

Management of Special Areas in Public Administration

Editors

Bekir PARLAK

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LIVRE DE LYON

2023

Social Sciences

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Cover Design • Motion Graphics

Book Layout • Motion Graphics

First Published • December 2023, Lyon

e-ISBN: 978-2-38236-639-4

DOI: 10.5281/zenodo.10433454

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Publisher • Livre de Lyon

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PREFACE

The connection with the business discipline in public administration, starting from the 1980s with the “New Public Management” reforms, has reached a political and philosophical level with the “governance” reforms from the 1990s to the present. Nowadays, when public administration has reached an interdisciplinary dimension, one of the dominant trends is the association of public administration with special administration areas. As a matter of fact, public administration can provide great opportunities with its concepts, theories and approaches in the management of different private areas. Public administration also includes many specific contents that we call the “special area of management”. These administrative special areas, spread throughout social, economic and cultural life, are intertwined with the world of public administration, where public policies are determined, public services are carried out and public investments and projects are implemented. Public authorities ensure public administration by managing, directing and supervising private areas of administration. The private area of each administration has a separate importance within its own sector and within the scope of public administration. Management areas such as Health Management, Education Management, Migration Management, Disaster Management and Crisis Management are at the center of public policies in terms of realizing the public interest. Therefore, they are of great importance for the effectiveness of public administration.

This book, prepared as an editorial work, contains chapters on the management of private areas in public administration prepared by academics from different universities in Turkey. The study includes articles on topics such as personnel, management, economy, risk, crisis, water, tourism, energy, agriculture, environment, poverty, coastal, waste and disaster management from an interdisciplinary perspective. At the beginning of the book, an introduction

is made with an article titled Understanding the Special Areas of Management, and the subject of the book and its focuses are explained in the said article. Each article provides a competent framework and content for the field it focuses on. A work of this scope and content has an original quality. This scientific study explains the special areas of management, which are increasingly important today, in their own concepts and reality, and also discusses their interaction with public administration.

We would like to thank the Livre de Lyon publishing house team and all the scientists who contributed to the publication of the book. We believe that the book will be useful for students, academics and other interested parties.

Prof. Dr. Bekir PARLAK
Nilüfer/Bursa/TÜRKİYE
December 2023

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December 2023

CONTENTS

REFEREES	I
PREFACE	III
CHAPTER I. UNDERSTANDING THE SPECIAL AREAS OF MANAGEMENT <i>Bekir PARLAK</i>	1
CHAPTER II. SITUATION OF CIVIL SERVANTS IN TÜRKİYE IN TERMS OF PUBLIC PERSONNEL ADMINISTRATION PRINCIPLES <i>Oğuzhan ÖZALTIN</i>	21
CHAPTER III. AN EVALUATION OF THE USA GOVERNMENT PERFORMANCE AND RESULTS ACT OF 1993 <i>Serdar Kenan GÜL</i>	43
CHAPTER IV. ENVIRONMENTAL MANAGEMENT AND GLOBAL CLIMATE CHANGE <i>Meryem AKBULUT BAKIR & Afşin Ahmet KAYA</i>	55
CHAPTER V. CRISIS MANAGEMENT IN HEALTH SERVICES <i>Aslı KAYA</i>	73
CHAPTER VI. POVERTY MANAGEMENT IN TÜRKİYE <i>Yasemin MAMUR IŞIKÇI & Esmeray ALACADAĞLI</i>	83
CHAPTER VII. CRISIS MANAGEMENT PROCESS IN WORKPLACES EMERGENCIES AND DISASTER <i>Elif ÇELENK KAYA & İbrahim IRMAK</i>	117
CHAPTER VIII. RISK MANAGEMENT PROCESSES IN OCCUPATIONAL SAFETY STUDIES <i>İbrahim IRMAK & Elif ÇELENK KAYA</i>	141
CHAPTER IX. GOVERNANCE SOLUTIONS FOR COASTAL MANAGEMENT: INSIGHTS FROM TÜRKİYE <i>Bayram COŞKUN & Eyüp ŞEN</i>	163
CHAPTER X. WASTE MANAGEMENT AND ITS IMPACT ON TOURISM MARKETING <i>Cihat KARTAL & Kezban KARABULUT</i>	181
CHAPTER XI. MANAGEMENT OF AGRICULTURAL POLICIES IN TURKEY FROM PAST TO PRESENT <i>Kurtuluş MERDAN</i>	213

CHAPTER XII.	THE EFFECTIVENESS OF GOOD GOVERNANCE IN WATER RESOURCES MANAGEMENT IN CREATING PUBLIC VALUE	229
	<i>Emrah FIRİDİN</i>	
CHAPTER XIII.	ENVIRONMENTAL MANAGEMENT	243
	<i>Ahsen SAÇLI</i>	
CHAPTER XIV.	EVALUATION OF DIGITALIZATION AND MOBILIZATION IN TERMS OF TOURISM MANAGEMENT	259
	<i>Salim AKYÜREK & Nesrin MENEMENCİ BAHÇELERLİ</i>	
CHAPTER XV.	MANAGEMENT OF TRANS-BOUNDARY WATERS: PRINCIPLES, DISPUTES, SEEKING SOLUTIONS AND WORLD WATER FORUM	281
	<i>Cansu YETİMOĞLU</i>	
CHAPTER XVI.	CRISIS MANAGEMENT AND DISASTERS: KAHRAMANMARAŞ EARTHQUAKES	309
	<i>Emine ÇELİKSOY</i>	
CHAPTER XVII.	FOUNDATIONS OF RISK MANAGEMENT IN BUSINESSES	333
	<i>Mübeyyen TEPE KÜÇÜKOĞLU</i>	
CHAPTER XVIII.	CURRENT BUREAUPATHOLOGIES IN TURKEY: THE CASE OF THE MINISTRY OF TREASURY AND FINANCE	349
	<i>Vildan ARMAĞAN</i>	
CHAPTER XIX.	DISASTER MANAGEMENT (WARNING AND ALARM SIGNS, EARLY WARNING SYSTEMS)	381
	<i>Afşin Ahmet KAYA & Bereket Bülent AYKER</i>	
CHAPTER XX.	IN THE CYCLE OF ENERGY, ECONOMIC GROWTH AND CLIMATE CHANGE: BRICS COUNTRIES	407
	<i>Melihat BATU AĞIRKAYA</i>	
CHAPTER XXI.	A GOVERNANCE CASE STUDY: TÜSİAD'S REACTIONS TO THE WORLD ECONOMIC CRISIS OF 1978	431
	<i>Kadir Caner DOĞAN</i>	

CHAPTER I

UNDERSTANDING THE SPECIAL AREAS OF MANAGEMENT

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1. Introduction

This article explains what special management areas mean. A short and simple approach has been preferred in the text, which aims to explain the title of this comprehensive study in a more understandable way and to establish the subject on its scientific foundations. This article has been prepared with a compact content and a systematic method. To begin with, an analytical review will be made on “Management Science”¹, which forms the basis of the subject. Then, “Management Related Sciences” is included in an appropriate context. The subject we will focus on in this section, “Special Management Areas”, is explained in detail under a separate heading. Most of the text is compiled from one of the author’s works in this field. The reference system in the work in question (specified in the bibliography at the end of the text) is also used here. However, specific areas of management are written separately from the basic source in question. Special administrative areas are also areas that operate within or interact with public administration. Examples of special areas of management are included in the text with short and concrete explanations. It is hoped that the study will provide a descriptive framework for a better understanding of the current book.

¹ The word “management” is preferred here. This word is used in special areas of management. On the other hand, the words “administration” and “administrative” are more frequently encountered in the management science literature. However, with the recent establishment of the “new public management” phenomenon and understanding, using the concept of management may be a more current and correct choice.

2. Quality of Management Science

2.1. Science as Process and Result

There are two aspects of science: “process” and “result”. “Science as a process” refers to physical activities such as experiment and observation, which are undertaken for the purpose of investigating the causes of facts and events related to a certain subject; hypothesis determination, testing of hypotheses, etc. It includes mental operations such as “Science in terms of results” refers to the “systematic and scientific body of knowledge” that emerges as a result of the physical and mental efforts and processes mentioned above. Since the late nineteenth century, research has been undertaken to determine the causes of phenomena and events related to the management process and organizational behavior, and the physical (experiment, observation) and mental (hypothesis determination and testing of hypotheses) necessary for the accumulation of a systematic and scientific body of knowledge about management and organizations. Efforts have been made (e.g., etc.). In other words, the “scientific method” has begun to be applied in examining management phenomena and solving organizational problems. Thus, management science began to emerge from systematic knowledge of scientific nature.

2.2. Scientific Management Movement

These new developments in management thoughts and practices, which started in the late nineteenth century, are called the “Scientific Management Movement”. At the birth of a new discipline, scientific efforts are generally directed to increasing systematic and scientific knowledge about the facts and events within the subject of the discipline. With its systematization in the form of theories, scientific maturation begins. The development of management thought as a body of scientific knowledge has been the same way. At the beginning of scientific management, scientific efforts were directed towards the accumulation of systematic and scientific knowledge about the management process and organizational behavior, and in the mid-twentieth century, this information was systematized in the form of theories and management science began to develop.

2.3. Management Science as Three Systems

Management science (thought) is a “conceptual system” because it consists of a set of interrelated concepts, principles and theories. In addition, it is an “abstracted system” because the information that constitutes the management idea is provided through abstractions from management practices

and organizational analyzes (real situations). On the other hand, management thought is a “dynamic system” that is affected by changes and developments in environmental conditions consisting of economic, socio-cultural and political elements, management philosophies and practices, scientific examination and research findings regarding management and organizations. While the management idea is largely the product of certain environmental conditions, it is valid under the environmental conditions in which it develops and is under the influence. However, the organizational environment conditions consisting of economic, socio-cultural and political elements have changed especially since the industrial revolution; Since the Second World War, changes and developments in environmental conditions have accelerated extremely. Management thought also changes and develops, being affected by these changes and developments in environmental conditions. On the other hand, management thought is greatly influenced by scientific examination and research findings regarding management process and organizational behavior.

3. Subject of Management Science

3.1. Examination of Management Science from Process and Factual Aspects

The subject of management science consists of facts and events related to the management process and organizational behavior. Management science is a discipline that examines and investigates how phenomena and events related to the management process and organizational behavior occur and how they occur with scientific methods, and tries to put forward a set of objective, general and clear principles. The management process and the facts and events related to this process, which constitute the subject of management science, are psycho-social in nature. For this reason, management science also has the characteristics of a social science discipline. The cause-effect relationship with psycho-social phenomena and events is not as clear and strong as with natural phenomena and events. In other words, determinism is weak in psychosocial events. For this reason, there is little possibility of predicting psychosocial events and binding them to definitive rules. Although social facts and events are not deterministic, there is a probabilistic (single order) in such facts and events.

3.2. Management Science as a Social Discipline

Another feature of management thought as a social discipline is that it is related to “morality” and “values” and it is not possible to purify it from value

provisions. It is not possible to explain and understand decisions and behaviors without considering the “values” that affect human decisions and behaviors. For example, informal organization is a social phenomenon that falls within the scope of management science. This phenomenon is closely related to feelings and emotions, desires and customs. These issues need to be taken into account when examining informal organization. On the other hand, the decision-making process is also closely related to morality and value provisions. However, it is extremely difficult to test the accuracy of value judgments and moral suggestions, both rationally and empirically.

As a social science discipline, management science is subject to some limitations in terms of examination and research compared to natural sciences. For example, in management science, the individual or group is affected by the analysis carried out by the scientist. However, in natural sciences, events are not affected by examination. Likewise, the subjects of social sciences are also affected by the conclusions reached in the investigation. However, there is no such influence in natural sciences. On the other hand, in social sciences, the researcher may move away from remaining objective because he studies his own fellow human beings. These and similar reasons pose research challenges in management science. For all these reasons, it is impossible to attribute the facts and events related to the management process and organizational behavior, which constitute the subject of management thought, to a set of immutable laws and principles. In this respect, the management discipline, like the social sciences, falls into the group of “incomplete and inexact” science disciplines.

3.3. Management Science as Applied Science

According to the division of sciences into “pure sciences” and “applied sciences”, management science falls into the “applied science discipline” group. While pure sciences aim to find truth and satisfy curiosity, applied disciplines also have a practical and pragmatic purpose, such as helping practitioners solve their problems. On the other hand, applied disciplines are closely related to the practice of an art and profession and form the basis of these arts and professions. In applied disciplines, the practitioner combines scientific knowledge about art and his profession with his skill and applies it. In this respect, there are similarities between the management discipline and the science disciplines of medicine and engineering.

3.4. An Interdisciplinary Science

On the other hand, management science, like the science disciplines of medicine and engineering, is “interdisciplinary” in nature. Medical science largely consists of chemistry, pathology, physiology, anatomy, bacteriology, etc. Engineering science is based on disciplines such as physics, chemistry, geology and mathematics. It is possible to group the disciplines that contribute to management science into two groups: social and behavioral sciences and quantitative sciences. Since humans have a great place and importance in the management process, social and behavioral sciences have common aspects with management science. While management science benefits from the concepts and principles of political sciences, economics, psychology and sociology disciplines, there are sub-disciplines within the mentioned disciplines that deal specifically with management issues and problems.

Table: 1 Social and Behavioral Disciplines and Subdisciplines Related to Management

Social and Behavioral Disciplines Related to Management	Social and Behavioral Subdisciplines Related to Management
Political Sciences Economy Psychology Sociology	Public Administration Public Economics Organizational Psychology Organization Sociology

With the contributions of behavioral sciences to management thought, the behavior of individuals and groups within organizations can be better analyzed, explained and understood; Therefore, directing behavior reduces conflicts to a minimum.

4. Purpose of Management Science

4.1. Theoretical and Practical Purpose of Management Science

Since management science is an applied science, it is necessary to divide its objectives into two groups: theoretical and practical. The theoretical aim of management science is generally to increase managerial effectiveness and efficiency, and ultimately organizational effectiveness. It can be seen that its theoretical purpose has not changed with the development of management

science. On the other hand; Its practical and pragmatic purpose remained generally based on the basic concept of rationality.

4.2. Purposes in Management Theories

The purpose element also differs in management theories that exhibit different approaches to the phenomenon of management. The rationality criteria of management schools of thought have changed and new criteria have been added.

Table: 2 Rationalization Criteria Of Management Schools Of Thought

<p>1. In classical theory, the effective and efficient realization of goals was the basic criterion of rationality.</p>
<p>2. In neo-classical theory, in addition to the effective and efficient achievement of goals, satisfaction and development of working people, etc. Rationality criteria such as were also added. While in classical theory the aim was “to create a rational organization”, in neo-classical theory the aim became “to establish an organization that is as rational as possible, which has the least undesirable side effects and provides the most satisfaction to the members of the organization...”</p>
<p>3. In modern theory, in addition to the aim of rationality; Sub-objectives such as “reducing or softening the authoritarian qualities of organizations, ensuring democracy in the workplace, etc....” were included.</p>
<p>4. In neo-modern theory, in addition to all these, one of the important aims is to gain “organic” and “open system” qualities that can easily adapt to “organizational structures and changes”.</p>

The aims of Management Theories have been shaped according to the conditions of the period and continue to be shaped by economic, social and political factors. As P.Drucker emphasized, goals are shaped according to the market situation and the course of the economic conjuncture, rather than being an independent variable. Moreover, it is unrealistic to look for a single goal and focus on a magic formula that will close the doors to different thoughts. Focusing only on profit as a goal may also mislead the manager and endanger the future of the business. He can undermine tomorrow to make today’s profit. For these reasons, the goals put forward by theorists must be current, real and functional.

5. Sciences Related to Management

In order to continue their existence and solve their problems, societies have created social institutions that work in accordance with the laws and rules they determine. Social relations in these institutions are determined and systematically

organized. For example, defense, religion, marriage, education, work, production, property, law are social institutions that provide the needs of societies at different levels. Social institutions create social units to carry out the tasks they undertake. For example, the institution of law defines the state as a social unit; educational institution, school systems; defense institution, army; The institution of production and ownership developed industrial organizations as social units. Just as the texture of human relations in social institutions is different, the texture of human relations in social units is also different. These differences make appropriate management types inevitable. Although the management process is the same in all organizations, the difference in purpose and structure of the institutions in which the management takes place has led to the emergence of management areas. Management sciences are quite dispersed. The fact that the field of management has not yet become clear causes these fields to be intertwined and to be seen as branches of other sciences rather than management sciences. Management has been the subject of many sciences because it concerns all individuals in society and is identified with the concept of state. Even though some of these are considered branches of other sciences, they are considered management sciences because they examine management. Management sciences can be grouped into four groups according to the subjects they examine.

5.1. Sciences Examining General Management

These sciences, which examine organization and management in general, do not take other differences into consideration. They study management according to their areas of interest. These; Administrative Law, Administrative Justice, Management Sociology, Management Psychology, Management Economics, Administration History, Organizational Behavior, Management Philosophy, etc.

5.2. Sciences Examining the Process of Management

There are scientific studies that examine only one or more of the management processes and have not yet qualified as a branch of science. These emerge as sciences that focus on management processes such as Managerial Communication, Control (inspection), Planning and Organizing.

5.3. Sciences Examining the Functions of Management

There are management sciences that examine each of the administrative functions such as marketing, personnel services, production, budget, general management services, which are called the management areas or administrative purposes of the organization. These are branches of science named after the

field they examine, such as Personnel Management, Marketing Management, General Services Management, Budget Management, Production Management.

5.4. Sciences Examining Special Areas of Management

Management sciences that focus on the management of organizations in different segments fall into this field. Today's management fields are generally divided into three main sections: Public Administration, Business-Industrial Management and Non-Governmental Organizations Management. Each section represents major sectors. In other words, these are; It Is Known As Public Sector, Private Sector And Civil Sector (Ngo). Other Combinations Are Emerging As Sectors Cooperate. These can be determined as Public-Private, Public-Civil, Civil-Private, Public-Private-Civil. The Public Sector is divided into two main branches: Public Administration and Public Economics. There are many special management areas within Public Administration. Such as Health Management, Education Management, Military Management, Migration Management, Disaster Management, Security Management and Environmental Management... Now let's see Special Management Areas with examples.

5.4.1. Business Management

It is one of the fastest growing areas of management. It deals with the management of industrial organizations. It is an area that contributes greatly to the development of other management areas. It also includes publicly traded companies. The public may have many enterprises operating in the economic field. The management of these organizations, called public companies, is a separate field.

5.4.2. Military Administration

It is one of the oldest administrative areas. It has developed through various methods in different societies throughout history and has come to this day. The need for defense makes these organizations and their management constantly important. Military administration is shaped according to the political, social and economic structures of the countries. Military administration, which incorporates advanced technology, is still the fastest developing field of administration today.

5.4.3. Healthcare Management

One of the rapidly developing management areas is health management. Health management, which examines the health systems and health organizations

of countries, develops in parallel with the developments in health technology and state understanding. Health management is a very complex management field, the importance of which increases day by day. This issue was also clearly seen during the Covid 19 Pandemic. Health management involves many actors and many variables. The management and financing of public hospitals is a prominent issue in this context. Healthcare administration is a profession that involves the oversight, planning, direction and administration of healthcare systems, facilities, clinics and hospital networks. Healthcare administrators are responsible for the organization and operation of a healthcare facility, ensuring that medical professionals perform their daily duties under effective supervision and with the right resources. They are responsible for facilitating the flow of information within and between departments to communicate operational goals and explain the success of medical services. Healthcare management requires business skills, communication with multiple stakeholders, and knowledge of technology to manage the complexities of a healthcare organization. Healthcare managers manage and produce services within healthcare systems within the scope of performance indicators, thereby creating guidance measures that improve overall operations. Daily tasks and skills in health management include: a) Workforce recruitment and training, b) Facility Management, c) Compliance with privacy laws, d) Managing internal communication between staff and department heads, e) Improving medical services.

5.4.4. Education Management

Educational management, which later became the subject of management compared to other management fields, is a field of management sciences that examines the education systems of societies and the educational organizations within them from a managerial perspective. It is critical that education, which is the key to the growth and development of a society, be managed effectively, rationally, systematically and result-oriented. Educational administration is the public responsibility. The education sector, including private educational institutions, is the leading application area of public policies. Educational management is based on complex institutional and organizational administrative arrangements that mobilize resources such as teachers, educational infrastructures, materials and equipment to deliver quality educational services to the population. Access to accurate and timely information is critical for ministries of education to implement, monitor and evaluate administrative and educational processes. Education sector management refers to the management

of the education system. Its overall goal is to create and sustain environments that effectively and efficiently promote, support and sustain teaching and learning within educational administration and educational institutions. To ensure quality education, governments need to ensure the availability of relevant educational services for students on a daily basis. This requires effective institutional and organizational arrangements to mobilize resources such as teachers, educational infrastructures, training etc.

4.4.5. Sports Management

It is a subfield of management science that examines the management of sports organizations and investigates the management problems of this field. Sports management includes any combination of skills corresponding to the planning, organizing, leading, controlling, budgeting, managing or evaluating any organization or business in the field of sports. The origins of the field of sports management are based on physical education departments. The discipline has evolved to include history and sociology. The development of sports management has expanded to include e-sports management, reaching a \$4.5 billion industry as of 2018. Opportunities in sports management have expanded to include sports marketing, sports media analytics, sports sponsorships, and sports facilities management.

5.4.6. Judicial Management

It is a management area that covers the administrative levels required for the functional functioning of the judicial body and the conduct of bureaucratic affairs, the officers and officials working at these levels, and the works and transactions carried out by these officials. It also includes the administrative bodies and boards of the high courts of the judicial bodies in the judicial system.

5.4.7. Financial Management

Financial management is the process of providing the resources and funds needed by organizations under the most appropriate conditions, protecting these funds in the best possible way, and using them effectively by investing in appropriate assets by calculating the time. In other words, it is the management of the financial situation and processes of a business or institution in order to achieve certain financial goals. The 5 basic functions of financial management are: a) Selection of assets in which the business will invest, b) Determining the amount of funds, c) Determining from which sources and how the funds will

be provided, d) Providing financial resources (funds), e) Distributing the profit arising from business activities.

5.4.8. Agriculture Management

Agricultural management covers the overall management of the agricultural sector in a country. It also includes the management of businesses and organizations in the sector both as a whole and separately. The processes of implementation, monitoring and evaluation of agricultural management strategies form the basis of agricultural management. The subject covers agricultural production organization, crop rotation, soil cultivation, monitoring organic and inorganic changes, development of product trade, balances of agricultural economy, climate change studies, management of agricultural cooperatives and many other tasks. It also interacts with other specific management areas such as water management, watershed management and mountain area management.

5.4.9. Tourism Management

Tourism management is the supervision of all activities related to the tourism and hospitality industries. It is a multidisciplinary field that prepares people with interest, experience and education for management positions in the food, hospitality and tourism industry. Tourism management involves the management of numerous activities such as reviewing the tour destination, planning the tour, making travel arrangements and providing accommodation. It also includes marketing efforts to attract tourists to travel to certain destinations. Tourism management is a combination of three elements: a) Business management processes such as marketing, finance and human resources; b) Management principles and concepts; c) Tourism-related issues, including tourism organisations, environmental aspects and travel motivation. Tourism management also consists of three business-related components: a) Accommodation: Hotel, resort, cabin, campsite, homestay, etc. Living arrangements such as; b) Accessibility: Transportation and travel arrangements such as planes, cars, trains, public transportation, buses, and cruises; c) Places to Visit: Tourist attractions such as historical sites, natural resources or theme parks.

5.4.10. Security Management

Security management is a high-level process that consists of cataloging corporate IT assets and developing documents and policies to protect them from internal, external and cyber threats. Although the security function varies from

organization to organization, it generally involves people, physical facilities, technology, and data. This comprehensive analysis goes beyond classification and includes identifying potential security risks and establishing procedures for managing, responding to and resolving threats, especially those related to cybersecurity. Security management is important for organizations. Because it provides organizations with a proven, reliable basis for protecting their infrastructure against loss, theft and disruption, especially for cybersecurity purposes. For companies, especially those working with large amounts of data, applications, and other workloads across distributed networks and multiple locations, comprehensive risk analysis and assessment can help prevent cyber attacks from occurring, minimize downtime during and after an attack, and improve recovery time.

5.4.11. Environmental Management

Environmental management is a multifaceted and multidisciplinary practice that aims to protect nature from potentially damaging commercial activities. It involves implementing strategies to protect resources such as energy or water and reduce the negative effects of industrial activities on the environment. Environmental management, from an ecological perspective, is defined as “the planning, coordination, control and execution functions carried out to identify the problems that arise at every stage of natural resource use, to seek solutions to the problems and to put them into practice, in order to maintain the balance of the environmental system so that the living elements of the environmental system can live in a healthy environment.” It is defined as “the whole”. Environmental management appears as an organization that aims to establish a balance between humans and other elements of the environmental system and to minimize the damage caused by humans to the natural environment. In this context, environmental management in its broadest sense can be defined as “the means of implementing environmental strategies, policies and programs”.

5.4.12. Crisis Management

Crisis management involves dealing with crises in a way that minimizes damage and enables the affected organization to recover quickly. Dealing properly with a crisis can be particularly important for an organization’s public relations function. Crises can occur in a variety of ways, and an organization needs to prepare a crisis management plan in advance. When considering crisis

management, there are several types of crises that need to be given critical attention:

- a) **Accidental Disasters:** Accidental disasters are disasters that occur unintentionally and are caused by humans. Fire is an example of an accidental disaster that can impact the workforce and cause great damage to the entire organization. Especially in areas where physical labor and large machines are operated, such as mining and construction, serious accidents that may occur while the workforce is performing their duties can lead to serious consequences.
- b) **Natural Disasters:** Natural disasters are generally environmental crises that humans cannot prevent. Earthquakes, hurricanes and floods are examples of natural disasters.
- c) **Technology Disasters:** The majority of initiatives in an organization involve technology in one way or another. In some cases, a small disruption in a company's technology structure can bring all operations to a halt. Some technology crises may occur by accident, while others may be caused by malicious intent. Under technology disasters you will find examples such as:
 - a) **Malice crisis – Criminal technology attack by competitors;** Hostile employees with malicious intent to destabilize the organization,
 - b) **Cybercrime crisis – The crime of intentional theft driven by technology,**
 - c) **Critical virus attacks – Accidental or maliciously infected.**

5.4.13. Risk Management

Risk management is the ongoing process of identifying, analyzing, evaluating, and treating losses incurred and monitoring risk control and financial resources to mitigate the adverse effects of loss. Loss can be caused by:

- a) **Financial risks** such as cost of claims and liability decisions,
- b) **Operational risks** such as worker strikes,
- c) **Environmental risks**, including weather or political change,
- d) **Strategic risks**, including management changes or reputational damage.

Risk management is the process of identifying, assessing and controlling financial, legal, strategic and security risks to an organization's capital and earnings. These threats or risks; It can arise from a wide variety of sources, such as financial uncertainty, legal liabilities, strategic management errors, accidents and natural disasters.

5.4.14. Water Management

Water management is the control and movement of water resources in a way that minimizes damage to life and property and maximizes their efficient and beneficial use. Good water management of dams and levees reduces the

risk of damage due to flooding. Irrigation water management systems ensure the most efficient use of limited water resources for agriculture. Drainage management includes water budgeting and analysis of surface and subsurface drainage systems. Sometimes water management involves changing practices, such as groundwater withdrawal rates or the allocation of water for different purposes. Today, most countries are exerting unprecedented pressure on water resources. The global population is growing rapidly and predictions show that with current practices the world will face a 40% shortfall between projected demand and available water supply by 2030. Additionally, chronic water scarcity, hydrological uncertainty, and extreme weather events (floods and droughts) are perceived as one of the greatest threats to global prosperity and stability. There is growing recognition of the role that water scarcity and drought play in exacerbating vulnerability and conflict.

5.4.15. Diplomacy Management

It is within the scope of Public Diplomacy management that countries become centers of attraction, gain reputation and respect, and build their brand values by effectively using their soft power. In the new century, the way to persuade the public and other societies is to effectively use public diplomacy tools and methods. Public diplomacy closely concerns not only the state and related institutions, but also the business world, companies, non-governmental organizations, media and educational institutions. Because when all these elements we have mentioned fulfill their duties in the best possible way, have a vision of public diplomacy, and work together towards the same goal, they pave the way for the construction of a valuable “country brand”. Another aspect of the issue is business diplomacy management. Global companies can increase their effectiveness by establishing a business diplomacy management function and developing and leveraging competent business diplomacy managers. Global companies need to be successful in their business and demonstrate their ability to manage multiple stakeholders at home and abroad. While having the right products and services at the right price and time is vital, global companies may not be able to successfully deal with obstacles beyond their direct control.

5.4.16. Disaster Management

One of the most important public policy issues of the age is undoubtedly disaster management. When it comes to disaster management, “process management” should be emphasized first. Because disaster management refers

to the general management of all activities before and after the event occurs. When disasters are viewed from the perspective of “general management of activities”, it is clear that they cannot be managed by a single sector. In other words, disaster management and other related activities should be carried out by an administrative body. Disaster management policies can be evaluated under the title of “risk management”. Therefore, disaster management should start with disaster risk reduction policies. For example, strategies should be specific to each disaster type and additional threats. These strategies need to be developed to reduce and prevent the negative effects of disasters. Legal, political and technical coding needs to be completed. All of these studies are called “disaster risk reduction studies” and are considered a high priority in disaster management. Success in disaster management starts with reducing risks in advance. disaster occurs. Disaster risk management organizes operational capabilities, technical studies, response capacity and preparedness in order to reduce disaster risks. In addition, the necessary strategies and methods for a successful system must be determined and implemented with continuous practices. In other words, risk management is defined as the process of identifying hazard and risk. Analysis of opportunities, resources, priorities, policies, strategies and preparations should be taken into account and action plans should be implemented. Reducing total risk is the first and most important step of any disaster management plan.

5.4.17. Migration Management

In general terms, “migration” is the movement of a group of people from a certain place (a settlement: village, city, region, country) to another place. When this transition is made with the aim of living in a new place or at least staying for a certain period of time, migration occurs. As can be understood from here, migration is the permanent or temporary settlement of a group of people in another place by leaving the place where they live, either willingly or unwillingly. Migration management is one of the special management areas that has gained great importance in terms of public administration. Increasing migration, which brings with it serious problems in the world, requires effective policies and effective management. Migration management is a complex field. It is expected to be carried out in coordination with many public policies and public institutions. It is possible for migration management to be more successful with a holistic organization that includes public institutions and organizations, as well as non-governmental organizations, private sector organizations and international organizations. The International Organization for Migration (IOM)

is working on developing policy guidance in this area; formulation of global strategies; standard setting and quality control; and information management related to “mainstream” migration sectors, including workforce and facilitated migration, migration and development, combating trafficking in human beings, assisted voluntary repatriation, migration health, assistance to vulnerable migrants, migration and border management, and general capacity building in migration management. The European Commission proposes directives, regulations and recommendations for creating fair, efficient, and sustainable migration and asylum systems. It aims to align these systems across the EU, while supporting all EU countries in developing and implementing effective migration management and asylum procedures. In doing so, it provides operational responses on the ground, focusing particularly on countries most affected by migration. In these countries, the Commission supports the national authorities with specialised teams, and works closely with EU Agencies, international organisations, and other related bodies in: a) managing the arrival of migrants, b) setting up suitable migrant reception facilities, c) carrying out relocations and other transfer mechanisms at EU level, d) ensuring quick and efficient asylum and return procedures, e) improving border management, f) protecting unaccompanied minors and other vulnerable groups, g) promoting integration policies for legally residing non-EU nationals, h) developing legal pathways to migration through labour mobility, i) creating partnerships against human trafficking networks.

Apart from these, it would be appropriate to mention the following as special areas of management: **Development Management, Energy Management, Management of Mountainous Areas** and others...

6. Conclusion

There are many special management areas that differ according to institutions. However, some of these (such as family, religion, cultural institutions) have not yet been examined within the scope of management. All management areas listed above benefit from each other’s data and methods and also positively affect each other’s development. Organization and management styles may vary depending on themselves, their sectors, social culture and management traditions. Public administration covers a complex and comprehensive area that touches almost every aspect of life. It is natural that there are many “special areas of management” within this huge structure consisting of a combination

of individuals, groups, institutions and sectors. In this article, special areas of management in public administration are examined in the context of this interaction.

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CHAPTER II

SITUATION OF CIVIL SERVANTS IN TÜRKİYE IN TERMS OF PUBLIC PERSONNEL ADMINISTRATION PRINCIPLES

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1. Introduction

In general, the classical functions of personnel administration in organizations are summarized under three main headings: consulting, research and development on personnel policies, strategies, tactics and techniques, and performing the necessary procedures for personnel. On the other hand, contemporary personnel administration performs additional functions such as workforce planning, competency analysis, and motivation of the existing workforce (Tutum, 2008:205). Organizations in public administration are different from companies and non-governmental organizations in terms of their objectives. Public personnel administration is considered as one of the sub-disciplines of public administration. Within the scope of public personnel administration, it is investigated how those who are appointed by the state and thus have professional occupations are managed (Güler, 2020:45).

The aim of the study is to examine the situation of civil servants, who work under the Law No. 657 but are classified in four different ways, in terms of contemporary public personnel administration principles. The method of the study is document analysis, one of the qualitative research methods. In the study, care is taken to evaluate the Turkish Public Personnel Administration together with its historical context.

In the face of the occupation of the Ottoman Empire, the Grand National Assembly was convened in Ankara in 1920 as a national resistance movement.

In 1921, the name of the same assembly was adopted as the Grand National Assembly of Türkiye (GNAT). In 1922, the GNAT abolished the Sultanate and ended relations with the Ottoman Empire. Subsequently, the Turkish Republic was established by the Turkish Grand National Assembly in 1923, and in 1924 the Caliphate, a religious title from the Ottoman Empire, was abolished. During the transition from the Ottoman Empire to the Republic of Türkiye, the tradition of public administration and public personnel regime in the empire influenced the republican period. For example, in continuation of the Ottoman tradition, in the Republican Era, the term “zat jobs is used to mean public personnel. According to Mıhçıoğlu, the term personnel administration started to be used instead of personnel affairs in 1953 (Mıhçıoğlu, 1957:96). It is also known that until the mid-nineteen eighties, some public institutions used the term “muamelat” jobs in the sense of personnel affairs.

2. The Period between the Establishment of the Republic of Türkiye and the Enactment of the Civil Servants Law No. 657, 1921-1965.

On 20.01.1921, the Grand National Assembly adopted the Law on Organization and Principles or the Constitution of 1921 (Constitutional Court of the Republic of Türkiye). The 1921 Constitution is recognized as the first constitution of the Republic of Türkiye. The 1921 Constitution does not include regulations on civil servants due to the extraordinary conditions of the period.

On 20.04.1924, the Law on Organization and Principles or the 1924 Constitution was adopted by the Grand National Assembly of Türkiye. It is recognized as the second constitution of the Republic of Türkiye. It is the first constitutional regulation of the Republic of Türkiye on civil servants. The 1924 Constitution consists of a total of one hundred and five articles. Among the one hundred and five articles, there are three regulations under the title of civil servants in the sixth section. “Article 92.-Every Turk with political rights has the right to become a civil servant according to his qualification and merit. Article 93.-The qualifications, rights, duties, salaries and allowances, recruitment and dismissal, promotion and advancement of all civil servants shall be laid down by special law. Article 94: “Obedience to a superior order shall not relieve a civil servant of his/her responsibility in matters contrary to the law” (Constitutional Court of the Republic of Türkiye). Thus, civil service is identified with citizenship in Article 92 and constitutionally guaranteed in Article 93. Article 94 emphasizes the importance of civil servants acting in accordance with the rule of law before the hierarchy to which they are subordinated in the performance of their duties.

Adhering to the 1924 Constitution, the Law No. 788 on Civil Servants was put into force on 31.03.1926. Law No. 788 was the first legal regulation of the Republic of Türkiye on civil servants. Law No. 788 on Civil Servants contains a total of ninety-six articles, including ninety-two regular articles, an exceptional article for those working for the National Government between 23.04.1920 and 23.08.1923, and three temporary articles (R.G, 1926:336; GNAT). Article 1 defines two different types of employment: civil servants (Memur) and employees (Müstahdem). Civil servants are those who are registered and receive salaries from the budget. Employees, on the other hand, are those who do not have a registration record, receive salaries from sources other than the budget, and are subject to a different legal arrangement than civil servants. Considered in terms of the nature of labor and its organizational function, the 788's distinction between civil servants and employees can be likened to today's distinction between white-collar and blue-collar workers. Article 2 of the 788 explains the scope of the law. According to Article 2, civil servants can work with or without a contract, but cannot request a change in their conditions of employment. Military personnel and gendarmerie are not included in the scope of Law No. 788.

On 02.07.1927, the "Salary Law" numbered 1008 was put into effect (R.G., 1927:622). 1008 is the first legal regulation of the Republic of Türkiye regarding the salaries of civil servants. Enacted on 30.06.1929, the "Law No. 1452 on the Unification and Equalization of Civil Servants' Salaries" is the second legal regulation of the Republic of Türkiye regarding civil servants' salaries (R.G., 1929:1229). The third legal regulation of the Republic of Türkiye regarding the salaries of civil servants was the Law No. 3656 dated 08.07.1939, "Law on the Unification and Equalization of Civil Servants' Salaries" (R.G. 1939:4253). Law No. 788 regulated the conditions for becoming a civil servant, sanctions, penalties, working conditions, and retirement rather than financial issues (R.G, 1926:336; GNAT). The financial regulations in Laws No. 1008, 1452 and 3656 were intended to support Law No. 788. Wage systems for public employees can be grouped as "bar system period" between 1926-1965 and "indicative system period" between 1965-1983 (Öztürk, 2001:4).

The "Law No. 5434 on the Pension Fund of the Republic of Türkiye", adopted by the GNAT, was put into effect on 17.06.1949 (R.G., 1949:7235). Eleven different pension funds for civil servants were merged with Law No. 5434 (Hall, 1951:138). With Law 5434, a comprehensive legal arrangement was made on issues such as pensions, invalidity conditions, widows' and orphans'

pensions of public employees in the Republic of Türkiye. The retirement conditions of military and civilian public personnel, who were subject to separate legal regulations while working, were regulated in a single law. With Law No. 5434, 26 years after the proclamation of the Republic, the social security system of civil servants gained legal integrity.

On 30.04.1958, the Directive No. 4/10195 on Per Diem Personnel to be employed for Fixed and Temporary Services was put into force. (1958:9895). 4/10195 is not a law, it is a directive reflecting a Council of Ministers Decision. The importance of 4/10195 stems from the circumstances of 1958. Within the scope of the public personnel legislation in 1958, it is a piece of legislation that relaxed the employment and remuneration of technical personnel. For example, it was produced to meet the technical labor needs of the health market and the energy sector in the years when revolving fund enterprises were newly established in public institutions. Therefore, 4/10195 is among the first examples of legislation that allows flexible employment in the Turkish Public Personnel Regime. As Aslan emphasizes, the period between 1945 and 1965 in Türkiye was the period when the “Fordist Personnel Regime” began to be implemented. It was during this period that the public personnel working in the technical service field were separated from the “Civil Servant Regime” under No. 788 through the 4/10195 directive. Technical service personnel were paid relatively higher wages (Aslan, 2019:325).

On 17.12.1960, the State Personnel Office was established by Law No. 160 (R.G., 1960:10683). In 1950, the Barker Report prepared by the experts of the World Bank and in 1951, the report presented by Martin and Cush, experts of the United American Temporary Assistance Board, were influential in the establishment of the State Personnel Office. On the one hand, the State Personnel Office was established and on the other, a draft law was submitted to the GMAT in 1956. When the organizational transformation, the reports and the draft law are evaluated together, it can be said that the Turkish Public Personnel Administration started to prefer the “American Classification Order” instead of the traditional “Barem Order” that had been used since the establishment of the TR (Mihçioğlu, 1987:82). With the establishment of the State Personnel Department, civil servants working in various public institutions were united under a single central organization.

The organizations established as a result of the decisions taken in the process that started with the Bretton Woods meeting in 1944 have led to a transformation in traditional understandings in many sectors around the world.

The public sector in Türkiye was also affected by this transformation. The reports prepared by both foreign and domestic experts in Türkiye reveal what is driving the transformation of the public personnel regime. 1949, Neumark on rational working principles in public institutions; 1949-1950, Thornburg on the economy, including the public personnel system; 1951, Martin&Cush on the Ministry of Finance; 1952, Gıyas Akdeniz Report on the improvement of civil servant wages; 1959, Chailleux-Dantel on public personnel reform; 1962, preliminary report on the state personnel regime prepared by the State Personnel Office; 1963, Podol; 1962, MEHTAP; 1971, Principles and Suggestions for the Reorganization of the Administration prepared by the Administrative Reform Advisory Board; 1991, KAYA are among the best known of these reports (Altan, 2005: 71).

On May 27, 1960, the first military coup was carried out in the history of the Republic of Türkiye (Kılıç, 2018:536). The 1961 Constitution, prepared as a result of the May 27, 1960 coup d'état and adopted on July 9, 1961, is the third constitution of the Republic of Türkiye. The 1961 Constitution includes a preamble, 157 regular and 22 provisional articles. Three of these articles, Articles 117, 118 and 119, are related to civil servants (Constitutional Court of the Republic of Türkiye). Article 117 states that the personal affairs of civil servants shall be regulated by law. Article 118 describes the basic principles of disciplinary penalties to be imposed on civil servants and emphasizes that disciplinary penalties are subject to judicial review. Article 119 states that civil servants cannot be members of political parties and trade unions. Article 119 also states that in the performance of their duties, civil servants may not discriminate against citizens on the basis of their political views. Otherwise, it is stated that civil servants will be dismissed from public service. Aslan'a göre, anayasalar kıyaslandığında, 1924 Anayasa'sı kamu personel rejimini yasallıkla temellendirmiş, 1961 Anayasa'sı kamu personel rejimini statü hukukuna dayandırmış, 1982 Anayasa'sı ise kamu personel rejimini statü hukukuna dayandırmayı sürdürmüştür. Ancak bu kıyaslama söz konusu üç anayasanın kabul edildiği tarihteki biçimleriyle sınırlıdır (Aslan, 2006:365).

On 13.12.1963, the State Personnel Department submitted a 238-article "Draft Law on Civil Servants" to the Prime Ministry for discussion by the Council of Ministers and referral to the GNAT. According to Giritli, Roger Gregoire, an expert from the Organization for Economic Cooperation and Development (OECD), contributed to the preparation of the Draft Law on Civil Servants in his capacity as Chief Advisor to the State Personnel Office (Giritli, 1964:5).

3. Period between the Enactment of Law No. 657 on Civil Servants and the Presidential Government System, 1965-2018.

The Civil Servants Law No. 657, adopted by the GNAT on 14.07.1965, was put into force on 23.07.1965 (R.G., 1965:12056). Law No. 657 is the second legal regulation of the Republic of Türkiye on civil servants after Law No. 788. Law 657 is still in force at the time of this study and has been updated many times. More information on Law No. 657 is provided in the following sections of the study.

On 14.08.1970, Law No. 1327 was published in the R.G., “Law No. 657 on the Amendment of Certain Articles of the Civil Servants Law and the Addition of Certain Articles to this Law, and on the Salaries and Wages of Public Personnel Excluded from the Scope of this Law” was put into effect (R.G., 1970:13579). According to Mihçioğlu, after Law No. 1327 was put into effect, the classification scheme of Law No. 657 was changed. The traditional “Barem Order” was reverted to, thus the reform efforts of the State Personnel Office were in vain (Mihçioğlu, 1987:99). Although the emergence of Law No. 657 was in line with the transformations envisaged by the Bretton Woods Institutions for the public personnel regimes of capitalist nation-states, it can be said that the enactment of Law No. 1327 slowed down the pace of articulation with the mainstream.

On 15.08.1970, the General Cadre Law No. 1322 was put into force (R.G., 1970:13580). According to Gezer, cadre is the basic unit of measurement in civil servant employment. In terms of the organizations where civil servants work, the qualitative and quantitative status of the staff of the public institution in question reveals the public service mission of that organization. Public institutions take cadre as a basis when hiring civil servants, supervising whether civil servants are doing their jobs or not, and determining their salaries. In terms of civil servants, the cadre provides them with jobs and social security (Gezer, 2023:307). Under the Law No. 657 on Civil Servants, civil servant positions are defined. However, the cadres defined for the execution of public duties are distributed by the Council of Ministers after consultation with the Ministry of Finance and the State Personnel Office. Law No. 1322 strengthens the role of the Ministry of Finance in the distribution of civil servant positions.

On 30.12.1972, Decree Law No. 2 “Decree Law No. 657 on Civil Servants and the Amendment of Certain Articles of this Law Amended by Law No. 1327 and the Abolition of Certain Articles” was put into force (R.G., 1972:14407). On 19.01.1974, Decree Law No. 9 “Decree Law on the Amendment of Certain

Articles of the Civil Servants Law No. 657 as Amended by Law No. 1327 and Decree Laws No. 6, 7 and 8” was published (R.G., 1974:14773). On 26.05.1975, Law No. 1897, “Law on the Amendment and Adoption of Decree Law No. 12 on the Amendment of Certain Articles of the Civil Servants Law No. 657, the Abolition of Certain Articles and the Addition of Certain Articles” was put into force (R.G.1975:15247). When the legal regulations enacted in the 1970s are evaluated in general, it is seen that no new law was enacted by the GMAT to replace Law No. 657. During this period, decrees with the force of law issued by the Council of Ministers or the Government were widely used and preferred. According to Tan, decrees with the force of law (KHK) entered Turkish Law with the 1961 Constitution and continued to be used after being amended by the 1982 Constitution. Although decrees with the force of law are based on the authority arising from the Constitution and granted by the GMAT, they lead to the disregard of legislative technique and to the complexity of legislation (Tan, 1995:352).

On 28.06.1978, with the Decree of the Council of Ministers numbered 7/15754, “Principles Regarding the Employment of Contracted Personnel” was determined and published (R.G., 1978:16330). Many amendments have been made to the principles on contracted public personnel since 1978 (2022, Baysal: 242). In the public sector in Türkiye, those who are employed in the public sector without a staff, under Part B of Article 4 of Law No. 657, are briefly called “4B’li”. The contracted personnel status within the public administration system causes major problems for both employees and employers (Kalağan and Saydam, 2022:14).

On September 12, 1980, a military coup was carried out for the second time. The 1980 coup d’état changed the administration of the Republic of Türkiye in a manner contrary to the ordinary course of life.

On 16.05.1982, Law No. 2670, “Law No. 657 on the Amendment of Certain Articles of the Civil Servants Law, the Abolition of Certain Articles and the Addition of Certain Articles to this Law” was put into force (R.G., 1982:17696). In 1970, Law No. 1327 abolished the “inter-institutional class concept” and the central examination practice was abandoned. Law No. 2670 aimed to return to the principle of centralized examination system (Güneyi, 2021:1066).

On 09.11.1982, the 1982 Constitution was put into force. The 1982 Constitution is recognized as the fourth constitution of the Republic of Türkiye. On 07.11.1982, under the conditions of September 12, the 1982 Constitution was put into force. The 1982 Constitution consists of a preamble and 177 articles.

The 1982 Constitution was in force at the time this study was prepared. The 1982 Constitution has undergone many revisions. The 1982 Constitution's second part, called the Executive, is subtitled "D. Provisions on public service officials". These provisions are explained in Articles 128 and 129 (R.G., 1982:17863). Article 128 states that civil servants and their personal affairs shall be regulated by law, while the procedures and principles for the training of senior executives shall be regulated both by law and specially. Article 129 emphasizes that civil servants shall adhere to the rule of law in the performance of their duties. Article 129 stipulates that lawsuits for damages may be filed against the administration arising from the misconduct of civil servants. Article 129 states that criminal prosecution of civil servants is subject to the permission of the administrative authority. According to Kağıtçıoğlu, when the 1961 and 1982 Constitutions are compared, in 1982, in addition to civil servants, other public officials are also under constitutional guarantee (Kağıtçıoğlu, 2019:44).

On 14.12.1983, the "Decree Law on General Staff and Procedure" numbered 190 was put into effect (R.G., 1983:18251).

On 08.06.1984, with the "Decree Law on the Establishment and Duties of the State Personnel Directorate" numbered 217, the State Personnel Directorate was established under the Prime Ministry (R.G., 1984:18435). Thus, the State Personnel Department, which had been established in 1960, was abolished and the State Personnel Presidency was established instead. With this organizational transformation, Turkish Public Personnel working in different institutions were united under the roof of a single central organization for the second time.

On 12.12.1984, Decree Law No. 243, "Decree Law on the Amendment of Certain Laws on Civil Servants and Other Public Officials" was put into force (R.G., 1984:18603). With the Decree Law No. 243, the institutional examination system was brought back instead of the centralized examination (Güneyi, 2021:1066).

On 30.06.1989, the "Decree Law No. 375 on Amendments to the Civil Servants Law No. 657, the Turkish Armed Forces Personnel Law No. 926, the Judges and Prosecutors Law No. 2802, the Higher Education Personnel Law No. 2914, the Turkish Republic Retirement Fund Law No. 5434 and Certain Other Laws and Decree Laws, and the Payment of Civil Servants and Other Public Officials Civil Service Base Salary, Seniority Salary and Additional Compensation" (R.G., 1989:20211). As is known, Article 4B in Law No. 657 is related to the employment of contracted personnel in public institutions. In 2018, some updates will be made to the Decree Law No. 375. According to Albayrak,

although Law No. 657 is still in force, the updates to Decree Law No. 375 have created a second piece of legislation and thus new forms of employment for temporary personnel in public institutions (Albayrak, 2020a:1537).

On 29.01.1990, the “Decree Law No. 399 on the Regulation of the Personnel Regime of State Economic Enterprises and the Repeal of Certain Articles of the Decree Law No. 233” was put into force. Article 3 of 399 stipulates that “Services in the enterprises and subsidiaries shall be provided by civil servants, contracted personnel and workers” and thus three types of employment were determined for SOE (R.G., 1990:20417). As a result of privatization policies, the number of employees in the state-owned enterprise (SOE) was reduced. For example, according to Güler, while total employment in SOE was 750,000 in 1984, this number decreased to 350,000 in 2004 (Güler, 2020:132). Law No. 399 is one of the pioneering pieces of legislation that pioneered the flexible employment approach and practices that have recently started to gain weight in the public sector (2022, Baysal:242).

On 22.02.1999, with the Council of Ministers Decree No. 99/12377, the “Regulation on the Amendment of the General Regulation on Compulsory Qualification and Competition Examinations for Those Who Will Be Appointed as Civil Servants for the First Time to State Public Services and Positions” was put into force. The first article of the Decree No. 99/12377 stipulates that “The written examinations of those who wish to work as civil servants shall be conducted centrally throughout the country by the State Personnel Presidency to the Student Selection and Placement Center (ÖSYM)” (R.G., 1999:23619). The first centralized examination for civil servant entry was held on October 17, 1999 (Güneyi, 2021:1066).

On 08.07.2011, the “Decree on Changing the Ministries to which Certain Organizations are Affiliated and Related” was published (R.G., 2012:27988). With this regulation, the State Personnel Presidency, which was established in 1984, was affiliated to the Ministry of Labor and Social Security.

On 02.11.2011, the “Decree Law No. 666 on the Amendment of Certain Laws and Decree Laws in order to Regulate the Financial Rights of Public Servants” was published (R.G., 2012:28103). According to the study on “Problem Areas and Solution Proposals in the Public Personnel System in Türkiye” conducted by Özkal Sayan, until 2003, only the Ministry of Finance had expert and assistant expert positions among the ministries, but with the Decree Law No. 666, other ministries were given expert and assistant expert positions and the number of positions was increased. It has been stated that the examination

for assistant specialists, which is planned to be opened for specialists who want to be appointed to these positions, will not be registered. Not using the exam registration system contradicts the principle of merit (Özkal, 2016:686).

On 24.12.2017, Decree Law No. 696 “Decree Law on Making Certain Regulations within the Scope of the State of Emergency” was put into force (R.G., 2017:30280). In the Decree Law No. 696, temporary personnel were transferred to contracted personnel status with the update to be made on 02.04.2018 (Baysal, 2022:241). This situation is also called “old 4C, new 4B” in the public opinion (Kağıtçıoğlu, 2019:31). According to Çelikyay and Yücel, with the Decree Law No. 696, workers working in municipalities were assigned to municipal companies. Although this is partly a positive development, the assignment of workers to municipal companies instead of municipal staff positions has led to losses in the personal rights of the assigned municipal workers. A double standard was applied among municipal workers in the form of permanent and non-permanent public workers (Çelikyay and Yücel, 2021:511-533).

On 01.01.2018, the Ministry of Labor and Social Security published the “Communiqué on the Procedures and Principles for the Implementation of Provisional Articles 23 and 24 of the Provisional Decree Law No. 375 on the Transition of Workers Employed in Public Institutions and Organizations within the Scope of Personnel Based Service Procurement Contracts to Permanent Worker Positions or Worker Status in Local Administration Companies” (R.G., 2018:30288). One of the most fundamental characteristics of public services is the continuity of services. The administration and the personnel authorized by the legislation must be on the job continuously. Therefore, if administrative actions are not carried out by authorized personnel, a violation of the law will occur. Exceptional examples can be seen on the grounds of providing convenience to the executive power in practice (Yavuzdoğan and Ergene, 2023:221). According to the statement of Çınar, “It is stated that the personnel working in the status of laborer subject to the additional article 20 of the Decree Law No. 375 can be assigned as environmental engineer” (Çınar, 2022:394).

4. Presidential Government System Period, 2018 and Beyond.

On 09.07.2018, the Parliamentary Government System was terminated and the Presidential Government System was introduced in the administration of the Republic of Türkiye (R.G., 2018:3047). In Türkiye, a constitutional referendum was held on April 16, 2017 and general elections were held on June 24, 2018 to elect the 13th President and 27th term deputies. As a result of the referendum and general elections, the Parliamentary Government System was

ended and the Presidential Government System was introduced (Avaner and Çelik, 2021:244).

On 09.07.2018, Decree Law No. 703 was published (R.G., 2018:30473). With the Decree Law No. 703, the State Personnel Presidency, which was established in 1984 and affiliated to the Ministry of Labor and Social Security in 2011, was closed in 2019.

On 10.07.2018, Presidential Decree No. 2 on “General Staff and Procedure” was put into force (R.G., 2018:30474). Presidential Decree No. 2 regulates the principles and methods regarding the creation, cancellation and utilization of cadres and positions of public institutions and organizations.

On 10.07.2018, the Presidential Decree No. 3 “Presidential Decree on the Appointment Procedures for Senior Public Administrators and Public Institutions and Organizations” was put into force (R.G., 2018:30474). According to Albayrak’s study, when compared to the parliamentary system, the conditions for the appointment of senior public administrators changed radically after Regulation No. 3 and a “new era” was initiated in the appointment of senior public administrators. For example, while under the parliamentary system, appointments were made only by law, in the new era, the rules of appointment are determined solely by the Presidential Office. Before the appointment is made, the rules can be updated according to the characteristics of the person to be appointed. While 12 years of civil service was a prerequisite for appointment in the past, five years of service is sufficient in the new era, and appointments can be made from outside the civil servants (657, 4A) (Albayrak, 2020b:137).

On 10.07.2018, the Human Resources Office of the Presidency of the Republic of Türkiye was established (R.G., 2018:30474). The Presidential Human Resources Office has been assigned tasks that directly concern the public sector.

On 28.12.2018, Presidential Decree No. 25, “Presidential Decree Amending the Presidential Decree on Certain Regulations Regarding Personnel Subject to Contracts and Labor Legislation and the Organization of Institutions and Organizations Affiliated, Related, Associated Institutions and Organizations and Other Institutions and Organizations” was published (R.G., 2018:30639). According to Albayrak, Presidential Decree No. 25 introduced new forms of employment in the public sector, such as the employment of career specialists, the employment of foreign contracted personnel, the employment of contracted personnel in institutions that do not employ civil servants, the employment of personnel subject to labor legislation, and employment on deputy and exception contracts (Albayrak, 2020a:1537).

On 21.04.2021, the Presidential Decree No. 73, “Presidential Decree within the Scope of the Transition to the Presidential Government System” was put into force (R.G., 2021:31461). In 2019, the duties of the State Personnel Presidency, which was closed down, were assigned to the General Directorate of Personnel and Principles of the Presidential Administrative Affairs Presidency by Presidential Decree No. 73.

On 26.01.2023, Law No. 7433 on “Amendments to the Civil Servants Law, Certain Laws and Decree Law No. 663” entered into force (R.G., 2023:32085). According to the claim of the Ministry of Labor and Social Security, “Law No. 7433 will ensure the staffing of 458,615 contracted personnel working in the public sector. 4B personnel, local administrations personnel, contracted personnel working based on organizational laws, artists of the Ministry of Culture and Tourism, family health personnel who are not public servants, proxy imams, khatip and muezzin kayyims, proxy midwives and nurses will also be included in the scope of the regulation. Article 4B of the Civil Servants Law will be reorganized according to the 3+1 model. Contracted personnel who enter the public sector after the regulation enters into force will be able to be appointed to civil servant positions after serving for 3 years” (Ministry of Labor and Social Security, 2023).

Table 1: Forms of Employment of Public Personnel of the Republic of Türkiye according to the Laws to which They are Affiliated

According to Law No. 657	According to Other Laws
Civil servant, 4A Source: R.G., 657, 1965:12056	Academic Staff Source: R.G., 2547, 06.11.1981:17506
Contracted Personnel, 4B Source: R.G., 657, 1965:12056	Military Personnel Source: R.G., 926, : 10.08.1967:12670
Temporary Personnel, 4C Source: R.G., 657, 1965:12056	Judges and Public Prosecutors Source: R.G., 2802, 26.02.1983:17971
Workers, 4D Source: R.G., 657, 1965:12056	Contracted Staff Source: R.G., 7/15754, 28.06.1978:16330
	SOE Staff Source: R.G., 399, 29.01.1990:20417
	Workers Source: R.G., 4857, 10.06.2003:25134

Source: The data in Table 1 are derived from the data obtained from the website www.mavzuat.gov.tr, which includes the amendments to the “Law No. 657 on Civil Servants”. <https://www.mevzuat.gov.tr/mevzuat?Mevzuat-No=657&MevzuatTur=1&MevzuatTertip=5>, Accessed on 23.10.2023.

As mentioned earlier in the historical context of this study, the “Civil Servants Law No. 657” came into force in 1965. 657 is the basic and overarching law for both civil servants (4A) and other public employees (Table 1). For example, academic staff working in state universities in Türkiye are employed under Law No. 2547, but in cases where the provisions of Law No. 2547 are insufficient, Law No. 657 is considered valid.

Article 4 of Law 657 states that “Public services are provided by civil servants (4A), contracted personnel (4B), temporary personnel (4C) and workers (4D)” and Article 5 states that “Institutions subject to this Law cannot employ personnel other than the four forms of employment specified in Article 4” (Table 1). As a result of Decree Law No. 696, employees in temporary staff (4C) status were transferred to contracted staff (4B) status. Thus, the 4C form of employment was terminated (R.G., 2017:30280). Despite this legal change, according to Çağlaroğlu, one of the union representatives who spoke on behalf of those who switched from 4C to 4B employment, “in the new situation, the jobs of 4C workers do not coincide with the positions they were transferred to” (Çağlaroğlu, 2023).

Workers in the public sector, who are employed under Law No. 657, are also referred to as “4Ds, public sector workers”. Although 4D workers work under Law No. 657, they are subject to the provisions of Labor Law No. 4857 (Table 1).

Table 2: Data on Public Sector Employment Republic of Türkiye, September, 2023.

Type of budget	Total	Civil servant 4A	Contracted 4B	Permanent workers 4D-P	Temporary workers 4D-T	Others
Total	5.101.689	3.467.443	277.281	1.204.526	48.628	103.811
General budget administrations	3.446.330	2.933.226	169.021	210.540	29.732	103.811
Higher education institutes, universities and high-tech institutes	317.263	257.139	14.110	45.497	517	0
Other special budget administrations	102.038	40.523	8.842	52.492	181	0
Regulatory and supervisory agencies	5.831	3.912	430	1.489	0	0
Social security institutions	41.793	34.729	366	6.697	1	0
Revolving funds and caution funds	237.563	47.248	2.687	183.441	4.187	0
Other public institutions	6.316	1.576	1.754	2.986	0	0
State-owned enterprises covered by decree law no.233 (including subsidiaries)	101.028	4.294	42.802	44.648	9.284	0
Organizations in the privatization portfolio	215	22	56	137	0	0
Public enterprises with special laws	38.665	4.877	28.453	5.335	0	0
Special provincial administrations	10.332	5.591	49	4.222	470	0
Municipalities, affiliates and local administration units	186.316	134.306	8.711	39.043	4.256	0
Municipality economic enterprises	607.999	0	0	607.999	0	0

Source: T.R. Presidential Strategy and Budget Directorate, <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.sbb.gov.tr%2Fwp-content%2Fuploads%2F2023%2F11%2F1-Kamu-Sektoru-Istihdam-Sayilari-2023-10112023.xlsx&wdOrigin=BROWSELINK>, Accessed on 05.12.2023.

At the end of 2023, when this study was conducted, the total size of public employment was 5,101,689 people. The proportional distribution of employment by cadres is approximately 68% Civil servants, 5% Contracted, 24% Permanent workers, 1% Temporary workers and 2% Others. In 2013, the total size of public employment was 3,223,484 persons (Table 2). Ten years ago (2013), the breakdown of employment by cadre was approximately 78% Civil servant, 6% Contracted, 11% Permanent workers, 1% Temporary workers, 1% Temporary Staff (4C), 1% Temporary Staff (4C) and 3% Others.

When the ten-year change in public employment (2013-2023) is analyzed, the number of public sector employees increases proportionally by 58%. In the last decade, Türkiye's population has increased by 10% (2013 population 76,481,847; 2023 population 84,247,088). When both proportional increases are evaluated together, there is a larger expansion in public employment than the population growth.

Article 3 of Law No. 657 on Civil Servants states the basic principles of the law as classification, career and merit (R.G., 657, 1965:12056). According to Akgüner, the principles of impartiality, career, merit, classification, fair and adequate remuneration, in-service training, and recourse to experts are accepted as contemporary public personnel administration (Akgüner, 2001). Canman expresses the general principles of modern personnel administration as merit, career, classification, equality, assurance, impartiality, fair and adequate remuneration (Canman, 1995:16).

In the thirty-sixth article of the law numbered 657, the classes of civil servants employed in the institutions subject to the law are I-General Administrative Services Class, II-Technical Services Class, III-Health Services and Assistant Health Services Class, IV-Education and Education Services Class, V - Legal Services Class, VI - Religious Services Class, VII - Security Services Class, VIII - Gendarmerie Services Class, IX - Coast Guard Services Class, X - Auxiliary Services Class, XI - Civil Administration Services Class, XII - National Intelligence Services Class. Although they do not work under the 657 law, there are also staff working in the public sector under special laws specific to public institutions (Others, Table 2). These are public employees in justice, academic, military, municipalities, GNAT and independent administrative authorities (Bilgin ve Tuğan, 2021:iii).

5. Conclusion

In this study, the legislative dimension of civil service in Türkiye is presented in detail, starting from the foundation years of the Republic of Türkiye to the present day. The legislative process is explained under three headings. The second section titled “The Period Between the Establishment of the Republic of Türkiye and the Enactment of the Civil Servants Law No. 657, 1921-1965”, the second section titled “Period between the enactment of Law No. 657 on Civil Servants and the Presidential Government System, 1965-2018” and the third section titled “Presidential Government System Period, 2018 and Beyond” explain the historical development and transformation of the legislation. In general, during the period of four constitutional amendments, more than sixty government changes and twenty-one general elections (1946-2023), it is seen that the current Law No. 657 continues to exist as the basic law covering all types of employment in the public sector. According to Eren and Dölek, Law No. 657 on civil servants has been updated more than two hundred and thirty times since it was first adopted (Eren and Dölek, 2021:30). According to Altan’s study titled “Turkish Public Personnel Regime in Development Plans”, all nine development plans (1963-2013) criticize the personnel legislation and emphasize the need for a comprehensive public personnel reform. It is seen that the criticisms are concentrated on the Civil Servants Law No. 657 (Altan, 2010:435). Despite all these changes, discussions on Law No. 657 continue.

In the study, the organizational transformation that directly concerns the Civil Service in Türkiye is presented under the titles of “The Period Between the Establishment of the Republic of Türkiye and the Enactment of the Civil Servants Law No. 657, 1921-1965”, “Period between the enactment of Law No. 657 on Civil Servants and the Presidential Government System, 1965-2018”, “Presidential Government System Period, 2018 and Beyond” together with its legislative dimension and historical context (e.g. military coups and constitutional changes). The organizational transformations of the institutions that are actors in determining the public personnel regime of the Republic of Türkiye, especially in managing the employment of civil servants, are evaluated in general. According to the general evaluation, “State Personnel Office” was established in 1960. In 1984, the “State Personnel Office” was closed down and replaced by the “State Personnel Presidency”. In 2011, the “State Personnel Directorate” was affiliated to the Ministry of Labor and Social Security. In 2018, following the transition from the “Parliamentary Government System” to the “Presidential Government System” in the administration of the Republic of

Türkiye, the “State Personnel Directorate” was closed in 2019. In 2018, the “Human Resources Office of the Presidency of the Republic of Türkiye” was established. In 2021, the duties of the “State Personnel Directorate”, which was closed in 2019, were transferred to the “General Directorate of Personnel and Principles” under the “Presidential Human Resources and Administrative Affairs Directorate”. According to Acar’s study on “Organizational Change in Public Personnel Administration”, the “Human Resources Office” will focus on projects; the “General Directorate of Personnel Policy” will focus on appointments; and the “General Directorate of Labor” will focus on the classical functions of public personnel administration (Acar, 2021:1041).

At the end of 2023, when this study was conducted, the total size of public employment was 5,101,689 people. The proportional distribution of employment by cadres is approximately 68% civil servants, 5% contracted, 24% permanent workers, 1% temporary workers and 2% other (Table 2). The population of Türkiye has increased by 10% in the last decade (2013 population 76.481.847; 2023 population 84.247.088). When both proportional increases are considered together, there is a larger expansion in public employment than the population growth.

In addition to the legal, organizational and numerical transformations mentioned in the previous sections of the study and in the paragraphs above, problems arise as a result of the practices, in accordance with the nature of all moving systems. In the face of these problems, those who manage the system continue to generate negative entropy. In the following paragraphs, some of these problems are discussed with examples from the public administration literature.

According to Bağcı and Arık, public personnel working in the “III-Health Services and Auxiliary Health Services Class” have current problems that need to be solved. Violence against health personnel, complaints about health personnel that do not reflect the truth, occupational health and safety, excessive on-call hours, the covid 19 process, and brain drain are the main problem areas waiting for a solution (Bağcı and Arık, 2021:103). According to the results of a study conducted by Armağan Kaygusuz titled “Public Personnel Administration in Türkiye and the Place of Health Personnel within the Regime”, employees in the health sector are differentiated according to whether or not they are subject to Law No. 657 in the institutions they work in. Then, the personnel who are not subject to Law No. 657 are differentiated a second time according to the diversity of the legislation they are subject to. Therefore, different financial, social and

legal differences between the personnel doing the same jobs cause inefficiency and loss of rights (Armağan Kaygusuz484). The field of health services is very dynamic as it concerns public services for both humans and other living beings, and the problem areas mentioned in the literature are unfortunately still current. For example, a trade union representative reported that there were 249 incidents of violence against health workers in 2022, with an upward trend compared to previous years (Durmuş, 2023).

According to Çelikyay and Yücel, the sheer number of actors determining the human resources policies of municipalities in Türkiye can lead to confusion. These actors are the General Directorate of Personnel and Principles under the Presidency of the Presidency of Human Resources and Administrative Affairs, the General Directorate of Labor under the Ministry of Labor and Social Security, and the General Directorate of Local Governments under the Ministry of Environment, Urbanization and Climate Change (Çelikyay and Yücel, 2021:533). According to Çınar, in some municipalities, workers perform substantive and permanent duties just like civil servants. However, they do not enjoy the same guarantees as civil servants. The main problem in this case, which should not be overlooked, is that in the provision of public services, rather than the forms of employment of public employees, secured employment based on status law is substituted by precarious employment (Çınar, 2022:394). Şen's study titled "Systemic Problems of the Public Personnel Regime in Türkiye" argues that the public personnel regimes of local governments and central government in Türkiye should be separated from each other (Şen, 2020:79). As mentioned in the fourth section of this study titled "Presidential Government System Period, 2018 and After", the legal amendment numbered 7433 was realized on 26.01.2023. Although the legal amendment No. 7433 significantly met the expectations of SOE workers regarding staffing, the double standard continues regarding the employment of workers in municipalities in municipal companies with or without staff.

According to a study conducted by Peker and Köseoğlu on the problems in the Turkish Public Personnel System, they stem from Legislation, Performance Administration and Socio-Economic reasons (Peker and Köseoğlu, 2022:505).

In the study by Güneyi in which the problems of the Turkish Public Personnel System related to merit are investigated, first of all, a central organization should be established to protect and develop the principle of merit in the public sector. Then, there is a need for both constitutional and legal

regulation in order to effectively and efficiently implement the principles of contemporary public personnel administration. Finally, the use of oral exams and interviews as a means of nepotism is one of the most popular criticisms of merit in Türkiye (Güneyi, 2021:1087). To give an example of merit, a faculty member working as a Research Assistant or Lecturer at state universities cannot benefit from the rights of a higher position until he/she retires, even if he/she has merit, unless the Higher Education Council or University Administrators give him/her a higher position, such as Dr. Lecturer. If he/she is not given a Dr. Lecturer position by the Higher Education Council or University Administrators, even if he/she is meritorious, he/she cannot benefit from the rights of a higher position until he/she retires. Moreover, his/her career path is slowed down and partially closed and he/she continues to do the work assigned by his/her supervisor. This situation is incompatible not only with the principle of merit, but also with the basic principles of public personnel administration such as fair and adequate wages and career.

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CHAPTER III

AN EVALUATION OF THE USA GOVERNMENT PERFORMANCE AND RESULTS ACT OF 1993

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1. Introduction

Modern concepts of public management suggest several strategies and techniques that can enhance the government's performance. These concepts primarily include accountable management, management by objectives, result management, and performance management. Eventually, a renovation of the structure and practices of public administration is needed in the direction of sustainable or continuous development (Yasamis, 2003:104).

Osborne and Gaebler (1992) see New Public Management (NPM) as part of what they term "entrepreneurial government". Their version of NPM is viewed as a new global paradigm emerging in contemporary public administration.

Recently, performance-centered improvements have become popular. Some of these reforms are managing for results, performance-based budgeting, and the Government Performance and Results Act (GPRA) of 1993, which emphasize the outcomes of government programs and actions (Ingraham et.al., 2003:1).

Performance measurement issues receive increasing attention as organizations try to implement new measurement systems that support organizational goals in a better way. Despite many of these initiatives being more common in the private sector, recent efforts to improve governmental performance have also placed important weight on performance measurement as a way to enhance accountability and improve decision-making. Certainly,

government agencies are in the front position to carry out new and strategic performance measurement systems (Cavalluzzo and Ittner, 2004:243). For example, the Government Performance and Results Act of 1993, which is the focus of this study, requires United States federal agencies to explain their strategic goals and develop results-oriented measures toward these objectives.

In this study, I discuss the GPRA in detail; its background, flaws and benefits, and its impact on government efficiency. Next I discuss the role of performance measures, and top management in this process. After providing detailed information about the GPRA, I argue the applicability of this new management concept to Türkiye, which has a highly centralized government structure.

2. The Government Performance and Results Act (GPRA)

2.1. The Background

The US attempts to improve the performance of government in several ways such as executive orders, memoranda, task forces, committees, and legislation. During the 1990s, the US government commenced enacting numerous main initiatives to foster a performance-based approach to the management and accountability of federal activities. Some of these include the Chief Financial Officers Act, and National Performance Review, but the most significant initiative is the Government Performance and Results Act of 1993 (Cavalluzzo and Ittner, 2004:244).

In January 1993, President Clinton announced a six-month review of the federal government under the leadership of Vice President Gore. The Vice President brought together experienced federal employees and invited them to recognize problems and recommend solutions. The idea behind this action was to reinvent a government that “works better and costs less” (Halachmi, 2002:67). After working on the reinventing government project, Vice President Gore remarked that the goal is to produce rules that work, rules that are results-oriented, customer-oriented, free of duplication and that give power to workers. This would necessitate a simplification of the process, a decrease in middle management, and an increase in government reactivity (Eisner et. al., 2000:49).

The results act is different from the National Performance Review (NPR). NPR was located in the political environment of the White House and proclaimed via executive orders and presidential pleas. GPRA, on the other hand, was a bill that emerged from congress with broad support and was signed by President

Clinton on August 3, 1993. Vice President Gore saw this legislation as a way to accomplish some of the goals that defined in the National Performance Review. This movement also influenced the electoral platform of President Clinton during his first presidential campaign (Radin, 1998:306; Kettl, 2000:26). It is interesting to note that Republicans and Democrats use different names for the legislation. Republicans call it “The Results Act” while Democrats tend to call it “GPRA” or use the complete name (Radin, 1998:312).

Unlike most of the earlier performance-oriented budget process reforms, the GPRA was implemented on an incremental basis. This alone is an important progress over the previous performance budgeting oriented efforts at reform (McNab and Melese, 2003:83). The GPRA is not a secluded amendment. Moreover, it is part of a wide enterprise for every federal agency to integrate planning, budgeting, management, and performance measurement (Halachmi, 2002:67).

2.2. The Purpose of the Government Performance and Results Act (GPRA)

The GPRA is an effort to initiate performance-based management and budgeting techniques at the federal level in the United States. The GPRA is the most recent repetition in a series of government-wide performance-oriented enterprises. It is the leading initiative among many of the modern federal management and financial reforms. The GPRA has three major purposes: increasing the value of congressional decision-making, advancing better internal management of government programs, and escalating responsibility to taxpayers (McNab and Melese, 2003:79).

The 1993 act requires that every federal department and agency will develop five-year strategic plans connected to measurable outcomes by September 30, 1997. This should be done by using a sequence of annual performance plans that will be required government-wide starting with fiscal year 1999. Beginning no later than March 31, 2000, and filed by March 31 of each succeeding year, yearly program performance reports are required. This set the performance indicators, goals, and actual performance for at least the three previous years (Kravchuk and Schack, 1996).

Essentially, it is difficult to be in opposition to legislation that looked to improve the efficiency and effectiveness of federal programs by founding a system to set objectives for program performance and to measure program results. The Act requires agencies to concentrate on program results, service quality, and customer satisfaction by requiring performance measurement and strategic planning. This legislation has several purposes:

- ✓ To improve the confidence of the people in the government by holding agencies accountable for achieving program results,
- ✓ To stimulate reform with a series of pilot projects that could be used as examples for others,
- ✓ To promote a focus on results, service quality, and public satisfaction,
- ✓ To help managers improve service delivery by requiring them to plan for meeting program objectives and providing them with information about program results,
- ✓ To improve congressional decision-making by providing information on achieving statutory objectives and the relative effectiveness of various programs, and
- ✓ To improve the internal management of the federal government (Radin, 1998:308).

In order to achieve this aspiring agenda, the GPRA consists of a four-step plan. The first step is for departments to present five-year strategic plans including goals and objectives for all main duties and operations. The second step is for departments to develop annual performance plans stating these goals and objectives in measurable form. The third step is for departments to give annual performance reports to the President and Congress that measure improvement toward performance objectives stated in their performance plans. The last step is to link budgets with performance (McNab and Melese, 2003:83).

2.3. The Failures of the GPRA

The paradox of GPRA is that it uses a top-down (centralized), one-size-fits-all policy direction to mandate a bottom-up (decentralized) implementation approach. The GPRA is a vague instrument when it is applied government-wide. Given the intricacy of the American political system, it is nearly impetuous to try to implement a one-size-fits-all approach to all conditions. It is also sarcastic that in an era where management calls for decentralization and flattened organizations the GPRA increases centralization (Radin, 2003:1253). The other argument is that bureaucratic discretion becomes to an increasing degree fundamental to the accomplishment of these policies (Long and Franklin, 2004:312).

Putting much of the accountability for GPRA to the sole examiners in the Office of Management and Budget stresses the budgetary of the legislation. Nevertheless, this reduces its significance for satisfying agency management needs and definitions of program efficiency. While the legislation does not

state that one of its objectives is to decrease federal expenditures, the general perception of the implementation process is that it is closely connected to a budget-cutting agenda (Radin, 1998:312).

Another criticism is that it makes it hard to engage in a reflection of social values because the law demands that performance goals will be articulated in “an objective, quantifiable, and measurable form” (Radin, 1998:313). Ever since the implementation of the GPRA process, a considerable amount of paper documents produced, and incredible amount of personnel time has been involved in developing documents, responding to assessments, etc. (Radin, 2003:1248).

One federal department conducted a survey that asked staff in the department “why they were involved in the GPRA process?” They remarkably answered that they were involved in GPRA just because Congress requested it from them. This shows that the compliance attitude is alive and well in this Act. This also reveals that the requirements are not regarded as helpful to the people who put into practice those requirements (Radin, 2003:1256).

According to Radin (2003:1256), the GPRA approach does not lead to serious attention to performance in the federal government. It establishes unpractical expectations, nourishes pessimism, and produces few results.

The GPRA requires that information is obtainable to be able to decide whether programs are working efficiently. In several instances, however, agencies do not have that data accessible. A large amount of the data that is presently available is not focused on results but on inputs, and rarely on outputs. The process of improving performance measures with third parties needs a lot of time and requires a high level of agreement among all players on program outcomes and proper program technologies (Radin, 2003:1254).

The last inefficiency is that the Act describes what kinds of reports are necessary, but does not provide much assistance on how to produce them at agencies with very varied missions and conditions. Therefore, federal managers have to plan their achievement strategies (Hakes, 2001:322).

Whatever its flaws, GPRA is not monolithic. The Act acknowledges that not all agencies can readily produce objective, quantifiable, and measurable statements of goals and actions. It thus permits an agency, in consultation with approval by the Office of Management and Budget, to build a substitute form of performance measurement and reporting that occupies illustrative statements to evaluate whether a program has accomplished minimum levels of efficiency (Feller, 2002:442).

3. The Impact of Management to Government Performance

Ingraham et.al. (2003:4) argue that efficient management is vital to the overall efficiency of government. They assert that management matters in ways that are central to public performance. They argue that public organizations will be more likely to be effective performers if they have good managers and good management systems.

It is evident that public management or administrative manner matters to government performance. Preceding research showed that public managers could affect performance improvement in their agencies (Coggburn and Schneider, 2003). In their analysis, Coggburn and Schneider (2003) revealed that management capacity directly affects the policy commitments of state governments.

Members of Congress, academics, planning offices, and others have discussed the successes and failures of GPRA. However, senior managers have been mostly silent in public debates about managing for results. This void is unfortunate because managers with real line tasks are in a good position to make informed assessments about improvement so far in measuring for results (Hakes, 2001).

3.1. The Role of Performance Measurement

The role of measurement in public performance is very important. There is good evidence that performance measures and performance information are becoming one part of policy decision-making in many governments. Certainly, that is the goal of the Government Performance Results Act at the federal level (Ingraham et.al., 2003:3).

Obviously, using performance measurement data as a foundation for forcing development efforts in a merged style is implied in the GPRA. However, management remains responsible for sustaining performance-improvement efforts (Kravchuk and Schack, 1996). The development of performance indicators has received importance within the reinventing government movement, especially in the application of total quality management to the public sector (Osborne and Gaebler, 1992). Endorsed by Vice President Gore's National Performance Review, the 1993 Act has assumed a central role in the reinventing government process (Kravchuk and Schack, 1996).

Adjusting employee performance management with the agency mission is key to setting up a high-performing agency. Nevertheless, it is a difficult task.

An agency must establish a clear mission, goals, and measures. Goals, targets, and measures are built into budgets and performance appraisals to provide even stronger inducements for credible results management (Caudle, 2001:78; Gül and Kırılmaz, 2013).

Organizational factors such as top management commitment to the use of performance information, the extent of decision-making authority delegated to users of performance information, and training in performance measurement techniques have significant positive influences on measurement system development and use. However, technical issues play an important role in performance measurement implementation. In particular, difficulties selecting and interpreting appropriate performance metrics in hard-to-measure activities are a major obstacle to measurement system innovation (Cavalluzzo and Ittner, 2004:244).

In performance measurement, the ability to select and assess performance metrics that capture desired outcomes is very critical. In various public and private sectors, employees perform many tasks that are hard to evaluate using objective, quantifiable performance metrics. (Cavalluzzo and Ittner, 2004:245; Gül and O'Connell, 2012).

Good performance measures are essential for any modern organization to recognize successful strategies and throw away the unsuccessful ones. Finally, measuring results makes agencies more responsible to the public. Good performance measures should be clear, credible, balanced, flexible, and tied to desired results (Hakes, 2001:321).

4. The Applicability of the New Public Management Paradigm to Türkiye

Turkish managerial system has an extremely centralized and bureaucratic structure. Considerable amount of resources and authority concentrated in the central government. In contrast, Quality Management suggests independent organizations and flexible structures based on teamwork and vertical and horizontal coordination within and among the organizational units (Ustuner and Coskun, 2004:168).

Sozen and Shaw (2002) argue that New Public Management is a public administration management model that is valid across the world without taking into consideration the social, cultural, and political nature of the future host country.

Türkiye has a strong public commitment to become a more modern Westernized country and this is reflected in Türkiye's repeated applications for full membership of the European Union (EU). The EU has identified that Türkiye needs to put greater emphasis on decreasing waste and improving the management, efficiency, and effectiveness of public resources (Sozen and Shaw, 2002:478).

Walsh (1995:71) argues that the "more unified and centralized the system of political control and power, the easier it is to introduce new approaches to the management of public services." Türkiye is certainly a highly centralized state with a lot of power in the hands of the Presidents' office. Therefore, in this argument, Türkiye should have the ability to put into action such reforms if the government were to be committed to them (Sozen and Shaw 2002:479).

According to an OECD report (2002), there is an emerging need for a comprehensive regulatory reform to rebuild a modern Türkiye. However, there are some challenges: Firstly, Türkiye must restore confidence in the institutions of government. Türkiye currently faces a crisis of public confidence in these institutions and their capacity to respond to the current economic problems and challenges (OECD, 2002:8).

Another important challenge lies in the low efficiency, transparency, and accountability of the public sector. Administrative practices favor legalism and formalism instead of management based on results, outcomes, and market orientation. Pay increases are not based on performance-related criteria, and poor performance is not disciplined by sanctions. Incentives are not arranged to encourage good practices. Therefore, the attractiveness of the public sector as an employer is declining (OECD, 2002:8).

The deep economic crisis in Türkiye is revealing the considerable weaknesses of Türkiye's current public administration structures. The need for urgent achievement of comprehensive reforms is confronted with regulatory institutions and practices that are outdated, ineffectively managed, and partially undermined by a very low trust in government. The implementation and enforcement capacities of the public sector are far behind policy decisions. If basic regulatory capacities are not in place, the likelihood that new reforms will succeed is limited (OECD, 2002:45).

5. Conclusion

The impact of management on performance in public organizations has long been a key question in public administration. Reforming public institutions

requires comprehensive and joint efforts. The GPRA is a significant landmark in the history of governmental reform. The GPRA is an important component of the continuing effort to reinvent and improve the performance of the US federal government (Halachmi, 2002:71).

It is obvious that performance measurement can improve performance, and organizations should definitely use them. Nevertheless, managers should get enough autonomy to select for what purpose and which measures to use. Pushing for the uniform completion of GPRA in the US may weaken future efforts of managers to develop and use ad hoc performance measurement (Halachmi, 2002:72).

Regulators use performance standards as a device of regulation in order to set up regulatory goals and delegate to regulated parties the task of finding the most cost-effective means of accomplishing these goals (Eisner et. al., 2000:15).

This law requires that all federal agencies engage in strategic planning, then in performance planning and reporting. These activities are viewed as critical steps in moving agencies towards performance-based management. The act requires the development of three documents: Strategic plan, annual performance plan, and annual performance report. These serve together as an effective and efficient management tool to inform decision-making and budget allocation by outside funding sources (Long and Franklin, 2004:310).

Governments that manage for results focus persistently on discovering the most effective ways of accomplishing their objectives, employing these techniques across all management subsystems, and monitoring agency activity in light of these objectives. This means that they must have the ability to identify clearly, what their objectives are. They emphasize the importance of strategic planning as a process that articulates the mission and goals of the organization, and long-term strategies for achieving those goals (Ingraham et.al., 2003:6).

It is very critical to obtain the support of top leaders in agencies and organizations to achieve the goals of the GPRA process. However, performance measurement initiatives are part of the government attempt to cut expenditures. The implication is that efficiency improvements will lead to lower budgets, which reduces top management's incentive to support performance measurement efforts. Consequently, there may be little reason for top agency management to support performance measurement efforts (Cavalluzzo and Ittner, 2004:248).

It is obvious that public management or managerial behavior matters to government performance. The administration needs to focus all of its energies and resources on the efficient achievement of goals and objectives. Deviating from that focus might produce inefficiency.

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CHAPTER IV

ENVIRONMENTAL MANAGEMENT AND GLOBAL CLIMATE CHANGE

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1. Introduction

Environmental management strategies have started to diversify in recent years. The climate crisis has formed the basis of this beginning. Every unconscious step taken to meet the demands of the consumer society has caused the most environmental damage (IPCC, 2007). The damage caused by human beings to the environment, which has the widest range of resources, has become increasingly difficult to compensate for (Brock and Taylor, 2004; Arat, 1995). Climate change has become a current issue as the most dangerous of the current environmental problems (Barnett, 2003). In order to cope with the negative effects of climate change, different methods have come into play in terms of environmental management strategies because, according to the reports of international climate research organizations, the damage caused by the climate crisis has been seen on many environmental parameters such as water, air, and soil (bolton.ac.uk, 2023, euronews.com, 2023; IPCC, 2014).

A comprehensive environmental management and discipline are necessary for the destruction caused by climate change on the environment, which is a common heritage that includes all living and non-living forms (ReVelle, 2000; Thornton and Hsu, 2001). Correctly planned protection steps will make it easier to cope with climate change. Environmental management comes into play at this

point. Thanks to the effective use of the dynamics of the process in this form of management, which includes elements such as planning, implementation, monitoring, and evaluation, the environmental impacts of climate change will be reduced, and important steps will be taken in terms of environmental sustainability. In this regard, establishing a continuously functioning environmental management network is important in solving problems (Keleş et al., 2011; Güler et. all., 2001; UNDP, 2023). The sustainability of environmental resources will be ensured by understanding the environmental problem and implementing the plans for the problem (Güner, 2020; Mileti, 1999). As the previous sentence suggests, it is expected to succeed in solving an important environmental problem by recognizing that climate change is a problem and by planning and implementing plans and practices to address it.

If the uncertainty about the existence of the climate crisis does not disappear and steps are not taken in governance, this crisis will become unmanageable (Akbulut and Kaya, 2020). When we look at examples of environmental damage caused by climate change, we see that it causes many problems, such as loss of biodiversity, pollution of water resources, air pollution, and soil pollution (Clarke, 2007; Demirbaş and Aydın, 2020; WMO, 2023). Therefore, planning and implementing the steps taken towards climate change within the understanding of environmental management is an important process. Only the right strategies will lead to success in solving the climate change problem (MEU, 2023).

Within the scope of this study, the first step is to understand environmental management and to reveal the strategies applied in this form of management. The main goal is to determine the right steps taken against the negative effects of climate change from a managerial point of view and the right practices expected to be done and to bring useful work to the literature by addressing the problem of climate change under the title of environmental management.

2. Environmental Management

Looking at the word environment from a conceptual point of view, it can be seen that the general definition of the word environment is a living space where living and non-living forms live together, and living things need to coexist in order to survive. The definition of the environment mentioned here indicates that living things need each other in order to survive (Germain et. all., 2002; Keleş et. all., 2011; Netherwood, 1996). In this case, it is understood that the environment has various resources. The important point is to benefit by ensuring the correct use of resources and their transfer to future generations. The basis

of environmental problems actually starts with resource utilization. In order to meet the needs of human beings, the benefit obtained from the environment in the wrong ways has led to the emergence of problems. In order to solve the problems, a management need has emerged, and an environmental management mechanism has been developed as a different discipline (Germain et. all., 2002; Keleş et. all., 2011; Netherwood, 1996).

The concept of environmental management is a process involving many parameters. Looking at its content, the basic principle of this form of management is the strategies applied to reduce the negative effects caused by the unconscious practices of people on the environment. It is to ensure that natural resources are used for the benefit of people but that environmental damage is minimized. The main objective of environmental management is to minimize the effects of human activities on the environment. It also aims to protect ecosystems and human health, support sustainable development, and ensure the effective management of natural resources (Güler et. all., 2001; Netherwood, 1996). Environmental management is an important process for governments. Within the scope of sustainable development goals, it aims to prevent crises that will prevent development by preventing material losses caused by environmental problems such as climate change. In this context, we can say that environmental management is a multifaceted network of management processes (Ekşi, 2016; European Parliament, 2001). The approach to environmental problems within the current traditional management approach may not be sufficient to keep up with the age. Therefore, understanding environmental management that goes beyond tradition, which has a different system within itself, is an important point that will increase the desired environmental quality (Shrivastava, 1995). The main differences between traditional and environmental management are presented in Table 1 below.

Table 1. Comparison of Traditional Management and Environmental Management

Traditional Management	Environmental Management
There is the principle of mastering the environment.	There is an understanding of being intertwined with nature.
The environment is viewed as a resource and managed accordingly.	There is an understanding that environmental resources are limited.
Waste and pollution issues are viewed as externalities.	It is aimed at managing waste and pollution and minimizing their damages.

Source: Shrivastava, P, 1995

As the table illustrates, it is seen that an environmentally sensitive management approach has more acceptable standards. The effective use of people dominates the traditional understanding of management, and the environment is seen only as a resource necessary for needs. It has been realized over the years that this understanding is a wrong strategy. Climate change, the effects of which have been increasing since the Industrial Revolution, is proof of this misunderstanding (Shrivastava, 1995).

2.1. Purpose of Environmental Management

The fact that natural resources are not unlimited, but adopting the management principle in the traditional management approach in the opposite way has been the beginning of the problems. Environmental management, which comes into play at this point, has been specialized around a number of main objectives. The protection and sustainability of environmental resources are at the forefront of these objectives. In addition, the understanding of environmental management deals with issues such as controlling human activities that harm the environment, minimizing environmental problems that will prevent sustainable development, protecting the ecosystem, resource efficiency, energy efficiency, and social awareness (Karaman, 1996; Yaşamış, 1994; Keleş et. all., 2011).

The main objectives of environmental management are not only about protecting the environment. Protecting the environment and improving its quality seems to be a fundamental objective. However, health problems caused by major environmental problems such as climate change are another objective of environmental management that needs to be addressed. Environmental problems negatively impact human health after a while; for example, unusual environmental conditions such as air pollution, water pollution, and extreme temperatures can cause many physical and mental disorders. Therefore, environmental management aims to protect human health while reducing the negative impacts on people (Şanlı, 1984; Manisadilis et. all., 2020). The role of national and international cooperation is important in realizing these objectives.

2.2. Principles of Environmental Management

Environmental problems, which are a major problem today, have the potential for disaster for future generations if the risk management process is not successful. In this regard, it is necessary to have a set of rules and disciplines to achieve the objectives in the risk management process and understand environmental management. Thanks to the principles, the progress of rules and disciplines is ensured (Barrow, 2000). The elements adding function to environmental management are as follows.

- The positive and negative effects of all living and non-living things in the environment on each other can be managed by humans. In other words, it is stated that the environment is manageable, and humans have the power to manage it.

- Since the environment is everyone's common heritage, everyone is responsible for the problems that will occur in this form and their solution.

- Environmental protection is an important situation for future generations. Unlimited consumption of resources means usurping the rights of the next generation and ignoring the principle of equality.

- It is not a problem for people to benefit from the environment. The main desired phenomenon is not to cause environmental problems while performing their activities.

- The understanding of environmental management should be risk-oriented. Efforts should be made to prevent problems before they occur.

- Legislators should not depend only on laws to prevent environmental problems. Social participation should be included in the policies produced to solve environmental problems.

- Environmental management policies should not be regionally focused. Management policies covering all segments in a wide array should be adopted.

A sustainable environmental management approach should be provided (Anadolu University Publications, 2018; Barrow, 2000)

2.3. Environmental Management Policies

Policies are an important dynamic used in solving problems in all areas of life. The solution steps that need to be implemented to achieve the main objectives in environmental management are realized with the right policies. Therefore, environmental policies need to see the conditions well and offer sustainable solutions. It is clear that policies are an important step in environmental management and an issue that should be considered. There are a number of principles adopted in the implementation of environmental policies. These principles are as follows:

- Polluter pays principle
- Prevention principle
- Cooperation principle
- Prudence principle (Anadolu University Publications, 2018; Ulucak, 2013; Demirci, 2010; Barrow, 2000)

The above principles are important practices in the process of solving environmental problems. According to the polluter pays principle, those who cause environmental damage should have the same degree of responsibility in practices to eliminate the problem. We can see an example of applying this principle in the Paris Climate Agreement. Reducing emissions by countries that cause carbon emissions and financial support to underdeveloped countries are good examples of this principle. The prevention principle aims to take measures against environmental problems at the stage of their occurrence and reduce their impact. The principle of cooperation is an important step in terms of content. Because environmental problems generally have the potential to affect very large geographies. Therefore, a global effort is required in the management of environmental problems. Thanks to the cooperation realized through national and international practices, environmental management processes proceed more healthily. Finally, the precautionary principle is a principle that has legal grounds and aims to leave a healthier and livable environment for future generations (Anadolu University Publications, 2018; Ulucak ,2013; Demirci, 2010). The United Nations (UN) Rio Conference on Environment and Development was the conference where binding decisions were made on a global scale and important steps were taken. The meetings that include important decisions on the environment at the international level and shape environmental policy are given below:

- 1971 - Convention on Wetlands of International Importance, especially as Waterfowl Habitat
- 1972 - Convention for the Protection of the World Cultural and Natural Heritage
- 1972 - Declaration of the Stockholm UN Conference on Man and the Environment.
- 1973 - Convention on International Trade in Endangered Species of Wild Fauna and Flora
- 1976 - Convention for the Protection of the Marine Environment and Coastal Zone of the Mediterranean Sea
- 1989 - Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
- 1992 - Rio Convention on Biological Diversity.
- 1994 - Paris United Nations Convention to Combat Serious Drought and/or Desertification, especially in Africa

- 1997 - Kyoto Protocol to the Kyoto United Nations Framework Convention on Climate Change.
 - 2009 - Cartagena Protocol on Biosafety
 - 2012 - Rio Rio+ 20 UN Conference on Sustainable Development
 - 2016 - Paris Climate Agreement
- (Türk and Erciş, 2017; UNFCCC, 2016; UNFCCC, 1997)

2.4. Why is Environmental Management Necessary?

This section, which sets out the general purpose of this study, will present the grounds for the necessity of environmental management. Rapid population growth, waste, fossil fuels, greenhouse gases, deforestation, and other anthropogenic factors, such as deforestation, have led to a decline in the quality of human life and environmental standards. This situation has brought meteorological and climatological disasters, pollution, and epidemics (Clarke, 2007; WMO, 2023; IFRC, 2020). As a result of the unconscious destruction of the environment, perhaps nature has begun to take its revenge in this way. The need to intervene in environmental problems before they turn into disasters has emerged, and the concept of environmental management has emerged. Managing the environment, one of the three important development components, is difficult. In order to provide management, the situation must first be understood, and the problem must be identified (European Parliament, 2020; Tıraş, 2012). Therefore, the following sections examine the origin and causes of the problems that need environmental management.

2.4.1. Origins of Environmental Problems

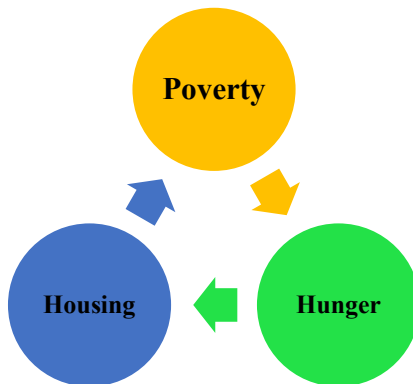


Figure 1. Origins of Environmental Problems
Source: Anadolu University Publications, 2018

With rapid population growth, meeting the needs of undeveloped and developing countries has become a serious problem. Human beings who want to meet their demands from the environment have unconsciously destroyed the environment. The important point here is that, as shown in Figure 1, environmental problems arise from the misapplication of resource utilization as a result of the formation of parameters such as housing, hunger, and poverty (Anadolu University Publications, 2018).

2.4.2. Causes of Environmental Problems

Basically, there are a number of factors that play a role in the formation of environmental problems. If we gather these under general headings, we can see that these factors are population growth, unplanned urbanization, and unplanned industrialization. Unpreventable population growth rate has increased the need for resources. Unplanned urbanization has led to the destruction of green areas, the filling of seas, the increase in reinforced concrete structures, and the proliferation of waste. Unplanned industrialization has played an important role in the increase in carbon emissions and the emergence of major environmental problems such as climate change (IPCC, 2007; Mittal, 2013).

Knowing the causes and origins of environmental problems is essential for implementing a correct environmental management system. A good understanding of these reasons is a guide to comprehending the necessity of the subject. The steps of planning, implementation, and supervision, which are the basis of the management discipline, will progress more easily when the origin and causes of environmental problems are well analyzed.

2.5. Major Environmental Problems

Today, environmental problems are increasing and diversifying. The main environmental problems are as follows:

- Air pollution
- Soil pollution
- Water pollution
- Food contamination
- Noise pollution
- Wastes
- Biodiversity loss
- Acid rain

- Deforestation
- Radiation
- Ozone depletion
- Global Climate Change (Akin, 2007; Baykal and Baykal, 2008; MFA, 2023; EEA, 2023).

The environmental problems itemized are interrelated and can potentially affect each other. Global climate change, which is the subject of our study here, has been making human life more and more difficult with its negative effects in the last century. Therefore, a proper understanding of environmental management is needed to combat climate change.

3. Global Climate Change as an Environmental Problem

The climate crisis is one of the most important environmental problems of recent years. It is also a silent danger that has emerged over a long period of time. When the effects of climate change started to be understood, it was too late for some situations. Carbon emissions have reached unprecedented values in the past years with increased anthropogenic activities. The earth's average temperature has almost reached the one-and-a-half-degree limit. In addition, the secondary disasters brought about by climate change have increased in severity. The increasing effects of the problem have revealed the necessity to take measures on a global scale. When we look at the factors that cause global climate change, we see that they are similar to the causes of the environmental problems mentioned above. Increased use of fossil fuels, increase in carbon footprint, increase in greenhouse gas emissions, and destruction of green areas and wastes are among the main causes (Türkeş, 2008; Aksay et. all., 2005). The complexity of climate change also has the potential to cause secondary environmental crises. A concerted effort is required to address this situation (Akbulut ve Kaya, 2020). Proper implementation of environmental management strategies will reduce the environmental impacts of climate change. Environmental management is also a method of combating global climate change. It is possible to ensure that environmental systems are not affected by the climate crisis with the right management approach.

3.1. Environmental Problems Caused by Climate Change

Climate change is an important environmental problem, but it also causes environmental problems. The environmental impacts of climate change are as follows:

- Abnormally high-temperature increases and this situation causes damage to living and non-living forms living in the environment
 - The disappearance of some continental areas as a result of rising ocean and sea levels
 - Acidification of the oceans and the impact on the life forms living in the ocean
 - Increase in extreme weather events and related disasters causing damage to the environment
 - The climate crisis is causing water and food shortages
 - Climate change has negative impacts on human health as well as the environment, and this situation is contrary to the sustainability of human life, which is one of the objectives of environmental management.
 - The impacts of climate change, such as extreme temperatures and extreme events, will devastate agricultural areas and lead to a food crisis.
 - Creating negative impacts on the ecosystem and causing a decrease in biodiversity
 - As the adverse conditions caused by climate change cause disruption of order in settlements and environmental damage, people leave their settlements, and climate migration occurs.
- (WMO, 2023; IFRC, 2020; Black et. all., 2011; Clarke, 2007; Aggarwal, 2010).

4. Global Climate Change and Environmental Management

The relationship between climate change and environmental management is a set of processes that require developing and implementing strategies for a sustainable future. This relationship is important for environmental sustainability, ecosystem health, and human quality of life. Integrating the methods used in mitigating the negative impacts and environmental problems caused by climate change into environmental management strategies will ensure that the process is carried out healthily (Glatzner, L., & Loew, T., 2022). Adaptation and mitigation methods used in combating climate change aim to intervene before the impacts of climate change peak (Glatzner, L., & Loew, T., 2022). The figure below shows the risk phase of climate change management.

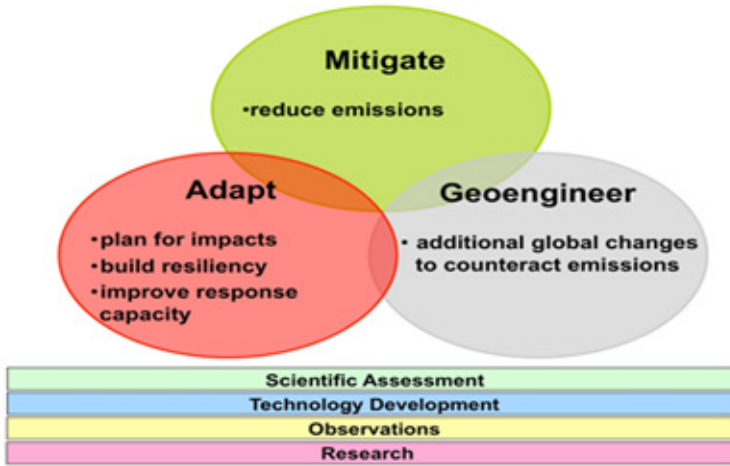


Figure 2. Climate Change Risk Management

Source: Higgins, 2014

Figure 2 above shows that risk management is a prominent practice in combating climate change. Accordingly, this triple impact mechanism consisting of adaptation, mitigation, and engineering solutions is supported by scientific assessments, technological developments, observations, and research. The mitigation phase aims to reduce greenhouse gas emissions, while the adaptation phase aims to make an impact plan and improve capacity. Finally, in the engineering phase, it is a management method that aims to develop solutions to counter emissions (Higgins, 2014).

Considering climate change risk management in the environmental management process is expected to make the process more efficient.

4.1. Environmental Management

Environmental management is a system involving many parameters. The ISO 14001 system introduced quality standards to environmental management, aiming to maximize the benefit obtained from the process. The current environmental management system consists of planning, implementing, controlling, and taking action steps. However, this system is not only an application specific to climate change (Babakri, 2014; Matthews, 2003). It guides companies and organizations to ensure institutions' environmental adaptation and sustainability. However, the important point here is that climate change has a global impact mechanism, not only on a sectoral basis (Babakri, 2014; Matthews, 2003). In other words, environmental management systems

such as ISO 14001 are expected to have an effective mechanism for analyzing and mitigating the effects of climate change.

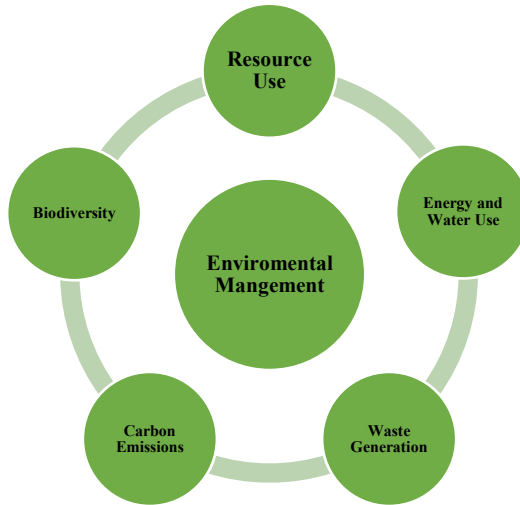


Figure 3. Elements considered when implementing an Environmental Management System

Source: *www.greenelement.co.uk, 2023*

Figure 3 above shows the elements that are taken into account when implementing an environmental management system. It includes important steps such as effective and efficient resource utilization, controlled reduction of energy and water use, controlling and reducing waste at source, controlling carbon emissions, and preventing biodiversity loss. We can say that the practices in this figure are also climate change risk management steps (*www.greenelement.co.uk, 2023*). A properly implemented environmental management system will subsequently include steps to combat climate change.

In research on the adequacy of existing environmental management systems in combating climate risks and the adequacy of the existing environmental management systems in combating climate risks in organizations using environmental management and systems developed for this purpose, different suggestions were made on the subject (Glatzner, L., & Loew, T., 2022). Accordingly, a number of options were reviewed, and recommendations were presented, including changing ISO 14001 separately from the existing environmental management system or adding a climate-specific regulation (Glatzner, L., & Loew, T., 2022). This is illustrated in the figure below.

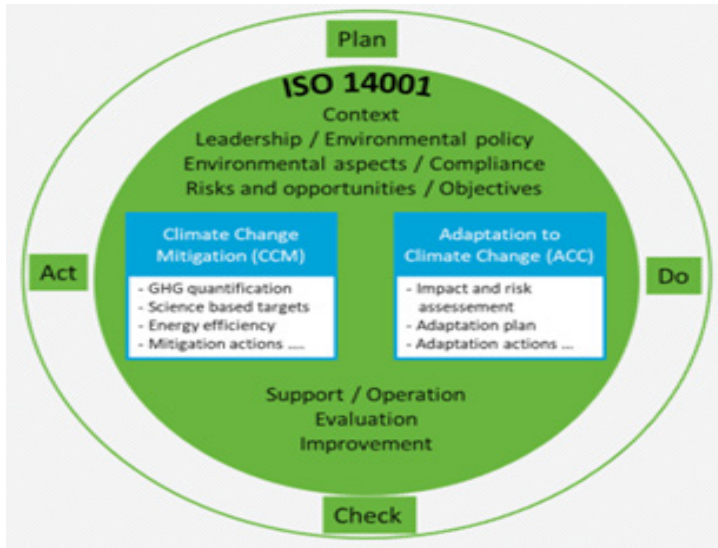


Figure 4. Climate-specific further development of ISO 14001

Source: Source: Glatzner, L., & Loew, T., 2022

The diagram in Figure 4 above is a suggestion created by the researchers. Accordingly, they stated that the existing environmental management system should be customized by considering climate risks, or a different climate management system should be created. An environmental management system developed in terms of climate risks will further integrate climate change adaptation and mitigation steps into the system and customize the process in terms of climate (Glatzner, L., & Loew, T., 2022). It is envisaged that combating climate risks will be more effective if mitigation activities, climate risk assessment, adaptation plans, adaptation actions, and activities related to greenhouse gas mitigation find more space in the existing environmental management system. Different from this proposal, a management system different from the environmental management system has been proposed for climate change management, and the content is based on climate strategy and policies (Glatzner, L., & Loew, T., 2022).

5. Conclusion

Within the scope of this research on climate change and environmental management, it has been concluded that the right environmental management systems are needed to overcome the climate crisis. Factors related to climate change should find more space in quality-based environmental management

systems applied on a sectoral basis. During the research process, it was observed that climate change causes many environmental problems, and the prevention activities against it are combined with environmental management. In other words, climate change and environmental management actually serve a common denominator. Although climate change is a huge environmental problem, it is possible to control it with the right managerial strategies. At this point, a different climate management system and guidelines can be developed if necessary. The suggestions we will give to minimize the negative effects of climate change within the discipline of environmental management and to leave an environment that is not exposed to the negative effects of climate for future generations are as follows:

- Environmental problems caused by climate change should be well analyzed.
- The relationship between climate change and environmental management should not be externalized, and these two concepts should not be considered separately.
 - Climate crisis-oriented practices should be increased in environmental management strategies.
 - Since combating climate change will also reduce environmental problems, managerial steps should be planned more carefully.
 - Climate change adaptation and mitigation studies can be carried out by considering the elements of the environmental management system.
 - Societies that want to achieve sustainable development goals should analyze climate change indicators well because the steps taken on important issues such as reducing greenhouse gas emissions, transition to clean energy, efficient resource use, and protection of biodiversity will both reduce the effects of climate change and facilitate the achievement of environmental development goals.
 - The management phase of climate change should be planned in a risk-oriented manner. Activities should be shaped accordingly.
 - Studies should be carried out on sustainable energy for risk-oriented environment and climate change management.
 - Environmental factors should be taken into consideration in city and infrastructure planning.
 - Efforts should be made to protect green and forested areas. Thanks to the ability of forests to absorb carbon, an important step is taken against a factor that causes climate change.

- Environmental management should develop local, regional, and national adaptation strategies to adapt to climate change. These strategies should aim to strengthen communities, ecosystems, and economies against the impacts of climate change.
- Environmental management strategies should be developed for efficient and effective use of resources.
- International and social cooperation should be ensured.
- Environmental management strategies and climate change adaptation efforts will be successful if they converge on a common denominator.

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CHAPTER V

CRISIS MANAGEMENT IN HEALTH SERVICES

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1. Introduction

*'To be clear and open in crises, to solve problems
It is important not to put it off and to try to resolve it by talking.'
(Nevzat Tarhan)*

Individuals and businesses are open systems in constant relationship with their environment. Therefore, there is change in the social, cultural, economic and political structure of every society. Globalization, the development of technology and the transition to the information society are driving the age we live in to a rapid change. Therefore, it is inevitable to keep pace with change in order for businesses and organizations to survive.

There is no escaping change and the crisis it creates, but the question is when and how to make change. While change enables businesses and societies to develop, it also creates new problems and tensions.

It is inevitable that both institutions and individuals will show resistance to this tension and crisis. In the face of this resistance, people experience conflict both individually and institutionally during the change phase. When these problems multiply one after the other and cannot be solved, they cause major crises.

2. Crisis and Crisis Management Concept

A crisis is a state of tension that is not anticipated or perceived in advance, that requires a quick and urgent response by the organization, that threatens the existing values, goals and assumptions of the organization by making its prevention and adaptation mechanisms inadequate. Concepts such as stress,

anxiety, panic, etc. are expressions of emotions experienced during the crisis period (Tağraf ve Arslan, 2003:150).

Crisis management, on the other hand, is the process of evaluating warning signals against possible crises before the crisis, establishing preparation and prevention systems, trying to control the crisis during the crisis in order to eliminate the crisis and minimizing its effects and returning to the state of balance, and providing the necessary learning by making post-crisis evaluation (Tengilimoğlu vd., 2009: 409; Tengilimoğlu vd., 2015: 525).

2.1. Sources of Crisis

Many factors such as rapid changes in the environment, uncertainty, fluctuations, insufficient information obtained from outside, inaccurate data, poor communication, poor coordination within and outside the organization, lack of planning, inability to manage time well can cause the organization to enter a crisis. In short, if the activities of the business cannot respond to the demands and expectations of the environment, it causes a crisis. The sources of crisis are internal organizational and external environmental factors. These are (Dinçer, 2013: 407-413);

External environmental factors are factors that are outside the business and cannot be controlled. Natural disasters include natural disasters such as fires and floods that management cannot control and factors related to the natural environment, soil, water and climate. General economic uncertainties and fluctuations include factors such as high rates of inflation, disruption of the supply and demand balance in goods or services, the emergence of disputes such as strikes and lockouts, braking of demand due to political turmoil, decline in production, credit constraints and lack of resources. Technological innovations; the speed of technological changes, the process of adaptation to change and the rate of dependence on technology will be effective in the emergence of the crisis. Legal and political regulations; new government decisions in both economic and other areas and provisions that impose new obligations on businesses can lead to a crisis. Socio-cultural factors; changes in the value judgments of the society, decreased interest of customers, social unrest and social unrest may lead businesses to crisis. Strong competition; the struggle of large and powerful competitors to increase their market share by differentiating their products and using the advantages of technological innovations can lead to a crisis.

Intra-organizational factors are caused by the inadequacies and problems occurring within the organization. Incompetence of top managers and their

personalities; incompetence and incompetence of top managers, such as misunderstanding the role of the top manager, weak intuition, etc. can cause a crisis. Inadequate information gathering and experience; failure to recognize the signals about the negative interaction between the organization and its environment can cause a crisis. The values, beliefs and attitudes of the management can be effective in the emergence of the crisis. Failure to learn from the organization's historical background and experiences can also cause a crisis. Fear and anxiety of loss may cause a crisis in the birth, development and maturation phases of the business.

2.2. Stages of The Crisis Process

The crisis process is not only the responsibility of the top management, but also of all employees, levels, units and departments within the organization. In order to manage the crisis and eliminate the negative effects of the crisis, it is necessary to know the stages of the crisis well. The stages of the crisis are divided into three parts: perception of crisis warnings and inaction, crisis period and dissolution period (Demirtaş, 2000: 361-363).

Perception of crisis warnings and period of inaction: At this stage, signals have emerged about situations that threaten the organization's goals, objectives and existence. Problems have started to arise in the organization and its environmental relations. Internal and external information systems are weakened and unable to take the necessary measures for the crisis. In this period, as the severity of the crisis increases, organizational problems become evident and panic begins. Since information is insufficient at this stage, the decisions to be taken cannot be successful.

Crisis period: Healthy decisions cannot be made because crisis signals cannot be received, interpreted and evaluated. It becomes inevitable for the organization to enter a crisis period. Failure to centralize authority, experiencing fear and panic, and disrupting and affecting the decision-making process are among the characteristics of this period.

Period of dissolution: In this period, if solutions that can successfully overcome the crisis cannot be developed, the organization becomes unable to survive depending on the severity of the crisis. As the organization's relations with its environment deteriorate, labor turnover, employee complaints, stress and panic increase within the organization, leading to organizational disintegration (Can, 2011: 337-340).

2.3. Crisis Management Process

The crisis management process operates in five stages. These stages are (Can, 2011: 337-340);

Receiving crisis signals: Since crisis signals contain information about the existence and severity of an impending crisis, managers should be sensitive to these signals. Various early warning systems that can receive different signals should be installed and marked in the organization.

Crisis preparedness and prevention: Prevention and protection mechanisms use the information from early warning systems to inform management about the measures to be taken in response to a potential crisis.

Crisis containment: Top management takes action to prevent the crisis in line with the information received. Using the data obtained in the first phase of crisis management, the course of the crisis is monitored and necessary measures are taken.

Transition to normal situation: After the crisis is under control and the crisis is overcome, the organization must be stabilized.

Learning and evaluation: At this stage, decisions, measures and practices taken during the crisis period are reviewed and lessons are learned from the crisis period.

2.4. Types of Crisis

Types of crisis in general terms (Sucu, 2000: 22):

1. External economic attacks; Direct economic and are factors that threaten the financial foundation of the organization.

2. Attacks based on external information: Attacks that come from outside the organization and are all attacks that aim to compromise important information. These attacks are theft of secure information, disclosure of such information, and theft of information that is damaging to the organization the spread of rumors.

3. A work stoppage is a work stoppage in a factory or production stops due to lack of equipment in one of them.

4. Psychopathology; Sabotage, executive kidnapping, sexual harassment and product damage criminal activities such as giving.

5. Human resource factors; low employee morale, change of managers and unethical behavior in the work environment include reasons such as.

According to the warning times, crisis types are categorized under two main headings is being collected (Tüz, 2001: 10).

1. Crises that come out of the blue: When the company and often effectively disrupting the work of opposing groups. This is groups created the structure; investor, customer, supplier and other groups.

2. Internalized crises: In this type of crisis, internal or external generally unknown and leading to negative consequences, affecting society, legal hassles, unnecessary expenditures and other costs is any serious business problem (Baydaş ve öte., 2011: 232).

3. The Importance Of Crisis Management In Health Services

Crisis management is a process that is strengthened by planning to prevent or minimize the losses or damages that crises may cause. Crisis management covers not only the times of crisis but also before and after the crisis (Coombs, 2007: 3).

Crisis management is the process of planning, managing and managing the process of combating possible crises of health institutions is a strategic approach to minimize the consequences. Crises, unexpected events and full of uncertainties. In order to cope with these challenges, healthcare organizations need an effective must have a crisis management plan. For effective implementation of crisis management health institutions should take a range of preventive measures and establish a rapid and effective response mechanism strengthen communication strategies and manage resources effectively. Pre-planned crisis scenarios, training programs and continuous evaluation mechanisms are also are important elements that ensure preparedness for crises (Alay ve Metin, 2023:28).

Health institutions are service providers with preventive, curative and rehabilitative functions. The most important objectives are to provide health services to the society on time, accurately and to the extent needed. The organizational structure of health institutions has a matrix structure. In other words, there is a hierarchical and horizontal structure in these institutions. For this reason, some role conflicts and communication problems may arise in health institutions. In addition, health institutions have an intense, tiring and stressful working environment. Because they are institutions that deal directly with people and realize production and consumption at the same time. In order

to provide better quality service and to keep up with the conditions of the age. They have to constantly monitor changes in the environment. Therefore, they need to be more in touch with the internal and external environment interact at a high level.(Cin ve Uzun, 2022:155).

In health services, services that are not suitable for storage are consumed as soon as they are produced and cause a crisis. Many elements that may cause a crisis also occur during the service delivery process. The main situations that may cause a crisis in the unique structure of health services are listed below (Bulduklu ve Karaçor, 2017:286; Ceylan ve Mete, 2021:35):

➤ The need for multi-tier service delivery and the extreme need for collaboration: In hospitals, which have the most prominent organizational difference, matrix and complex structure, different working areas and professions organizational members with different educational and training groups deliver services together in cooperation. In this process, when individuals with different levels of education, different degrees of expertise and different personality traits are taken into consideration, many factors that increase the likelihood of a crisis emerge.

➤ Intangibility of the service and subjective evaluation: Non-substitutability of health services, since service consumption is simultaneous with service delivery, some problems that may occur in the service delivery process may lead to a crisis can cause.

➤ Situations arising from the difference in the jobs performed: Healthcare institutions, which provide many supportive services such as food and beverage, accommodation, cleaning, etc. under the roof of the organization in addition to the provision of healthcare services, are generally external

use of external resources. When outsourcing, the procurement and supply chain disruptions are also among the important factors that pave the way for crisis formation.

➤ Standardized practices: Health service providers in practice due to routinized activities may experience carelessness and lack of attention. The resulting monotony increases the margin of error of organizational employees errors that trigger crises.

➤ Intense media and public attention to negativity: The fact that the human factor forms the basis of service delivery in health institutions makes it difficult or even impossible to recover from mistakes. This as a result of the media coverage of mistakes, the institutional crisis reaches a more serious dimension.

➤ Systemic problems: Health services provided by public and private health institutions, sectoral regulations can lead to individual, social and systemic crises. The obligation to notify institutions of an individual who applies to a health institution due to an infectious disease in order to protect public health can be given as an example that may cause a crisis due to its violation of the protection of the privacy of individuals' private life.

➤ Improvements resulting from a health intervention: Considering that every health intervention has a risk factor, it can be said that in more complicated case interventions, the risk factor increases and the magnitude of the crisis increases proportionally (Bulduklu, 2015: 91).

4. Conclusion

The tense situation, characterized as a crisis, should be resolved within the framework of a systematic plan prepared with realistic approaches. All of the activities implemented to eliminate the crisis constitute crisis management. Crisis management is the most It aims to implement the most effective decisions within a certain disciplinary framework (Tüz, 2001: 89- 90).

When crisis periods are analyzed, the management styles and steps to be taken vary according to the characteristics of the crisis. In disaster-based crises, the necessity of rapid intervention method. In addition, there are various health services provided in health institutions for disaster. In the event of an emergency, it can be listed among the most important types of services that all individuals without exception expect service without compromising quality. Regardless of the nature and circumstances of the situation, healthcare professionals, who continue to provide systematic and principled service delivery, are expected to maintain the same standards of service delivery in extraordinary situations. When crises are evaluated in the dimension of health services, it is important to take into account the differences in organizational structure and the difference in mission. While the effects of globalization and increasing demand pressures push the sector into a continuous circle of change, it is expected to achieve maximum service quality with minimum cost. In the shadow of these challenging conditions, early warning signals should be systematically monitored, new strategic methods and leadership models should be applied in order to avoid being affected by crises, protect organizational existence and ensure the continuity of service quality. In addition, activating hospital crisis committees and preparing proactive and active crisis management plans are important to support process management (Salur ve Vatan, 2010: 33; Ceylan ve Mete, 2021:40-41).

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CHAPTER VI

POVERTY MANAGEMENT IN TÜRKİYE

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1. Introduction

Poverty is a situation that dates back to ancient times, involves many variables and is caused by a combination of many spatial, economic, social and cultural factors. Nearly all of these factors have been addressed by numerous researchers either directly or indirectly. Thinkers such as Montesquieu, Adam Smith and Gunnar Myrdal emphasized the influence of geography on development. According to research results, factors such as the negative effects of tropical regions and land borders restricting economic growth are among the main causes of poverty. On the other hand, rapid population growth can hinder economic and social progress, especially in less developed countries. Corruption can also increase poverty and poor governance policies are recognized as a cause of poverty. The last component of the managerial explanation of poverty is related to government policies. From this viewpoint, the inability to enact market-oriented or neoliberal policies is also identified as a contributing factor to poverty. While neoliberal policies include strengthening property rights, liberalizing domestic markets and privatization, unsuccessful execution of these policies is also believed to augment poverty levels (Roope, 2012).

Poverty is not only a problem faced by millions of people around the world, but also a phenomenon that causes serious problems for societies and has socially undesirable consequences. Inequalities in access to education, health and employment opportunities and social exclusion are just some of the consequences of poverty. Moreover, when economic growth is limited, poverty can lead to social instability and public health problems. Continuous efforts and policy measures are needed to reduce poverty and mitigate its consequences, both because it has a profound impact on the quality of life of individuals and it has the potential to negatively affect the overall well-being of societies. In order to break the spiral effects of poverty, which affects all layers and structures of society, and to build a more just and equitable society, it is important to develop poverty management mechanisms that will enable stakeholders at various levels to cooperate.

Poverty management is a complex concept that includes policies and strategies implemented by a country's government or social institutions to reduce or eliminate poverty. The first of the legal arrangements to combat this problem, which has a long history, was made in England in the mid-1300's. With the Poverty Act, local governments were given the responsibility to fight against poverty. In the historical process, poverty could not be eliminated despite the establishment of many official and unofficial institutions and organizations in which both public and non-governmental organizations played an important role, regulations were made, and different struggle programs were implemented. On the contrary, poverty has become an important problem all over the world (Aygen, 2016:151-153). However, poverty in the past and poverty today are not the same in terms of content and scope. As the passing years have transformed many things, they have also transformed poverty, and moreover, they have made poverty a part of social life. In today's world, developed countries have not succeeded in eliminating poverty, although they have prevented the further impoverishment of the poor by effectively implementing social policy instruments. What has been achieved is the redefinition of poverty and deprivation in today's rapidly changing world.

In developing countries such as Türkiye, poverty management is an even more specific and important problem. Although Türkiye has taken important steps in the fight against poverty throughout its history and has developed various policies in this regard, it faces significant challenges in coping with increasing poverty due to changing economic, social and political conditions. In order to ensure both social welfare and peace and to prevent the intergenerational

transmission of poverty, our country needs to minimize the effects of poverty by developing social policies that are effective and address the fundamental causes of the issue.

In this chapter; fundamental concepts, data, and policy approaches necessary for comprehending the poverty situation in Türkiye are addressed. Additionally, the possibility of a comprehensive, solution-oriented poverty management approach with a different perspective and a more efficient administrative structure will be examined.

2. The Concept of Poverty

The understanding of poverty varies based on its characteristics, impacts, and the context in which it is considered. Consequently, there is no universally accepted definition, as the conceptual scope and extent of poverty differ according to the varying socio-economic development stages of countries. Nevertheless, as poverty poses a threat to the sustenance of life and represents a significant social risk, it is universally acknowledged as a critical issue that all societies focus on.

In general, poverty can be defined as the state of being unable to access resources and factors of production due to material deprivations, which manifests in the incapacity to meet fundamental needs such as nutrition, shelter, health, and education, thereby resulting in deprivation from minimum living standards. In its social context, poverty denotes a prolonged state of existence below a level congruent with human dignity and personal integrity, falling behind the established societal standards (Seyyar, 2011:261).

In both academic research and development perspectives, poverty has been predominantly addressed in its economic dimension for a considerable time. However, poverty is a concept that should be assessed not only economically but also by taking into account its social and political dimensions. On the other hand, development experts such as Sen (1987) have argued that this concept of economic well-being is too narrow to reflect individual well-being. This has led to active efforts over the last few decades to broaden the concept of poverty by considering its different dimensions.

Oyeranti and Olayiwola (2005:12) found that there are three dominant views in the literature on definitions and explanations of poverty. The first view considers poverty as a deprivation of material well-being, which can usually be measured in terms of money. The second view considers poverty as a multidimensional phenomenon; that is, it includes situations such as

lack of adequate livelihood and assets, inability to obtain basic nutrition, health, economic and social life skills. The third view considers poverty as a phenomenon that is difficult to determine objectively (cited in Ezeilo, 2016).

In general, poverty can be conceptualized in different ways, including lack of money or limited income; living well below the general standard of living in society; lack of access to basic needs and goods; lack of access to productive resources or resource degradation; inefficient use of common resources; lack or “special mechanisms” that benefit only a select few (Baratz and Grigsby, 1971; Streeten and Burki, 1978; George, 1988; Sen, 1994; Momoh 2005 cited in Ezeilo, 2016).

According to Marshall (1999), in the most general definition, poverty is a phenomenon that refers to the lack of material resources and sometimes cultural resources. In a similar view, Momoh (2005) stated that poverty is a multidimensional phenomenon associated with the inadequacy or lack of social, economic, cultural and political rights.

In an international study, “The Hidden Dimensions of Poverty”, conducted by ATD (All Together in Dignity) Fourth World¹ in partnership with Oxford University, the dimensions of poverty were defined as follows:

- Three dimensions of The core experience of poverty: Disempowerment, Suffering in body, mind and heart, and Struggle and resistance
- Lack of resources prevents people from living in dignity: Lack of decent work, insufficient and insecure income, material and social deprivation.
- Relational Dynamics Shape the Experience of Poverty: Institutional mistreatment, social mistreatment and unrecognized contributions. (Bray et al. 2016)

¹ ATD (All Together in Dignity) Fourth World is an international movement of solidarity (<https://www.atd-fourthworld.org/who-we-are/>)

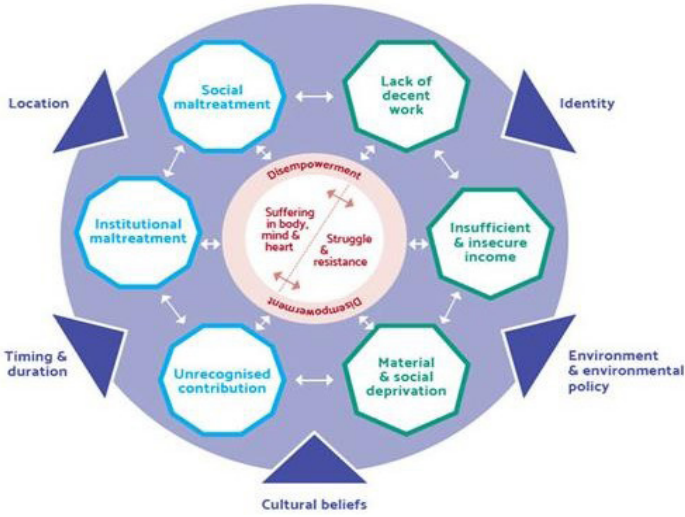


Figure 1: Dimensions of Poverty (Source: Bray et al.2019)

The Development Assistance Committee (DAC) recognizes that poverty is defined in various ways, but stipulates that it should cover basic deprivations (Figure 2). These are; Economic capabilities, Human capabilities, Political capabilities, Socio-cultural capabilities, Protective capabilities. These are briefly explained below;

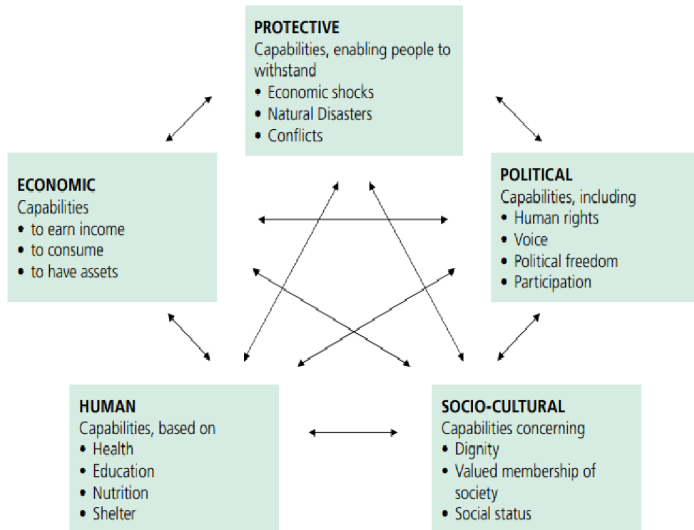


Figure 2: OECD’s Multidimensional Poverty Framework (Source: OECD, The DAC Guidelines Poverty Reduction, 2001)

Economic capabilities, i.e. the ability to earn income, consume and own assets. These are the basis for food security, material well-being and social status, and poor people often set these as priorities. However, secure access to land, tools and animals, forests and fishing waters, credit and decent jobs are also priorities.

Human capabilities are based on access to health care, education, nutrition, clean water and shelter. Lack of access to these services can mean illness and illiteracy, which are barriers to productive work and therefore barriers to economic capabilities for poverty reduction. Reading and writing support communication, which is important for social and political participation. Education, especially for girls, plays a key role in poverty reduction.

Political capabilities include having human rights and a voice in debates on public policies and political priorities. The deprivation of political freedoms or human rights, as well as arbitrary, unjust and violent actions by public authorities, can be a major cause of poverty.

Socio-cultural capabilities include participation as a valued member of a community and social status, dignity and other cultural conditions. Geographical and social isolation constitute an important dimension of poverty in many societies.

Protective capabilities allow people to withstand seasonal changes and external shocks to prevent poverty. Insecurity and vulnerability are strongly associated with poverty, linked to all other dimensions.

3. Types of Poverty

There are two different approaches preferred among sociologists and researchers about poverty: The absolute poverty approach and the relative poverty approach (Giddens, 2012:385-386). In addition to these, there are different definitions of poverty based on internationally accepted quantitative and qualitative indicators, such as human poverty.

3.1. Absolute Poverty

The definition of poverty in absolute terms, based on the concept of subsistence, indicates the minimum level of income or consumption required to sustain life. From this perspective, individuals and households that are unable to make a living by their own means are considered poor in absolute terms. Human life is jeopardized when the necessary means of subsistence are not provided. Accordingly, it will not be possible to talk about poverty in absolute terms only

if the minimum livelihood opportunities that will ensure the continuity of human life are provided (Laderchi et al., 2003).

Absolute poverty refers to a situation where an individual's basic needs are not met, i.e. there is a lack of basic goods and services such as food, housing and clothing. This concept of poverty is closely linked to desperation and is applicable to all countries or societies. A person considered poor according to these criteria is classified in the same way across the world. As we will see later, it is extremely difficult, even impossible, to develop ways of measuring absolute poverty (Instituto Nacional De Estadística, n.d.).

Absolute poverty can also be defined as the lack or impossibility of access to the resources necessary to meet the most basic human needs. People who cannot meet their needs for food, water, shelter and heating are in absolute poverty and experience severe deprivation (Gordon, 2006; Sen, 1983; Townsend, 1993). Since human rights are among these basic needs, absolute poverty is a violation of human rights (cited in Landiyanto Agustino, 2018)

3.2. Relative Poverty

Relative deprivation (Sen, 1983:155) means that a person or household has less access to or can do less than others in society. The relative poor are individuals with limited resources in terms of income, unlike the poor who are completely income deprived. Although they usually have a low income, they have a steady income and have reached an average standard of living. However, while the income level of these people is generally below the general welfare level of the society, they remain far from socio-cultural, educational, social participation and housing levels (Seyyar, 2011:262).

Measuring absolute poverty in a poor region indicates whether people are meeting minimum living standards. When the economy in a low-income country starts to grow and the majority of people meet minimum living standards, the role of relative poverty may increase. In this case, relative poverty is still important even in low-income countries. If the determination of the reference standard is based solely on theoretical perspectives, an absolute concept of poverty emerges; conversely, if the determination also takes into account the situation of the observed population, a relative concept of poverty emerges (Landiyanto Agustino, 2018).

According to Zastrow (2015), in relative poverty, the need to determine absolute needs, as in absolute poverty, and the existence of potential inequality in income distribution necessitates the existence of relative poverty. Relative

poverty situates the phenomenon of poverty within the examined society. According to this perspective, a person is considered poor when he or she is at a significant disadvantage, either materially or socially, compared to other people around him or her. This concept of poverty is closely related to the concept of inequality. According to this last criterion, the classification between poor and non-poor people depends on the level of development of the society under study and cannot be transferred to a different society (Instituto Nacional De Estadística, n.d.).

Closely related to social exclusion is another concept called multidimensional deprivation, which is associated with the lack of access to or deprivation of certain goods and services that are considered essential for society. By this approach, poverty is closely associated with social exclusion, regardless of whether it is a basic need or not, and in this context, lack of access to or deprivation of certain goods and services also indicate poverty. In this framework, poverty is measured using non-monetary variables and deprivation indicators, and poverty measures are constructed using the details of these indicators. Such multidimensional deprivation is also referred to as severe poverty (Instituto Nacional De Estadística, n.d.).

3.3. Multidimensional Poverty

Multidimensional Poverty recognizes deprivation not only as a lack of material assets, but also as deficiencies in other important areas such as social capital, human capital, power and voice. The World Bank's 'voices of the poor' study, the largest participatory poverty assessment of its kind, found that reality defines the poor more in terms of physical, human, social and environmental assets than income. (Narayan D, Patel R, Sxhafft K, et al. 2000)

The Multidimensional Poverty Index (MPI) measures 10 different non-economic indicators covering 1.3 billion people in more than 100 low- and middle-income countries. The MDI was adopted by the United Nations Development Program Human Development Report. In the global MDGCI, people living in a household that lacks one-third or more of the 10 indicators are considered multidimensionally poor. Each indicator is equally weighted in its dimension.

Measured dimensions of poverty

- Health
- Nutrition
- Child mortality
- Education
- School years
- School attendance
- Cooking fuel
- Sanitation
- Drinking water
- Electricity
- Housing
- Assets (Hardoon et.all,2022)

3.4. Human Poverty

The UN carries out country-based studies to identify strategies against poverty. One of the studies conducted in this context is the Human Development Report prepared by the UN Development Program (UNDP). UNDP published its first human development report in 1990. With the “Millennium Goals” established by the UN, attention was drawn to the economic and social aspects of the fight against poverty and a common international agenda was established on this issue. In the 1997 Human Development Report published by the UN, the concept of “Human Poverty” was introduced and a new perspective on the evaluation of poverty was put forward. In the definition of poverty made from this perspective, poverty is defined as “lack of basic human capabilities/capacities such as literacy, malnutrition, short life expectancy, inadequate maternal and child health, and contracting preventable diseases”. With this definition, the situation of living under conditions where human capabilities cannot be used is considered as the “human” dimension of poverty and the “Humanitarian Poverty Index” was developed to assess the poverty levels of countries. Three basic dimensions were identified in the index as “long and healthy life, access to information and a decent standard of living”. The long and healthy life dimension is assessed by life expectancy, the level of knowledge accumulation is assessed by the average duration of education in the adult population, and the standard of living is assessed by purchasing power parity (PPP) conversion rates

(UNDP, 2015). While calculating the index, different criteria were determined for developed and developing countries (Gündoğan, 2008, p. 44).

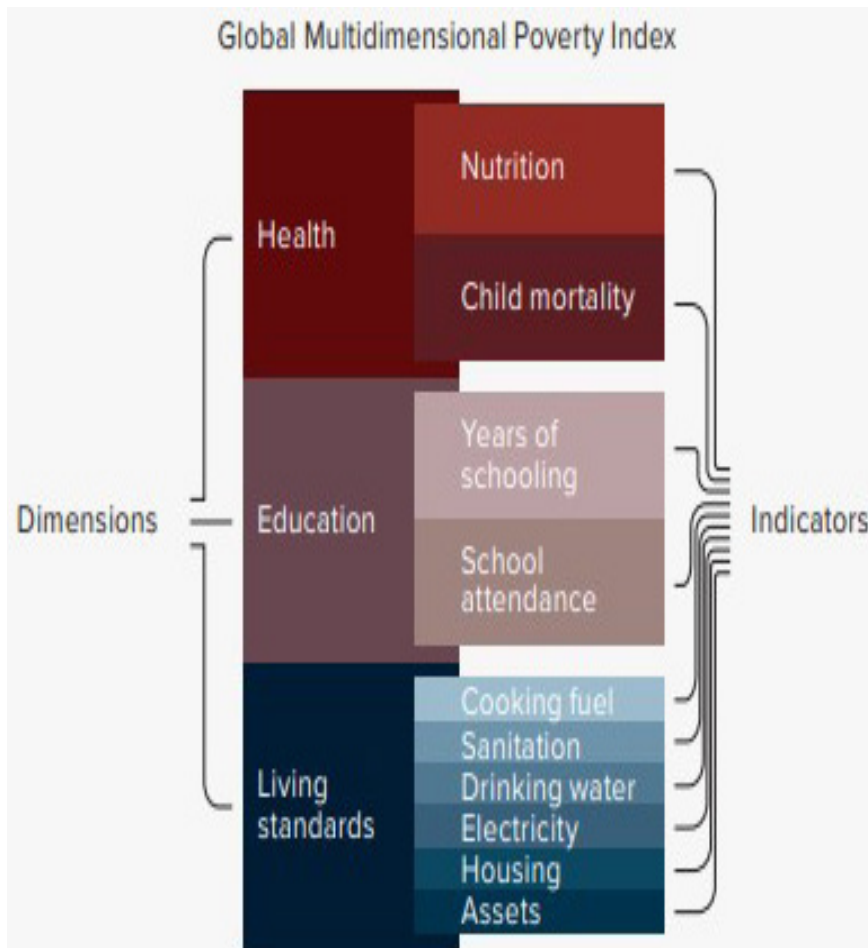


Figure 3: Multidimensional Structure of Poverty (Source: UNDP, 2023)

4. Poverty in the World

It is also possible to reveal the general outlook of poverty in the world with the concept of human development and the data obtained within the framework of this concept. According to the 2018 Statistical Report published by UNDP, the countries with the highest human development index are Norway, Switzerland, Austria, Ireland and Germany. The five countries with the lowest level of human development are Niger, Central African Republic, South Sudan, Chad and Brunei. According to the Human Development Index, which ranks 189

countries, the global human development index increased by 21.7% compared to 1990, but many countries faced serious obstacles that led to poverty such as wars, economic crises and epidemics (Cited in Çekici, 2012: 104).

The number of people living in poverty, measured at the poverty line of \$3.65 in low-income countries and \$6.85 in upper middle-income countries, increased between 1990 and 1999, but declined until the start of the 2020 pandemic. With the increase during the pandemic, it is estimated that in 2022, 1.85 billion people (26% of the global population) live below the threshold of \$3.65 per day and 3.71 billion people (46%) live below the threshold of \$6.85 per day (Economic poverty trends: global, regional and national, 2023). According to income/expenditure-based poverty measures, the prevalence of poverty is highest in Sub-Saharan Africa and South Asia. In 1990, 13% of people living in extreme poverty lived in the region; in 2022, an estimated 62% of people living in extreme poverty lived in Sub-Saharan Africa (Economic poverty trends: 2023). On the other hand, these regions are where poverty is deepest (Figures 4 and 5; UNDP, 2023)

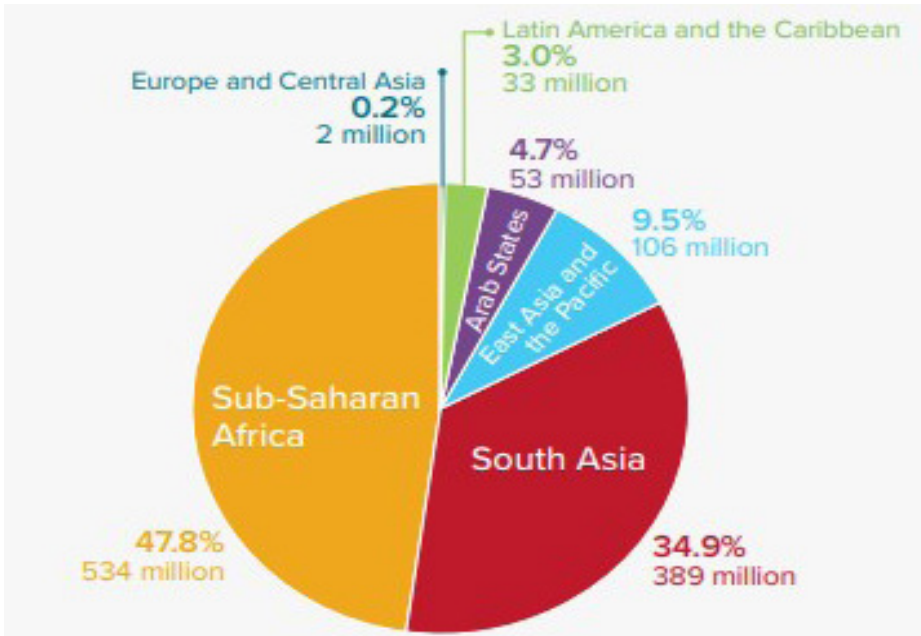


Figure 4: Share and number of poor people (Source: UNDP, 2023)

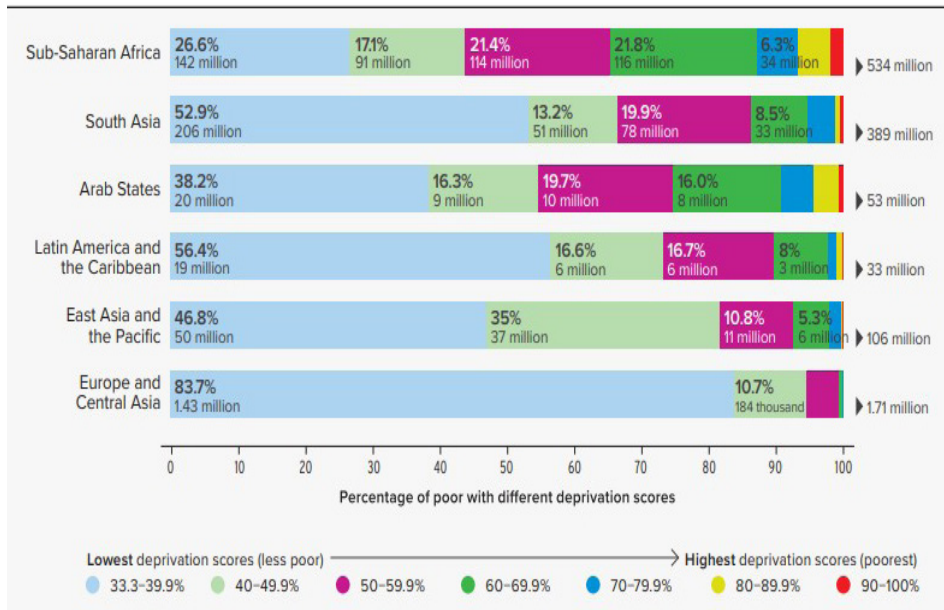
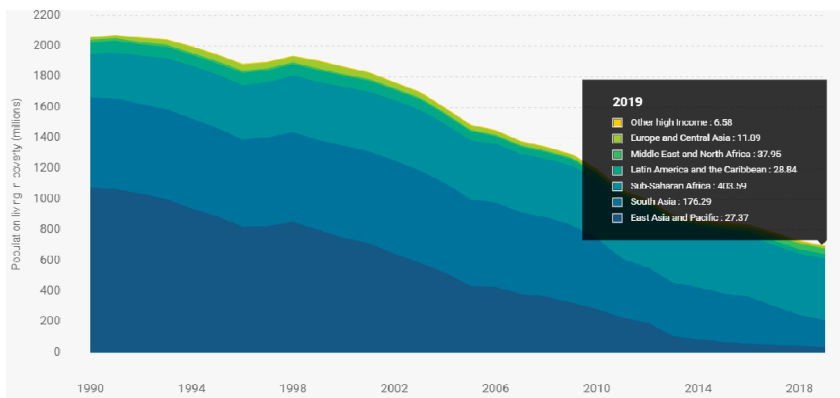


Figure 5: Poverty Scores by Region (Source: UNDP, 2023)

Poverty is also increasingly prevalent in countries dependent on natural resources and in fragile and conflict-affected countries. The adverse effects of climate change are also expected to pose significant obstacles to poverty reduction, while the World Bank calls on countries to pursue broad-based economic growth, invest in people, and insure the poor and vulnerable against ever-changing risks to end extreme poverty and increase shared prosperity (Worldbank Monitoring Global Efforts to Eradicate Poverty).



Graph 1: People lived below the \$2.15 per day poverty line in 2019 (Source: Worldbank Poverty and Inequality Platform)

5. Poverty in Türkiye

Poverty has become an increasing problem in a developing country like Türkiye. The root causes of this problem include inequitable income distribution, unequal sharing of national income and recurrent economic crises. In addition, ineffective policies have also led to a deepening of poverty. The 1980s represent an important turning point for Türkiye, as the new economic program was implemented on January 24, 1980, leading to fundamental changes in the economic and social structure. However, successive economic crises in the 1990s led to a shrinking economy and rising unemployment. The combined effect of the globalization process, neo-liberal policies and economic crises has led to a deterioration in income distribution, deepening the gap between social segments and increasing poverty. Therefore, Türkiye has ceased to be a country where income is distributed fairly and has become a country where the gap between rich and poor has widened (Taş&Özcan, 2012: 427).

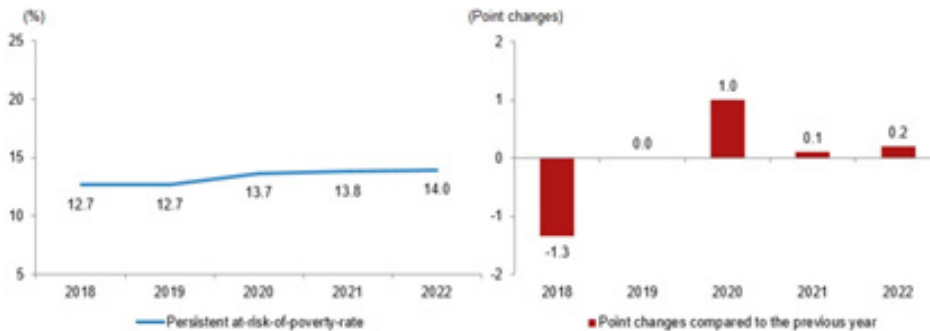
The problem of poverty in Türkiye has directly affected a large part of the country's population in recent years with the impact of economic crises. The extent of these crises is clearly visible in terms of all socio-economic indicators, and the imbalance in income distribution is increasing (Seyyar, 2011: 263). Research conducted by the Turkish Statistical Institute also reveals that the income distribution gap has widened. According to the results of the latest survey, the share of the 20% group with the highest equivalent household disposable income in total income increased by 1.3 points compared to the previous year and reached 48.0%, while the share of the 20% group with the lowest income decreased by 0.1 points to 6.0% (TUIK, 2022).

Table 1: Distribution of annual equivalent household disposable income by quintiles (%), 2013-2022**Distribution of annual equivalised household disposable income by ordered quintiles (%), 2013-2022**

Survey year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Income reference year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
First quintile (The bottom)	6.1	6.2	6.1	6.2	6.3	6.1	6.2	5.9	6.1	6.0
Second quintile	10.7	10.9	10.7	10.6	10.7	10.6	10.9	10.6	10.8	10.4
Third quintile	15.2	15.3	15.2	15.0	14.8	14.8	15.2	14.9	15.1	14.7
Fourth quintile	21.4	21.7	21.5	21.1	20.9	20.9	21.4	21.1	21.3	20.9
Last quintile (The top)	46.6	45.9	46.5	47.2	47.4	47.6	46.3	47.5	46.7	48.0

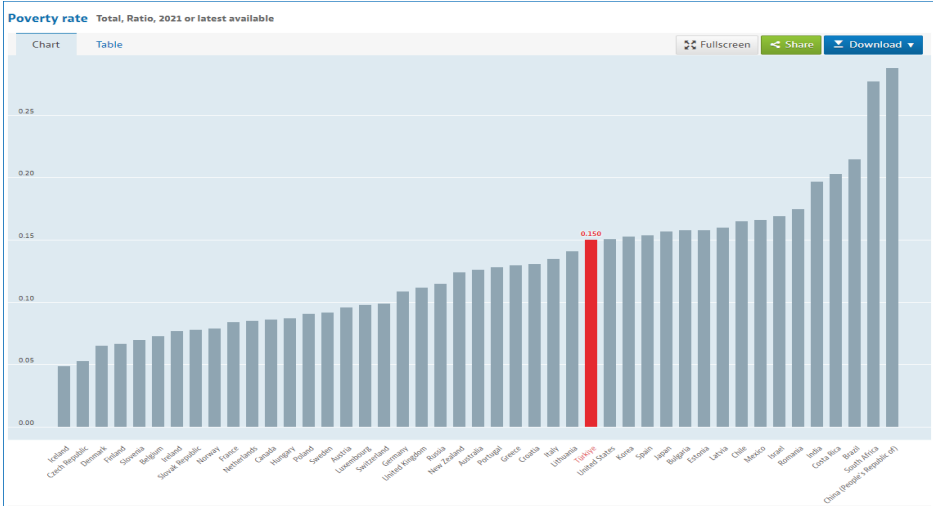
Figures in table may not add up to totals due to rounding.

Source: TUIK Income Distribution Statistics, 2022 (<https://data.tuik.gov.tr/Bulten/Index?p=Gelir-Dagilimi-Istatistikleri-2022-49745>)

**Graph 2:** Persistent poverty and year-on-year difference, 2018-2022

Source: TUIK Poverty and Living Conditions Statistics, 2022

As can be seen above, according to the survey results for 2022, the persistent poverty rate increased by 0.2 points compared to the previous year and reached 14.0%.



Graph 3: Poverty rates by country

Source: OECD (2023), “Poverty rate” (indicator), <https://doi.org/10.1787/0fe1315d-en>

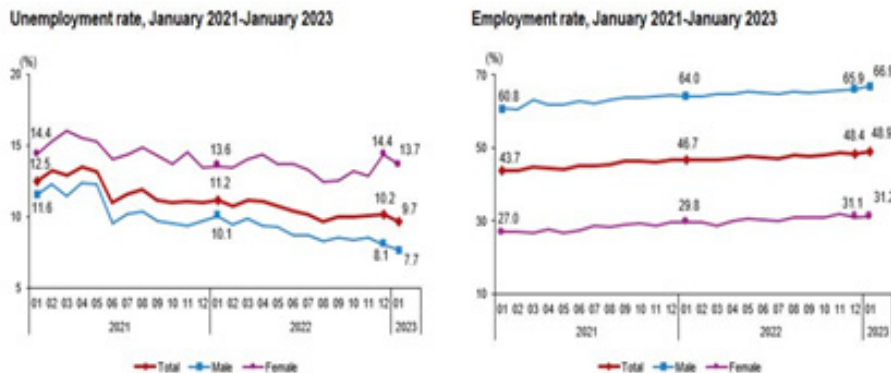
The poverty rate in Türkiye is above the average among OECD countries. As seen in Graph 1 above, the poverty rate in Türkiye in 2021 is higher than in countries such as Italy, Greece and Lithuania.

The risk of poverty in rural areas is considerably higher than in urban areas. People in rural areas tend to benefit less from public opportunities, and this situation also leads to migration to cities due to inefficiency in agricultural areas, decreased production and shrinking agricultural areas. As a result of migration movements, poverty rates increase in cities due to unemployment, informal employment, informal economy, lack of human resources and inadequate infrastructure services (Karakoyun, 2013:26).

As a result, while poverty was previously considered a problem of rural areas or slum areas of cities, economic crises and employment problems caused by development processes have increased unemployment rates and caused this problem to become evident in cities as well. All data on poverty strengthen the views that it will increase in the coming years and that poverty will gradually gain an urban character (Seyyar, 2021: 269).

Unemployment and poverty are two closely related phenomena. Indeed, unemployment can be seen as one of the main causes of poverty. According to the results of the Household Labor Force Survey, the number of unemployed persons aged 15 and over was 3 million 424 thousand persons and the

unemployment rate was 9.7%. The unemployment rate was estimated as 7.7% for men and 13.7% for women (TurkStat, 2023).



Graph 4: Employment and unemployment rates in January 2023

Source: TurkStat Labor Force Statistics, January 2023

However, as depicted in the table below, Türkiye’s unemployment rates have not improved significantly over the years.

Table 2. Unemployment rates (1923-2017)

Year	Unemployment rate	Year	Unemployment rate	Year	Unemployment rate	Year	Unemployment rate	Year	Unemployment rate
1923	9,1	1942	3,4	1961	3,4	1980	8,3	1999	7,7
1924	6,9	1943	2,9	1962	3,4	1981	7,3	2000	6,5
1925	5,3	1944	3,1	1963	3,4	1982	7,2	2001	8,4
1926	5,1	1945	3,1	1964	3,5	1983	7,9	2002	10,3
1927	4,2	1946	2,7	1965	3,7	1984	7,8	2003	10,5
1928	3,8	1947	2,5	1966	3,6	1985	7,3	2004	10,8
1929	3,2	1948	2,3	1967	4,8	1986	8,1	2005	10,6
1930	3,2	1949	1,8	1968	5,2	1987	8,5	2006	10,2
1931	4,5	1950	1,5	1969	5,9	1988	8,4	2007	10,3
1932	4,5	1951	1,7	1970	6,4	1989	8,6	2008	11
1933	3,9	1952	1,9	1971	6,8	1990	8	2009	14
1934	3,2	1953	2,8	1972	6,3	1991	8,2	2010	11,9
1935	3,3	1954	3,2	1973	6,8	1992	8,5	2011	9,8
1936	2,9	1955	3,1	1974	7,3	1993	8,9	2012	9,2
1937	2,7	1956	3,2	1975	7,6	1994	8,5	2013	9,7
1938	2,1	1957	2,8	1976	9	1995	7,6	2014	9,9
1939	2,1	1958	2,9	1977	10	1996	6,6	2015	10,3
1940	2,4	1959	2,9	1978	10,1	1997	6,8	2016	10,9
1941	3	1960	3,1	1979	8,9	1998	6,9	2017*	10,3

Source: Apaydın, 2018:171

Youth unemployment is particularly important in terms of unemployment. The youth unemployment rate, which covers the 5-24 age group, was 20.2% in January 2023. Unemployment rate in this age group was estimated as 16.5% for males and 26.6% for females (TurkStat, 2023).

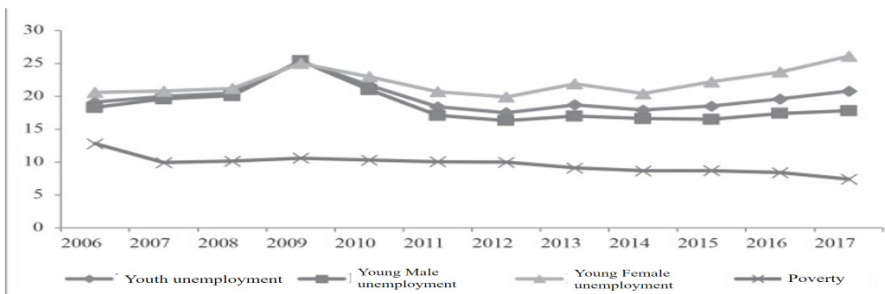
Table 3: Youth unemployment in January

Seasonally adjusted main labour force indicators, 15+ age, January 2023

	January 2023			Previous month			Difference with the previous month		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
(Thousand)									
Population 15 years and over	65 166	32 256	32 910	65 102	32 224	32 878	64	32	32
Labour force	35 260	23 376	11 885	35 072	23 125	11 947	188	251	-62
Employment	31 837	21 577	10 260	31 483	21 251	10 232	354	326	28
Unemployment	3 424	1 799	1 625	3 590	1 874	1 715	-166	-75	-90
Not in the labour force	29 906	8 880	21 025	30 030	9 099	20 931	-124	-219	94
(%)									
Labour force participation rate	54.1	72.5	36.1	53.9	71.8	36.3	0.2	0.7	-0.2
Employment rate	48.9	66.9	31.2	48.4	65.9	31.1	0.5	1.0	0.1
Unemployment rate	9.7	7.7	13.7	10.2	8.1	14.4	-0.5	-0.4	-0.7
Youth unemployment rate (15-24 age)	20.2	16.5	26.6	19.7	15.8	26.8	0.5	0.7	-0.2

Source : TUIK Labor Force Statistics, January 2023

The table above shows that Türkiye is deeply affected by the problem of female and youth poverty. The high level of youth unemployment and poverty in the Turkish economy makes the relationship between youth unemployment and poverty remarkable. As a matter of fact, employment opportunities have not increased in spite of the increasing youth population, and improvements in the poverty rate have not been observed for a long time. The following indicators have been prepared to see the situation more clearly (Bölükbaş, 2019:217)



Graph 5: Poverty and young unemployment

Source: Bölükbaş, 2019:217

Recently, there has been a slight improvement in poverty rates, which have fallen to around 7%. Despite this improvement in poverty rates, youth unemployment rates are still high. This situation can be regarded as an indicator

of the continuation of poverty in the young population due to unemployment (Bölükbaş, 2019:217).

6. Poverty Management in Türkiye

Article 2 of the Constitution of the Republic of Türkiye stipulates that “The Republic of Türkiye is a democratic, secular and social State of law, based on the fundamental principles set out in the preamble, respectful of human rights, loyal to Atatürk’s nationalism, in the spirit of social peace, national solidarity and justice.” As seen in this provision of the Constitution, the concept of social state is clearly emphasized in the 1982 Constitution. The principle of social state, which entered our understanding of governance for the first time in Türkiye with the 1961 Constitution, is included in the preamble of the 1982 Constitution with the statement that “Every Turkish citizen has the right and authority from birth to lead an honorable life within the national culture, civilization and legal order and to develop his material and spiritual existence in this direction by enjoying the fundamental rights and freedoms in this Constitution with the requirements of equality and social justice” (Coşkun and Tireli, 2008:125 cited in İncedal, 2013:68-69)

There are two main approaches to poverty alleviation: direct and indirect. The indirect approach was adopted by many development economists, especially in the 1950’s, and later reintroduced by neo-liberal economists in the 1980’s. According to the proponents of the indirect approach, the most effective way to fight poverty is to accelerate industrialization, increase infrastructure investments and the rapid economic growth and development that will result from this process. According to this approach, the most fundamental factor in reducing poverty is economic growth (Genç, 2010:126). According to the indirect approach, rapid growth not only increases the material income of individuals, but also contributes to the development of education, health and infrastructure facilities in the long run, thus making a significant contribution to indirect poverty reduction (Arpacıoğlu, 2012:87). The direct approach to poverty alleviation, on the other hand, focuses on issues that directly affect the living standards of the poor, particularly basic living needs such as nutrition, health, education and housing, through concrete programs, policies and assistance provided by the state to the poor (Şenses, 2009:219).

The first major policy in Türkiye to adopt a direct intervention strategy in the fight against poverty started with the Law No. 2022 on the Granting of Pensions to Needy, Weak and Destitute Turkish Citizens over the Age of Sixty-

Five, adopted in 1976. Law No. 2022 had a relatively limited target group, and in 1982 the Ministry of National Education was given the task of providing scholarships and free boarding to needy students, and in 1983 the former Social Services and Child Protection Agency (SHÇEK) was given the responsibility of providing in-kind and cash assistance to needy individuals. In 1984, the General Directorate of Foundations was authorized to provide various social assistance (Hacımahmutoğlu, 2009: 69 cited in İncedal, 2013:68-69).

Following the January 24, 1980 decisions, Türkiye adopted and implemented poverty alleviation policies. Within this framework, the Social Assistance and Solidarity Incentive Fund (SYTF) was established in 1986 and the green card scheme was launched in 1992. In addition, 973 Social Assistance and Solidarity Foundations were established in 81 provinces and 892 districts and 4 million people were assisted through these foundations by providing support in the areas of food, fuel, housing, education and health. In addition, the Conditional Cash Transfer Program (CCTP) was launched on 28th of November 2001 as a result of an agreement signed with the World Bank and a project to reduce social risks was initiated. This project aimed to minimize the negative effects of the economic crisis on the poor (Firat, 2013: 200-201).

In the case of Türkiye, there are a number of actors that are active in the fight against poverty or play a role in this field. Among these actors, the state is at the forefront. In addition to social assistance programs, the state provides cash income transfers and social services to vulnerable groups within the scope of anti-poverty activities. It uses central and local public institutions such as ministries and Social Assistance and Solidarity Foundations (SYDV) to carry out these activities (Açıkgöz and Yusufoglu, 2018: 168).

6.1. General Directorate of Social Assistance

Within the framework of Türkiye's social state approach, a number of institutions and organizations assume important responsibilities in the field of social assistance and social services. The most prominent institution in this field is the Ministry of Family, Labor and Social Services. With the regulations made in recent years, it has been merged under this ministry in order to gather services under a single roof and improve the quality of services (Yıldırım, 2019:25). An important unit operating under the Ministry of Family, Labor and Social Services is the General Directorate of Social Assistance. This directorate is responsible for determining, implementing, monitoring and evaluating policies and strategies in the field of poverty alleviation and social assistance at the

national level. In addition, Social Assistance and Solidarity Foundations (SYD Foundations) have been established in provinces and districts in order to provide services to all regions of the country. These foundations operate in order to quickly deliver the assistance they need to those in need (Yıldırım, 2019:26),

SYD Foundations are established in every province and district in accordance with the Turkish Civil Code and work to serve the objectives of the Social Assistance and Solidarity Encouragement Law No. 3294. There are currently 1,003 SYD Foundations across the country. The income sources of these foundations consist of amounts transferred from the Social Assistance and Solidarity Incentive Fund, income from enterprises and subsidiaries, and other sources. SYD Foundations are not included in the administrative structure of the Ministry of Family and Social Services and are supervised by the General Directorate of Foundations, the Ministry of Interior and the Ministry of Family and Social Services (URL 1).

The Social Assistance and Solidarity Encouragement Fund (SYDTF) was established in 1986 by Law No. 3294. SYDTF was established to assist citizens in need, to ensure fairness in income distribution and to promote social assistance and solidarity. The Fund's revenues consist of different sources. These sources include transfers from other funds, funds transferred up to 10% with the decision of the Council of Ministers, 2.8% of income and corporate tax collections, 50% of traffic fines, 15% of RTÜK revenues, budgetary allocations and donations (URL 2).

The duties of the Fund Board, which manages SYDTF, have been assigned to the President, the Social Policies Board and the Ministry of Family and Social Services by Presidential Circular No. 2018/3. The use of the Fund's resources is implemented by the General Directorate of Social Assistance through 1000 Social Assistance and Solidarity Foundations in different regions of the country (URL 2)

Table 4: Assistance of SYDV foundations according to their qualifications

Types of Regular Assistance	Types of Periodic Assistance
Conditional Education Assistance	Food Assistance
Conditional Health Assistance	Fuel Assistance
Conditional Pregnancy Assistance	Housing Assistance
Assistance for Widows	Educational Assistance
Aid for Needy Soldier Families	Health Assistance
Benefits under the Act No. 2022	Disabled Needs Assistance
Home Care Assistance	Special Purpose Assistance
Assistance for Needy Soldier's Children	Clothing and Other Family Assistance
Orphan and Bereavement Assistance	Employment Assistance
	One-time Assistance
	Birth Assistance

Source: Ministry of Family, Social Services and Policies 2015 report

As can be seen in Table 4, the General Directorate of Social Assistance divides social assistance programs into two categories: “*regular assistance*” and “*periodic assistance*”. Periodic assistance includes assistance provided to those in need at regular intervals. It involves the transfer of resources to SYDVs to meet basic and urgent needs and current expenditures. These resources are calculated based on factors such as province/district population and socio-economic development index, and are transmitted to SYD Foundations on a monthly basis. These aids are used to meet the basic and urgent needs of individuals in economic and social difficulties, such as food, clothing, fuel, shelter, health, and education (İncedal, 2013:77).

Family Assistance	Housing-Food Assistance	Assistance for the Disabled and Elderly
Birth Assistance	Food Assistance	Home Care Allowance
Multiple Birth Assistance	Lunch Assistance	Disability Allowance
Regular Cash Assistance Program for Widowed Women	Soup Kitchens	Allowance for the Relatives of the Disabled
Orphan and Bereavement Assistance	Housing Assistance	Elderly and Disabled Care Projects (VEFA Projects)
Regular Cash Assistance Program for Soldier Families	Social Housing Project	Elderly-Disabled Home and Personal Care Program (National VEFA Program)
Assistance for Soldiers' Children	Fuel Assistance	
Terror Damage Assistance	Electricity Consumption Supports	
Disaster Emergency Assistance	Social Adaptation and Complementary Social Adaptation Assistance	
Return to Work Assistance - Combating Addiction	Natural Gas Consumption Support	
Assistance for Relatives of Martyrs and Veterans		
Death Assistance		
Turkey Family Support Program		
Health Assistance	Education Assistance	Project Assistance
General Health Insurance Premium Payments	Free Textbook	Family Support Center (ADEM Projects)
Conditional Health Assistance (Health and Pregnancy)	Conditional Education Assistance	Social Solidarity Center (SODAM Projects)
Co-payment Contributions (Access to Health Services)	Conditional Education Assistance for Foreigners	Homeless Shelter Project
Chronic Illness Assistance	Free Transportation for Disabled Students	Social Service Projects
Payments Made to Silicosis Patients	Education Material Assistance	Project for Supporting Young People Separated from Institutional Care Socially
Uninterrupted Power Supply Support and Accumulated Electricity Debt Support for Chronic Patients	Student Accommodation-Transportation-Meal Assistance	
Health Assistance	Dormitory Assistance	
	Kindergarten/Preschool Support Program	

Figure 7: Social assistance programs by main groups
Source: Ministry of ASH and Social Services Annual Report 2022

Figure 7 shows that the types of assistance provided by the General Directorate of Social Assistance are divided into six main groups: “family assistance”, “education assistance”, “health assistance”, “special purpose assistance”, “elderly and disabled assistance”, “project support and employment assistance”. In 2022, social assistance expenditure by all public institutions amounted to 151.9 billion TL and the share of social assistance in GDP was 1.13%. In 2022, a total of 4,419,286 households benefited from social assistance across the country (Ministry of Family and Social Services Annual Activity Report 2022).

Table 5: Aid provided by Ministry of Family and Social Services in 2022

TYPE	2022
Total Social Assistance Expenditure Amount (TL)	151,9 Milyar
Social Assistance Conducted by the General Directorate of Social Assistance	87 Milyar
Share of Social Assistance in GDP	1,13%
Total Number of Households Benefiting from Social Assistance	4.419.286
Number of Beneficiaries of the Elderly and Disabled Allowance in 2022	1.533.509
Total Resources Transferred for the Elderly and Disabled Allowance in 2022 (TL)	21.576.925.376
Number of Individuals for Whom the State Pays GSS (General Health Insurance) Premium	9.488.441
GSS Premium Support (Paid to SGK) (TL)	33.552.337.026
Number of SYDV (Social Assistance and Solidarity Foundations)	1.003
Number of SYDV Personnel	8.779
Number of SYDV Social Aid and Inspection Officers	4.067
Percentage of Cash Assistance in All Assistance	93%
The Ratio of Regular Aid Allocated Resources to All Assistance	86%

Source: Ministry of Family and Social Services Annual Activity Report for 2022

6.2. Municipalities

Municipalities play a complementary role in addition to other sources of assistance. In addition to providing various services to the public, local governments identify poor individuals on the spot and provide assistance to meet their needs. Municipalities that provide assistance to the poor generally provide in-kind aid. Thanks to these aids, the conditions of poor individuals improve and their urgent needs are met, even if a permanent solution is not provided. These duties and powers of municipalities are based on the Municipal Law No. 5393 (Yusufoğlu, 2021: 21). These duties and powers of municipalities are based on the Municipal Law No. 5393.

Article 14 (a) of the Law No. 5393 on Municipalities states that “Municipalities are responsible for: urban infrastructure such as zoning, water and sewerage, transportation; geographical and urban information systems; environment and environmental health, cleaning and solid waste; urban traffic; burial and cemeteries; forestation, parks and green areas; housing; culture and arts, tourism and promotion, youth and sports; social services and assistance;

urban traffic; burial and cemeteries; afforestation, parks and green areas; housing; culture and arts, tourism and promotion, youth and sports; social services and assistance, marriage, vocational and skill acquisition; development of economy and trade.” is included in the provision.

Municipalities provide services for elderly people in need of assistance. These services include the construction of nursing homes, free medical examinations and medication for the elderly, food aid, fuel aid, and free or discounted municipal buses. In addition, metropolitan municipalities and municipalities with a population over 50,000 are obliged to open shelters for children and young people. Various services are also provided for the disabled. These services include opening care and rehabilitation centers, establishing counseling and guidance centers, providing free medical examinations and medication, providing in-kind and cash aids, and providing free or discounted use of municipal buses for the disabled (Çiçek, 2012: 98).

6.3. General Health Insurance

With the 1992 law, the Green Card scheme was introduced in Türkiye and the Ministry of Health covered the health-related expenses of citizens who could not afford treatment. The 2006 law on General Health Insurance, which entered into force in 2008, put an end to the Green Card practice. With the 2011 Regulation, as of 01.01.2012, income determination procedures are carried out through Social Assistance and Solidarity Foundations. In the income test conducted by the Social Assistance and Solidarity Foundation (SYDV) for General Health Insurance (GHI) premiums, the GHI premiums of citizens who meet the condition of being less than one third of the gross minimum wage specified in the law will be covered by the state. Information on citizens whose income is tested is shared with the SSI and they are included in the scope of the SSI (Social Assistance Statistics Bulletin, 2012: 39).

6.4. Microcredit Practices

Another method adopted in Türkiye after the 2001 crisis and playing an important role in the fight against poverty is micro-credit projects. These projects are implemented to encourage individuals to entrepreneurship and support them to start their own businesses. It is aimed to realize the entrepreneurial potential of individuals in both rural and urban areas. In this way, individuals are encouraged to be prepared for possible crisis situations and to find solutions by using their own skills in such situations. Microfinance projects, which aim to support the

entrepreneurial potential of poor women in particular, are implemented by various foundations. In this context, the Foundation for the Support of Women's Work (KEDV) provides financial and technical support especially to poor women through the micro- economic support enterprise it established in 2002 (Gürses, 2017).

Microcredit is recognized as an effective tool in the fight against poverty and has great potential, especially given the importance of small businesses and micro-entrepreneurs in development in developing countries. The origins of this approach can be traced back to loans given to poor women in Bangladesh by Muhammad Yunus through the Grameen Bank. According to Yunus, the main goals of economic development are to raise living standards, reduce poverty, create decent work opportunities and reduce inequality, and in order to achieve these goals, this process must be started with women (Soyak, 2010: 129).

6.5. Employment Policies

Social policies for employment in the fight against poverty can generally be analyzed under three main categories (Odabaşı, 2009:51)

- **Integrating the Poor into the Labor Market:** This category includes policies that promote the participation and employment of poor individuals in the labor market. In particular, vocational training programs, job placement services and employment skills training activities are included in this category.
- **Provision of Temporary Employment:** This approach aims to provide temporary employment to poor individuals. By providing temporary jobs during periods of unemployment or in times of urgent need, it enables individuals to earn income and become more resilient in times of crisis.
- **Entrepreneurship Promotion:** This category includes policies that encourage poor individuals to start their own businesses. Entrepreneurship projects, such as micro- credit programs, provide financial and technical support to poor people to encourage them to start their own businesses.

Various measures and programs are implemented in Türkiye for employment in the fight against poverty. The General Directorate of Social Assistance (SYDGM) and Social Assistance and Solidarity Foundations (SYDV) use the resources of the Social Assistance and Solidarity Encouragement Fund to provide support for income-generating projects. Through these projects, entrepreneurship activities in various fields such as agricultural product processing, animal husbandry, handicrafts, carpentry are encouraged.

In addition, employment-oriented training practices also play an important role. In particular, unemployed youth, women and other poor groups are provided with job skills and employment opportunities are increased through vocational training programs. The General Directorate of Turkish Employment Agency (İŞKUR) carries out such training programs (Odabaşı, 2009: 51).

6.6. Unemployment Insurance

Unemployment insurance refers to the compulsory insurance operating with the insurance technique, which covers the loss of income suffered due to unemployment for a certain period of time and to a certain extent for insured persons who lose their jobs without any intent and fault, despite their willingness, ability, health and competence to work while working in a workplace. The unemployment insurance premium consists of 1% of the insured, 2% of the employer and 1% of the State share calculated over the monthly gross earnings of the insured. Those who pay voluntary unemployment insurance premiums are charged 1% insured and 2% employer's share (URL 3). One of the main individual objectives of Unemployment Insurance is to provide income guarantee for the insured person who has lost his/her income and his/her family during the period of unemployment. In addition to this, the objectives of ensuring that the professional skills of the unemployed insured are not lost and that they find a job again have gained importance today (Sungur, 2016: 71)

Unemployment insurance is a social security system that aims to compensate for the loss of income for a period of time by providing financial support to insured individuals who lose their jobs. Unemployment insurance helps unemployed individuals to cover basic living expenses during unemployment for a certain period of time and provides financial support during this period. In Türkiye, unemployment insurance is financed by premium payments from both insured persons and employers (URL 3). The objectives of unemployment insurance include financially protecting unemployed insured persons and their families, meeting their basic needs during the period of unemployment, maintaining the professional skills of the unemployed and encouraging their re-employment. In this way, unemployment insurance helps individuals to be more economically resilient in cases of economic recessions or job loss (Sungur, 2016: 71). Unemployment insurance is an important tool for combating unemployment in many countries and plays an effective role in maintaining the stability of both individuals and the economy.

6.7. Civil Society Organizations

CSOs, and associations in particular, have the ability to fill in areas where the state is lacking or inadequate in dealing with poverty. NGOs play an important role in the fight against poverty through activities such as creating employment, improving the personal and professional skills of the poor workforce, encouraging entrepreneurship, developing micro- credit practices, organizing joint activities within the framework of public, private and NGO cooperation (As, 2017:57-58). The most prominent NGOs in Türkiye in this regard are the Red Crescent, Darülaceze, Support to Life Humanitarian Aid Association (Support to Life), Human Rights and Freedoms and Humanitarian Relief Foundation - IHH.

It can be counted as. CSOs in Türkiye present a disorganized picture in the fight against poverty. Moreover, their fields of activity often overlap with each other. Therefore, some CSOs operate within a narrow organizational structure for a very limited purpose. Thus, rather than donating to foundations, individuals prefer individual-to-individual assistance. Looking at the issue from a broader perspective, it is seen that this individual preference stems from the lack of information and awareness-raising by private foundations (TÜSEV, 2006: 14).

7. General Assessment of Türkiye's Poverty Management

The fight against poverty can vary depending on what poverty means and how it is perceived, and the success of this fight depends to a large extent on which solution methods are adopted. In the case of Türkiye, it is generally observed that the approach to combating poverty is to tackle poverty rather than to eradicate it completely. However, poverty reduction approaches have also been adopted from time to time, but the approach of eradicating poverty completely is not very common. This applies to the state and public institutions as well as local actors and civil society. In recent years, it can be observed that state income transfers to vulnerable groups (old-age and widow pensions, disability pensions, care fees, unemployment payments, etc.) have significantly improved the material living conditions of these groups. Moreover, social assistance and social services provided by both public and civil society can be said to improve the quality of life of the poor. However, it is noted that the social assistance approach is still generally dominant in Türkiye and it is difficult to adopt a poverty alleviation approach that covers all poor and vulnerable groups.

In particular, Social Assistance and Solidarity Foundations (SYDV) have been criticized for their efforts to combat poverty and it has been emphasized that these efforts have failed to reach predetermined targets, that the practices have been inadequately supervised, that a significant portion of the poor have not been reached and that the aid has not reached the poor effectively (Şenses, 2003: 334-340).

There is a great deal of legislative confusion in Türkiye regarding social assistance. Moreover, the use of different measurement methods and criteria for determining the criteria of neediness leads to different justifications, methods and amounts of assistance being provided to different poor groups. In addition, inadequate and unclear legislation defining the duties and authorities between local governmental organizations and other public institutions leads to difficulties in monitoring and supervision of services. At the same time, monetary and spatial limitations and problems arising from the culture of approach to poverty are among the factors that hinder the fair and effective implementation of social policies. Other factors further complicating the implementation of social assistance policies include the pursuit of political support and the presence of numerous institutions, organizations, local, and regional entities, despite insufficient coordination among these structures. This makes it difficult to implement social assistance policies effectively (Kasalak, 2013:94).

Within the framework of anti-poverty policies, there is a prevailing view that the impact of direct assistance policies on poverty reduction is limited, that these policies only help the poor to meet their immediate needs and are insufficient to address the roots of long-term poverty. It is emphasized that direct assistance policies are more effective especially in poverty structures consisting of the elderly, the disabled and children in need of protection. However, this approach is insufficient for a complete solution to poverty and states that the economic and social factors that cause poverty must be addressed. Based on these views, it is understood that economic problems such as unemployment in cities cannot be solved by direct aid policies alone. In anti-poverty policies, despite the presence of rights-based approaches in legal texts, a needs-based approach dominates in practice. In these practices, it is observed that families cannot be strengthened and the cycle of poverty cannot be broken. Therefore, it should be taken into account that policies that do not increase the capabilities of individuals cannot be effective and may create a dependent poor population. Therefore, it is stated that anti-poverty policies should adopt a long-term approach that tackles structural causes rather than merely making poverty less visible, and that these

policies should go beyond offering short-term and comforting solutions (Özsoy, 2019: 439,440).

In summary, despite numerous studies conducted, it cannot be said that there is a comprehensive and systematic approach in Türkiye to address poverty in the country, taking into account the economic, social, cultural structure, and relationships. In addition, poverty policies in Türkiye are dominated by an economic perspective and there is not enough data on the structure, depth and prevalence of poverty in the country. On the other hand, as in other areas, there is a lack of cooperation and coordination in the provision of social assistance and services. However, in today's conditions, in order to combat the problems of poverty and income inequality, which are increasing rapidly due to the economic bottlenecks, our country has to produce effective and efficient policies on combating poverty with a holistic and comprehensive approach and to increase the institutional capacity of the institutions providing services in this field.

8. Conclusion

Türkiye's poverty management is largely social assistance-oriented. In general practice, Türkiye is known as a country that has taken important steps in the fight against poverty and social protection through social assistance programs. However, critical questions have been raised about the effectiveness, inclusiveness, sustainability and scope of these social assistance programs. On the other hand, it should not be overlooked that without taking measures to alleviate poverty and establishing mechanisms for this purpose, the aid to be distributed will only serve to save the day and will not heal the wound. In this respect, for effective poverty management, those who govern the country must take measures and structural adjustments to eliminate inequalities in income distribution, reduce unemployment and inflation, which leads to a continuous decline in purchasing power. In addition, the transmission of poverty from one generation to another should be prevented by ensuring the establishment of an education system that will provide equal access to educational opportunities for all and an effectively functioning social security system that will cover the whole country. Another point that needs to be emphasized is that without addressing the economic, social and cultural factors and causes that give rise to and nurture poverty, a solution to this problem will not be possible.

As a final word, in our opinion, the problem of poverty in Türkiye is unlikely to be solved as long as the structural causes of poverty are ignored and social aids of questionable effectiveness and inclusiveness are used as bandages. In this

respect, we need to emphasize again that in order to find permanent solutions to the problem of poverty in Türkiye, effective policies should be developed to eliminate income inequality, regional disparities and unemployment, which are the root causes of poverty.

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CHAPTER VII

CRISIS MANAGEMENT PROCESS IN WORKPLACES EMERGENCIES AND DISASTER

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1. Introduction

Humanity has faced critical and challenging events throughout history. The effects of some of these situations are minor, while others can reach a magnitude so high that they result in loss of human life and even mass casualties. Among these events, emergencies and disasters have always been prominent, encompassing incidents ranging from traffic accidents to natural disasters. Emergencies and disasters can include adverse events such as industrial accidents, explosions, fires, chemical leaks in large industrial facilities, migration movements in society resulting from wars and conflicts, and global warming, in addition to natural disasters. The United Nations defines disaster as “the results of events that are natural, technological, or human-induced and that cause physical, economic, and social losses, disrupting or halting normal life and activities, which communities cannot cope with using their own resources and capabilities” (Sarı, 2020:3).

In addition to affecting daily life, emergency and disaster events also have a negative impact on work life. Preventive and restrictive measures should be established in workplaces to address emergencies and disasters. The

implementation of these measures minimizes human and material losses in workplaces and ensures a safe working environment for employees.

This study provides information about crisis management processes in workplaces concerning potential emergencies and disasters.

2. Management Concept

The word “management” is used in our language to denote guidance and administration. In the literature, it is observed that management is expressed in different forms. These expressions can be characterized as a specific definition encompassing all human activities and a general definition involving business activities. Specifically, management can be defined as the “action of managing or administering the resources of enterprises established for an economic purpose, consisting of monetary, mechanical, and labor resources, in an optimum manner” (Stead et al., 1984:90).

On a general level, management is described as the “totality of activities and efforts to ensure collaboration among people and direct them towards a common purpose” (Şimşek and Çelik, 2016: 3-4).

As a concept, management is a process involving the effective and efficient utilization of existing resources through functions such as leadership, organization, planning, and control to achieve predetermined goals (Eren, 2016: 4).

The fundamental characteristics of management are as follows:

- Firstly, the existence of people and collaboration among these individuals,
- The collaboration formed for management should be directed towards a specific purpose,
- It should involve a group with more than one person,
- It should occur within a hierarchical order in formal organizations,
- It is an occurrence consisting of regular activities,

Management consists of processes such as organizing, planning, providing necessary resources and guidance, regulating, coordinating, and monitoring (Eryılmaz, 2013: 4-8).

2.1. Incident Management

According to the “Presidency of Disaster and Emergency Management” (AFAD), an incident is defined as “any kind of work, event, or case that arises or occurs; of a nature that attracts or could attract attention.” Generally, incidents are undesired or unexpected situations with local and limited impact. In other

words, they are events that could disrupt the operations, services, or functions of an organization. Such undesired incidents do not necessarily affect settlements, institutions, or organizations. Incidents are typically situations that can be brought under control with initial intervention (Kadioğlu, 2015:62).

The concept of incident management involves identifying, defining, analyzing, and taking corrective actions to prevent the recurrence of hazards for a business or organization in the future. Not all services of an emergency response plan are activated in incidents, and a small team or an individual can intervene in the incident. Depending on the impact of the incident, only standard operating procedures and some checklists are used (Türkdemir, 2018: 151). Incident management aims to restore normal service operations as quickly as possible, minimizing the negative impact of incidents.



Figure 1: Incident Management Diagram (URL, 1)

2.2. Crisis Management

The word crisis is used synonymously with the words “Dismay” and “Depression” in our language. According to the Turkish Language Association (TDK), crisis is “a difficult period in the life of a society or an organization in a country or between countries; It is expressed as crisis, depression”.

Pira and Shodol, “The word crisis is etymologically based on the Greek word ‘krisis’, which means separation, and is expressed with two symbols, ‘opportunity’ and ‘danger’, in Chinese writing.” When we look at its Chinese meaning, it becomes clear that the word crisis should not always be understood as a bad situation (Pira and Shodol, 2004:23).

According to Öztürk, crisis is defined as “a situation in which an issue related to foreign policy has gone beyond its limits and entered a dangerous period, threatens national values, requires a rapid response, and accordingly, decision makers must keep their attention at the highest level” (Öztürk, 2007:137).

According to Tutar, the crisis; “It is a tension situation that is unexpected and unpredictable, requires a quick and urgent response, and threatens the organization’s goals, objectives, plans, strategies and assumptions by affecting its prevention and adaptation mechanisms.” (Tutar, 2000:19).

According to Merriam-Webstar dictionary, crisis; It is defined as “a turning point in a sudden illness” and “a difficult or dangerous situation that requires serious attention” (Merriam-Webstar, 2023:1)

According to AFAD, the crisis; “The emergence of physical, social, economic and political events that disrupt the normal order and have the possibility of causing negative consequences for society. It covers situations that significantly threaten the normal system and the basic values of society and require making important decisions under time pressure and stress. It is defined by the phrase”.

In general terms, crisis can be expressed as events that negatively affect the economic, physical, political, socio-cultural life of an organization or society and that lead to negative consequences in society at an unexpected time (Erdoğan, 2007:7).

The concept of crisis management aims to identify, examine, predict events that lead to a crisis, and establish specific methods or approaches for preventing or coping with a crisis for an organization.

Crisis management involves analyzing crises that occur unexpectedly, taking crisis warning signs into account, and implementing measures necessary for the organization to navigate through the crisis period with minimal damage. According to a different definition, it is a process of anticipating potential crises, evaluating these predictions, making preparations to minimize the impact of the crisis when it occurs, and resolving issues. In this process, decisions and actions taken by the decision-making authority determine how to deal with a potential crisis and what methods to apply to overcome it (Hermann, 1972:13; Pearson and Clair, 1998:61; Bruce, 2009:22).

According to AFAD, crisis management is a temporary management form applied during crisis conditions with the aim of returning the situation to normal. Unlike disaster management, it is characterized by its lack of continuity, being limited by a specific time, and ending when the events and causes requiring a crisis cease.

From the moment disasters occur, essential practices in crisis management include directing all relevant personnel, including search and rescue, firefighting, and first aid teams, to the needed areas, ensuring the correct and safe progression of workflow, efficiently using incoming resources and time, and collecting and securely storing all information. The timely and error-free execution of these processes requires managers to monitor the situation from a central point, and this coordinating center is referred to as the crisis management center (Oruç and Kaya, 2022:626).

In the crisis management process arising from disasters, the first step is determining the overall impact of the disaster on daily life and planning actions in the affected areas accordingly. This process involves steps such as damage assessment, establishing temporary living areas, identifying stakeholders, determining new settlement areas, and constructing permanent residences. When the tasks and procedures within the framework of crisis management are planned as depicted in Figure 2 after a disaster, successful results can be achieved (Turan and Giyik, 2018:387).

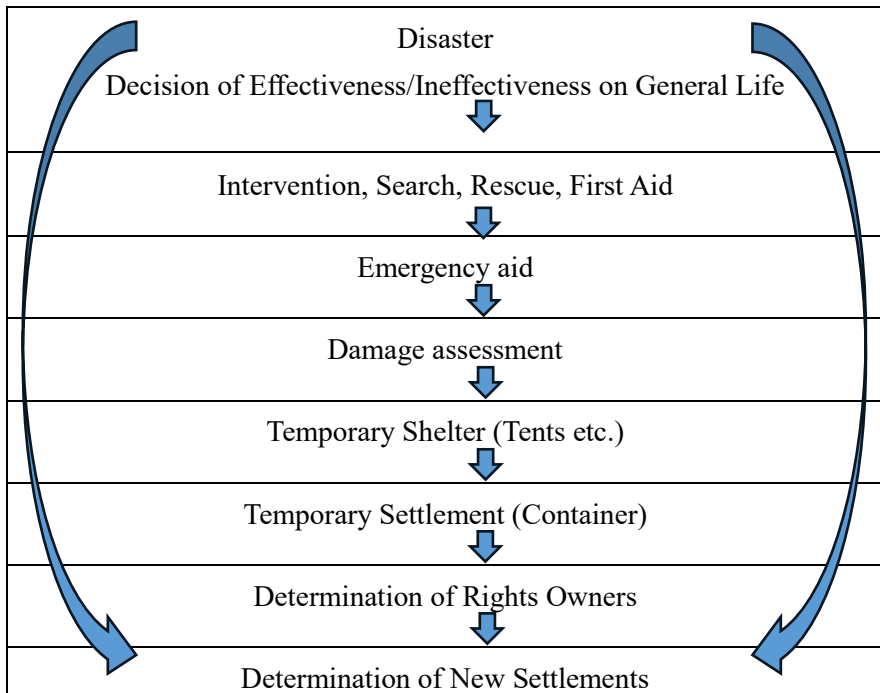


Figure 2: Crisis Management Implementation Process
(Turan and Giyik, 2018:387)

3. Emergency and Emergency Management Concepts

Emergency, according to Merriam-Webster, is defined as a “sudden, urgent, usually unexpected situation or occurrence that requires immediate attention, assistance, or rescue, a combination of unforeseen, unpredictable events.”

According to AFAD, emergencies are defined as “situations and conditions that require urgency, typically of a large scale but can generally be managed with local resources.”

In Article 2 of “Law No. 5902 on the Organization and Duties of the Disaster and Emergency Management Authority”, an emergency is defined as follows: “Events that stop or interrupt the normal life and activities of the entire society or certain segments, requiring urgent intervention, and the state of crisis created by these events” (Law No. 5902; 2009:1).

Emergencies are not limited to natural disasters; they can also occur in the workplace, adversely affecting employees and the environment. The definition of emergencies in the “Law No: 28681 on Regulation on Emergencies in Workplaces” is expressed as “incidents requiring immediate intervention, such as fire, explosion, spread of hazardous chemicals, poisoning, epidemic disease, radioactive leakage, sabotage, and natural disasters that may occur in the entire workplace or part of it and may affect the workplace from outside” (Law No:28681, 2013:1). According to the 4th article of the “Law No: 26735 on Regulation on Fire Protection of Buildings”, emergencies are also defined as events that stop or interrupt the normal life and activities of the entire society or certain segments, requiring urgent intervention (Law No: 26735, 2007:1).

The concept of emergency management encompasses a management process that begins immediately after an unwanted event occurs, aiming to timely, quickly, and safely meet all the needs of affected employees or the community. Emergency management is not continuous; it starts with the occurrence of an event caused by an accident or a natural disaster and continues until the reasons creating the emergency are eliminated. Effective emergency management requires planning, preparedness, coordination, and, unlike regular management, necessitates extraordinary resources, capabilities, and authorities (Özman et al., 2015:40).

3.1. Identification of Possible Emergencies in the Facility

Emergencies can arise in workplaces depending on the nature of the work being performed. If these emergencies are not prevented, they can escalate to a disaster. The occurrence of emergencies in a facility results in potential loss of

life and property. The impact of this situation on the operation and its reflection outside the business, affecting the community, can transform the incident into a disaster. Some emergencies that may occur in workplaces include:

- Fire
- Ignition and explosion
- Dispersion of hazardous chemicals
- Poisoning
- Natural disasters
 - ❖ Earthquake
 - ❖ Flood
 - ❖ Tsunami
 - ❖ Landslide
 - ❖ Storm
- Sabotage
- Work accidents requiring first aid and evacuation
- Radioactive leakage
- Epidemic diseases

Additionally, when identifying emergencies in workplaces, the results of risk assessments in the facility according to the regulation on emergencies, as well as situations involving the potential spread and explosion of hazardous chemicals, are taken into consideration.

3.2. Structures of Response Teams

To promptly and effectively respond to events such as fire, natural disasters, accidents, or other emergencies in workplaces, intervention teams are formed. The number of these teams is determined based on the hazard class of the work conducted in the workplace.

According to Article 11 of “Law No. 6331 on Occupational Health and Safety”, employers are required to:

a) “Evaluate potential emergencies in advance, taking into account the work environment, substances used, work equipment, and environmental conditions, identify possible emergencies that may affect employees and the working environment, and take preventive and restrictive measures to mitigate their adverse effects.

b) Conduct necessary measurements and assessments to protect against the adverse effects of emergencies and prepare emergency plans.

c) Considering the size of the workplace, specific hazards it poses, the nature of the work performed, the number of employees, and other individuals present in the workplace, appoint an adequate number of trained individuals with appropriate equipment in prevention, protection, evacuation, firefighting, first aid, and similar areas to deal with emergencies. Provide necessary tools and equipment, conduct training and drills, and ensure that teams are always ready.

d) Make necessary arrangements, especially in the areas of first aid, emergency medical intervention, rescue, and firefighting, to establish contact with external organizations outside the workplace.” In accordance with the expressions stated in the necessary precautions should be taken in the workplace (Law No:6331, 2012:8).

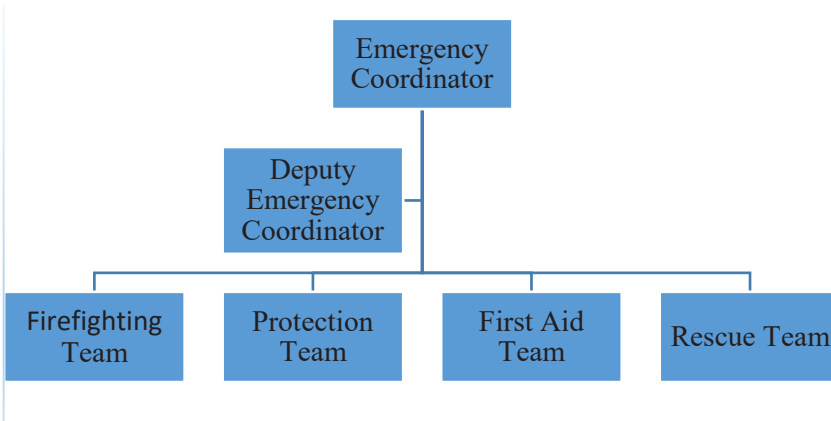


Figure 3: Emergency Teams

Employers are obligated to assign support personnel for emergencies according to the Law No: 28681. These teams are divided into four groups: firefighting, protection, rescue, and first aid teams.

When establishing search, rescue, and firefighting teams in workplaces, the number of teams is determined based on the hazard class of the workplace. According to Article 11 of Law No: 28681:

- a) “In workplaces classified as very hazardous, up to every 30 employees,
- b) In workplaces classified as hazardous, up to every 40 employees,
- c) In workplaces classified as less hazardous, up to every 50 employees,

at least one trained employee with suitable equipment is assigned as a support member.” “For workplaces with fewer than 10 employees, it is sufficient to assign at least one trained employee as a support member for all firefighting, rescue, and protection teams to establish contact with national and local institutions and organizations related to emergencies” (Law No: 28681, 2013:2).

Regarding the determination of the number of first aid teams, according to Article 19 of the First Aid Regulation:

- a) “In less hazardous workplaces, 1 first aider for every 20 employees,
- b) In hazardous workplaces, 1 first aider for every 15 employees,
- c) In very hazardous workplaces, 1 first aider for every 10 employees, must be present” (First Aid Regulation, 2015:3).

3.3. Duties and Responsibilities of Response Teams

Emergency teams designated to respond to emergencies or disaster incidents must carry out their duties in the best possible manner. Employers are responsible for procuring the equipment and gear to be used during emergencies, ensuring their regular maintenance, and keeping them in suitable locations and conditions. These teams should receive necessary training on the specifications and usage conditions of this equipment.

The definitions and responsibilities of the teams are outlined below:

Protection Team: The task of the Protection Team, according to Law No: 28681, is to “prevent panic and chaos likely to arise due to emergencies, perform coordination among emergency teams, conduct headcounts, and provide information to relevant national and local intervention teams when necessary” (Law No: 28681, 2013:2).

The Protection Team Leader should be able to promptly communicate the emergency to the relevant individuals when it occurs. They must prevent unauthorized individuals from entering the emergency area and facilitate transportation by removing obstacles on the access route to assist fire, ambulance, and other emergency intervention vehicles, thus expediting the process. Once the incident is under control, the Protection Team Leader should play a role in cleaning the workplace where the emergency occurred and ensuring the creation of a safe area.

Rescue Team: The personnel in this team consist of individuals who have received special training. The Rescue Team is responsible for search and rescue operations for employees, visitors, and other individuals in workplaces

following an emergency. In the event of an emergency, they promptly proceed to the emergency crisis center and conduct necessary checks. If there are missing personnel according to the checks, planning for rescue operations is immediately initiated. They move to the region specified by the crisis center with specialized equipment and vehicles, commencing rescue operations. Rescue teams carry out rescue efforts on the incident site without jeopardizing their own safety, using the necessary equipment for individuals stranded in the area. They ensure the rapid transportation of rescued individuals to the first aid intervention zone (Durmuş, 2022:47).

Firefighting Team: According to the emergency response guide of the “Ministry of Labor and Social Security”, the firefighting team, in the event of an emergency such as a fire or explosion, promptly informs relevant departments by phone, providing details of the incident, including the time and type. Upon hearing about the fire, the firefighting team proceeds to the fire location, determines the type of fire, and attempts to control and extinguish it using the available fire extinguishing equipment at the workplace. If any individuals are identified as being trapped in the fire zone, the rescue team is notified to initiate rescue efforts.

When the fire brigade arrives at the scene, firefighting activities are handed over to them, and unless assistance is requested, the team should not interfere with the ongoing operations at the scene. The area around the incident site should be cordoned off with safety tapes to prevent unauthorized individuals from entering. The team assists in clearing obstacles and vehicles on the road to facilitate the passage of ambulances and fire trucks. After the incident is under control and the fire is extinguished, the team contributes to the investigation and reporting of the cause of the fire, the affected area, and the material and other losses that occurred after the incident (Ministry of Labor and Social Security, 2017:27-28).

First Aid Team: In emergency situations, the first aid team provides initial medical assistance to affected individuals on-site without using medical drugs until health teams arrive, with the aim of saving lives or preventing conditions from worsening. The team shares the health status of the injured individuals with healthcare institutions arriving at the scene. They facilitate the rapid transportation of injured individuals to the nearest healthcare institutions and continue their duties until the incident site returns to normal, following the requests of healthcare teams. The first aid team should consist of employees holding first aid certificates approved by the Ministry of Health (Çelenk Kaya and Demirtaş, 2022:73; Ministry of Labor and Social Security, 2017:28).

3.4. Emergency Notification and Communication

Communication plays a crucial role in on-site response to emergencies and disasters. In Turkey, significant loss of life and property occurs due to emergencies and disasters. Utilizing technological advancements to establish communication during disasters and emergencies can minimize potential losses (Kadiođlu and Özdamar, 2005; Kaçar, 2018). It is of great importance that both emergency response teams and the general public are informed about key aspects of communication to enable prompt and effective intervention (Kaya, 2013:22).

In Turkey, when an emergency or disaster occurs, assistance can be requested by dialing the emergency contact number 112. Based on the information received at the center, the units responding to the incident may vary according to the scale of the emergency.

3.5. Evacuation Routes, Assembly Points, Shelters and Features

In workplaces, in the event of emergencies and disasters, the employer, according to Article 10 of the Law No: 28681, “specifies in the emergency action plan the appropriate evacuation arrangements to enable employees to move from their location to a safe place for protection from the adverse effects of emergency situations, providing necessary instructions to employees in advance” (Law No: 28681, 2013:2).

When emergencies and disaster events occur, knowing where individuals will gather outside is a crucial factor. The area designated for individuals to gather outside is referred to as an emergency assembly area. This area represents a designated space at a safe distance, ensuring that employees are not harmed by potential adverse situations during emergencies. For the assembly area to be a secure place, it should be located at a distance unaffected by hazards and risks. The assembly area should be marked with a sign visible to evacuees during emergencies. Considering the possibility of power outages in evacuation routes, a lighting system should be provided using a secondary power source. Assembly areas should be designed with sufficient width and size to accommodate the current number of users without causing overcrowding. Emergency plans in workplaces should include information such as exit points, assembly areas, and the locations of fire extinguishers within the facility during emergencies (Çelenk Kaya et al., 2018:14).



Figure 4: Sample Emergency Evacuation Plan
(Ministry of Labor and Social Security, 2017:24)

During emergency situations, individuals require information on emergency directional signs and evacuation diagrams to be able to move from their current environment to a safe zone. With this guidance, the safety of individuals will be ensured.

4. Disaster and Disaster Management Concepts

Disasters can arise as a result of natural events such as fires, earthquakes, floods, storms, or human-induced incidents like accidents, pandemics, sabotage, and nuclear accidents. These events lead to consequences such as death, injury, economic, psychological, and social losses. In the year 2022, there were 387 disaster events worldwide, affecting 185 million people and resulting in the loss of 30,704 lives. Economically, these disasters caused approximately \$223.8 billion in losses (CRED, 2023:1). In Turkey, there were 22,982 natural disasters in the year 2022 (AFAD, 2022).

According to Article 4 of the “Law No: 31760 on Disaster and Emergency Intervention Services Regulation”, disasters are defined as “natural, technological, or human-induced events that cause physical, economic, and social losses for the entire community or certain segments, disrupt normal life and human activities, and overwhelm the coping capacity of the affected community” (Law No:31760, 2022:1).

According to the WHO, a disaster is an “unexpected ecological event that exceeds the capabilities and capacity of institutions and organizations, disrupts normal functioning, and requires external assistance” (WHO, 2008).

According to the United Nations, a disaster is defined as an event that “exceeds the coping capacity of the affected community or society, involving a serious disruption in the functioning of a community or society, encompassing widespread humanitarian, material, economic, or environmental losses and effects, using its own resources” (UNISDR, 2009:9).

In other words, a disaster can be described as natural, technological, or human-induced events that require coordinated efforts of various institutions and organizations in the affected area. It results in economic, social, and physical losses, disrupts daily life and human activities, and affects human communities (Erkal and Değerliyurt, 2009:149).

Resilient communities with high economic and cultural levels are observed to engage in successful efforts against disasters by utilizing local and general resources more rationally.

The concept of disaster management refers to a comprehensive community effort to prevent disasters, reduce their impacts, intervene in events arising from disasters in a timely, fast, and effective manner, and create a safer and improved new living environment for communities affected by disasters (AFAD, 2014:3).

In modern disaster and emergency management, the reduction of losses and damages, preparation, planning, forecasting, and early warning, as well as pre-disaster preparations such as understanding disasters, all fall under risk management. Post-disaster efforts such as impact analysis, intervention, recovery, reconstruction, and development define crisis management. Effective disaster management encompasses all these activities. The success of disaster management in a country and its level of development can be evaluated by the increase in risk management and the decrease in crisis management. In other words, if emergencies and disasters are accurately predicted, studied, and preventive measures are taken before they occur, the damages resulting from the upcoming emergency or disaster are reduced accordingly.

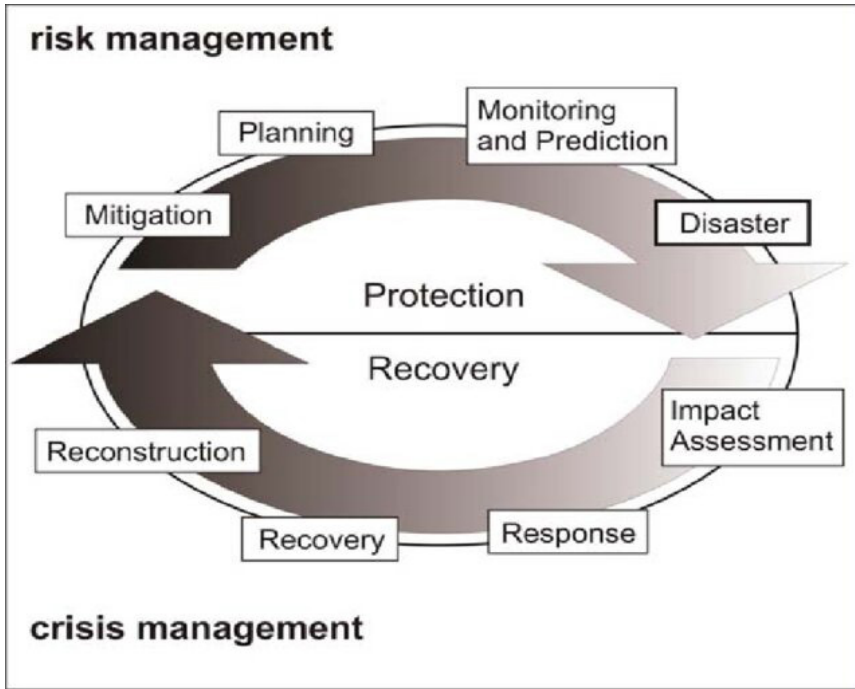


Figure 5: Disaster Management (Wilhite, 2011:11)

4.1. Differences Between Disaster and Emergency

The concepts of emergency and disaster are often confused with each other. Although the meanings of these terms are close, they are not the same. In emergencies, timely intervention and swift delivery of aid are crucial to reduce the consequences of potential damage and losses. While emergencies refer to events requiring urgent response and the crisis they create, disasters encompass natural, technological, or human-induced events that result in economic, physical, and social losses in the community (AFAD, 2011:20; Ertürkmen, 2006:12).

Emergencies and disasters are unexpected events, but they have different impacts. The distinction between these two terms lies in the fact that:

Disaster generally describes large-scale destructive natural events. These natural events may include fires, earthquakes, floods, tsunamis, hurricanes, volcanic eruptions, and other similar natural disasters. Disasters typically affect large populations or regions and can cause significant damage. They often arise from natural processes such as extreme weather conditions or underground seismic activities.

Emergency denotes an unexpected, dangerous, or critical situation. Emergencies are events of a small enough scale that can be controlled by a few

local institutions without requiring external assistance, and they can be managed without seeking help from outside the region. Emergencies can include both natural disasters and human-made events. Among these human-made events are terrorist attacks, fires, accidents, pandemics, chemical leaks, power outages, and more. Emergencies can affect either on a personal level or a smaller region, but they can also impact a large geographical area (Kruijff, et al., 2012:2; Tekin, et al., 2017:139).

In summary, a disaster generally describes large-scale natural events, while an emergency encompasses any unexpected or dangerous situation, including both natural and human-made events. Being prepared for both disasters and emergencies and responding correctly during such events are crucial.

4.2. Disaster Management Features and Principles

Disaster management is a management process that encompasses a series of important principles and features involving the prevention, preparedness, response, recovery, and rehabilitation processes of natural or human-induced disasters. In this management process, it is crucial to be integrated with multiple institutions and organizations, and the execution of the planning process with defined tasks and responsibilities for each organization is essential. Therefore, organizations, in line with the plans in the management process, should update their plans over time to fulfill their tasks and responsibilities quickly and effectively.

There are some fundamental features and principles of disaster management. These include (Setyowati, 2019:34; Çakın, 2007:5; Gerdan, 2010:41).

Multidisciplinary Approach: Disaster management requires collaboration among experts from different disciplines. Professionals from fields such as science, engineering, health, safety, communication, and many others come together to collaborate in dealing with disasters.

Risk Analysis: Disaster management involves analyzing the disaster risks of a region. This includes understanding potential types of disasters and their impacts, measuring and mitigating risks.

Planning and Preparedness: Disaster management includes creating and implementing preparedness plans before disasters occur. These plans should cover topics such as risk analysis, emergency procedures, equipment, and resources.

Emergency Response: Disaster management involves managing emergency response during a disaster. This includes providing emergency services such as rescue operations, first aid, and firefighting.

Coordination and Collaboration: Disaster management requires different institutions and organizations to come together and work in coordination. This may involve collaboration at the local, international and national levels.

Communication and Information Management: Effective communication is a critical part of disaster management. Conveying accurate and up-to-date information to relevant organizations can help reduce the impact of a disaster and assist the community in acting consciously.

Sustainability and Recovery: Disaster management includes the post-disaster recovery process. Recovery involves long-term sustainable solutions for communities to return to normal life.

Equality and Justice: Disaster management aims to distribute the impacts of disasters equally and justly, protecting every segment of society. Paying special attention to the needs of disadvantaged groups is particularly important.

Public Participation: In disaster management, public participation and awareness are crucial. Encouraging the community to be prepared for disasters, contribute to emergency plans, and exhibit safe behaviors should be promoted.

These features and principles help facilitate the effective implementation of disaster management, making communities more resilient to disasters.

5. Disaster Management Stages

Disaster management is a process implemented in specific stages with the aim of being prepared for disasters, minimizing the impacts of calamities, dealing with the consequences of the events, and managing the recovery process. Throughout this process, individuals, as well as numerous public and private institutions and organizations at the national and international levels, play a role at various points. According to the Turkish Disaster Intervention Plan (TAMP), the effective intervention method in disaster management is addressed in three stages: preparation, intervention, and pre-recovery (AFAD, 2014:18).

5.1. Preparedness for Disasters

The preparedness phase for disasters involves an individual or community becoming aware of potential disasters, being ready, and taking effective organizational and methodological measures to minimize their impacts. This stage should be carried out in a planned and systematic manner, taking into account the probability and effects of the disaster.

During this phase, it is necessary to determine the roles and responsibilities of individuals who will be involved in the emergency and disaster management process, and appointments should be made. Personnel assigned to search and

rescue activities should be provided with the necessary equipment and resources. The maintenance of this equipment, the use of early warning systems, training of personnel, and other activities should be continuously updated (Kadioğlu, 2008: 18).

The following actions should be taken during the preparedness phase:

- ✓ Disaster and emergency plans should be prepared,
- ✓ Existing resources should be identified,
- ✓ Emergency aid and logistical service plans should be prepared,
- ✓ Materials, equipment, and vehicles should be prepared,
- ✓ A risk map should be created,
- ✓ Resource management should be planned,
- ✓ Intervention teams should be formed, and training should be provided,
- ✓ International cooperation for disasters should be established,
- ✓ Utilization of new technologies should be considered,
- ✓ Communication, early warning, and alert systems should be established, improved, and tested,
- ✓ Training activities for emergencies and disasters should be conducted,
- ✓ Drills should be organized,
- ✓ Insurance services should be popularized,
- ✓ Coordination and communication systems should be synchronized with the disaster and emergency management center (AFAD, 2014: 18; AFAD, 2012:22).

Preparedness efforts for disasters should not be seen as a one-time application. Plans, assignments, equipment checks, communication, and coordination of units to be contacted during a disaster should be continuously updated.

The preparedness phase is a continuous process that involves conducting activities ensuring the safety of individuals and minimizing the impact of disaster damages on their lives and belongings until the next disaster occurs.

5.2. Disaster Response

The intervention phase in disasters refers to the immediate period after the occurrence of a disaster. It can be described as the efforts made by institutions and organizations to bring the post-disaster situation under control (Özel, 2013: 19). To execute the intervention phase professionally, the activities identified in the preparation phase must be completed effectively. Successful response

processes such as emergency aid, health services, temporary shelter, and search and rescue activities during a disaster require good preparation and organization before the disaster (Kaya and Ayker, 2023: 130).

According to AFAD, the intervention phase is defined as follows: “Efforts aimed at saving lives and property, providing health, subsistence, restoration, security, property and environmental protection, social and psychological support services in disasters and emergencies. It is the first phase that begins with the occurrence of the disaster. Providing urgent needs of the public such as search and rescue, first aid, medical health, food, shelter, clothing, water, and purification services; damage assessment, coordination of aid resources, and similar matters are carried out in this phase. It is a process that starts with the initial intervention and can continue for a short or longer period depending on the situation” (AFAD, 2023).

The intervention phase aims to save as many lives as possible within the shortest possible time, provide assistance to the injured, and meet the urgent needs of disaster victims, such as water, food, shelter, protection, clothing, and heating.

Activities conducted during the intervention phase can be listed as follows:

- ❖ Communication,
- ❖ Search and rescue,
- ❖ Emergency shelter,
- ❖ Nutrition,
- ❖ Information management,
- ❖ Protection from fire and hazardous materials,
- ❖ Security and traffic,
- ❖ Health and sanitation,
- ❖ Damage detection,
- ❖ Debris removal,
- ❖ Social support,
- ❖ Logistics and maintenance,
- ❖ Activities such as emergency aid financing are carried out in coordination

with AFAD (AFAD, 2012:23).

5.3. Disaster Recovery

Recovery in disaster management is the process that follows the intervention phase in a disaster. It is a long-term process that encompasses all physical, social,

legal, institutional, and economic activities necessary to meet the needs of the affected community in the most practical ways, restore life to normal as quickly as possible, enhance the ability to cope with potential disasters, and create a safer living environment to minimize further damage (AFAD, 2023).

The main objective of the activities carried out in this phase is to ensure that the basic conditions for the community affected by the disaster, such as food, water, transportation, psychological support, communication, electricity, long-term temporary housing, education, economic and social activities, etc., are met at a minimum level. In the recovery phase, activities should be prioritized based on the damage left by the disaster, and work should be carried out in accordance with a plan and the resources provided. The utilization rate of resources should be documented, identified deficiencies should be recorded, and corrective actions should be taken before the next emergency. Lessons learned during this management process should be used to review emergency plans (Kadioğlu, 2008:28).

The restoration of the economic and social life integrity of the community damaged by the disaster can vary depending on the magnitude of the disaster. Therefore, the recovery process is a comprehensive set of activities that cover very broad areas. While the primary goal in this process is the individuals and communities affected by the damage, it is crucial not to overlook other important aspects such as infrastructure development, support for industry and trade activities, and the revitalization of the local economy (Gülkan et al., 2003; Gerdan, 2010:49).

Some key points to follow in the recovery process can be listed as follows:

- Involvement of local communities in recovery efforts,
- Allocation of budget and provision of aid economically,
- Resolution of housing issues,
- Conducting risk analysis for preparedness for the next disaster and assessing the balance of existing damage,
 - Damage assessment and debris removal related to the losses incurred after the disaster,
 - Planning and implementation of both short-term and long-term recovery efforts,
 - Identification of needs in recovery efforts and efficient utilization of existing resources for the possibility of returning to pre-disaster conditions (Coppala, 2015:380; Kıymış and Kaya, 2022:12).

6. Conclusion

Disasters and emergencies negatively impact the lives of many people worldwide and, in addition, cause serious damage to work environments and economies. In the workplace, there are numerous high-risk accidents and incidents, some of which can reach the level of disasters that can cause harm to human life, even leading to mass casualties. In the fight against emergencies and disasters that seriously affect working life, responsibility falls on institution and organization managers, employers, and employees. Preventive and limiting measures can largely prevent emergencies before they occur. If these measures are applied in a timely and appropriate manner, human and material losses can be minimized.

The foundation of disaster and emergency management is the human factor. When there is no conscious society about emergencies, managing a crisis becomes challenging. For effective crisis management in emergencies and disasters:

- An emergency and disaster plan should be prepared for workplaces to reduce the adverse effects of emergencies, natural and technological disasters on occupational safety. A risk analysis report should be created for workplaces.
- A modern and integrated disaster management plan should be prepared using the risk analysis prepared for workplaces.
- The first 72 hours are crucial, especially for search and rescue activities. As part of the prepared plan, all employees should receive training and drills for the first 72 hours.
- Quick and coordinated intervention is essential in emergencies.
- Feedback should be considered to make improvements and better prepare for future crises.
- Communication should be maintained with other institutions and organizations during crisis management.

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CHAPTER VIII

RISK MANAGEMENT PROCESSES IN OCCUPATIONAL SAFETY STUDIES

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1. Introduction

The term risk management, which became widespread in the twentieth century, is a general term that can be used in various fields. Accordingly, risk management encompasses different subfields such as occupational health and safety risk management, disaster risk management in emergency and disaster management, corporate risk management for workplaces, and financial risk management for economic uncertainties. There are various concepts, terms, policies, and guide resources related to risk and risk management in different fields. In this study, the risk management processes involved in occupational safety work are detailed.

Occupational safety emerges as a crucial management element in every industry. In occupational safety, there are two different strategic approaches to dealing with risks in the workplace: reactive and proactive. The reactive approach focuses on taking precautions after incidents and problems have occurred. The proactive approach, on the other hand, anticipates and addresses events and issues in advance to minimize potential future problems. Within the framework of a proactive approach in workplaces, it provides the opportunity to be prepared for changing conditions and unexpected situations (Özkılıç, 2014:7).

Identifying potential hazards in the work environment, evaluating the possible impact of these hazards, and controlling these effects are of critical importance. Managing these effects may be possible through risk management because risk management is one of the fundamental principles of modern management and is a frequently used management approach in occupational health and safety practices.

In the context of occupational health and safety, risk management involves efforts to make the health and safety conditions of employees as excellent as possible. In workplaces, injuries, illnesses, and deaths that may occur represent not only individual tragedies but also economic losses. Developed countries have implemented comprehensive occupational health and safety management systems to continuously reduce workplace accidents. These systems include strategies, policies, and measures aimed at improving the health and safety of employees (Brocal et al., 2019:24). Therefore, occupational health and safety risk management represents a systematic approach to identifying, evaluating, and controlling risks in workplaces.

For the health and safety of employees in the workplace, it is necessary to eliminate or minimize the dangers and risks present in the environment. Employers must address the risk management process against hazards and risks. The risk management process includes the steps of identifying hazards, determining and analyzing risks, determining risk control measures, documentation, and finally, renewing the risk assessment.”

2. Risk

The concept of risk is associated with various scientific fields, ranging from engineering to medical sciences, insurance to finance. Examining the essence of the word “risk,” in ancient Greece, in “Homer’s *Odyssey*”, “rhza” referred to treacherous cliffs, and the dangers faced at sea were called “Rhizikon.” In Chinese, the term ‘risk’ is composed of expressions for ‘danger’ and “opportunity” defining it as “Risk=Crisis” (Alleman et al., 2018:26).

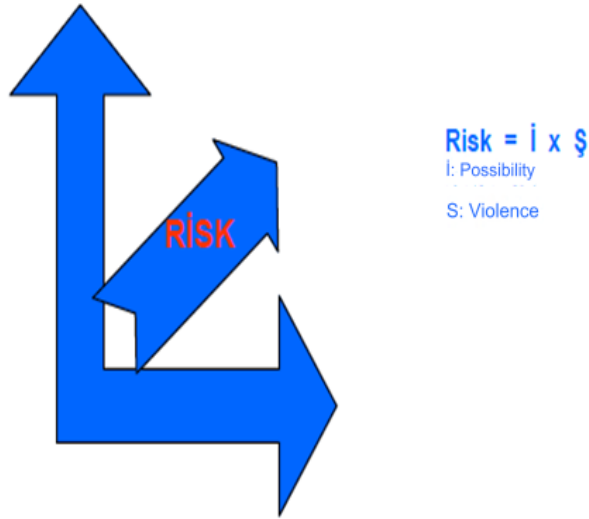


Figure 1: Risk (TMOB, 2014:2)

The concept of risk has more than one definition in the literature. These definitions;

- According to TS ISO 45001, it is defined as “the combination of the probability of the occurrence of work-related hazardous events/exposures and the severity of the injury or harm to health that these events/exposures may cause.”

- According to the ILO, it is described as “the combination of the probability of a hazardous event occurring and the severity of the harm or injury to human health” (Alli, 2001:67).

- According to the WHO, “it is the likelihood of an adverse outcome occurring or the factor giving rise to this likelihood.”

- According to the Risk Management Institute, “it is the combination of the probability and severity of an event.”

- According to the Turkish Language Institution, it is the risk of suffering harm, or “riziko” in Turkish.

- According to the Disaster and Emergency Management Authority (AFAD), “it is the probability of the occurrence of loss of values such as life, property, economic, and environmental in specific conditions and environments.”

- According to the “Occupational Health and Safety (OHS) Law No. 6331, it is defined as the probability of loss, injury, or other harmful consequences arising from a hazard.”

Risk is the probability of an unwanted event occurring in the future. This situation can arise from physical events (such as explosions, fires, accidents), natural events (such as floods, earthquakes, landslides, storms, hail), or social events (such as sabotage, theft), and at times, it can be due to economic fluctuations (Çelik, 2008:20).

Risk is inherent in all activities. It is an understanding of the level of threat against potential problems. In the workplace, efforts should be made to identify and analyze risks to eliminate or reduce their potential harm to an acceptable level.

According to the “Occupational Health and Safety Risk Assessment Regulation” (OHSRAR), acceptable risk is defined as “the risk level that is in compliance with legal obligations and the workplace’s prevention policy and does not pose a level of risk that would result in loss or injury.” In other words, it is the capacity to maintain the risk level that may arise in the workplace at a tolerable level. Acceptable risk is commonly used in the risk management processes to assess whether a particular risk is acceptable.

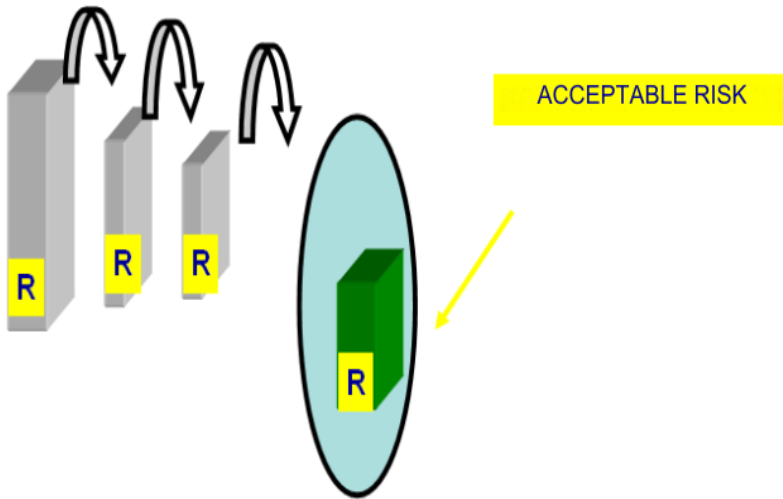


Figure 2. Acceptable Risk (TMOB, 2014:3)

The first step in determining safety measures in terms of occupational safety at workplaces is the identification of hazards. In this stage, hazardous conditions and behaviors that may lead to occupational accidents and diseases are identified. The identified hazards can create multiple risks, and risks can have multiple sources of danger. Since risks arise from hazard sources, preventive measures should be identified separately for each hazard. Ensuring

the health and safety of employees against hazards and risks that may arise from the conduct of work in the workplace is of utmost importance, and taking preventive and protective measures is crucial. The OHS Law No. 6331 imposes the responsibility on employers to identify hazards, analyze risks, and reduce them to an acceptable level.

3. Risk Management

Risk management is defined as the systematic process of anticipating and assessing potential hazards and risks that may arise during the course of work in a workplace. This involves taking preemptive measures to eliminate or mitigate the impact of these risks, with the aim of minimizing their effects. In other words, risk management involves the identification of risks, determining the adverse conditions that these risks may cause, identifying how to deal with the identified risks, implementing the determined methods, and analyzing the results obtained (Hubbard, 2020:24). By following these processes, undesired outcomes resulting from adverse situations and conditions in the workplace can be prevented.

Bernstein describes the concept of risk management as follows: “You want a leak-proof valve, and you try everything possible to make such a valve. However, the real world gives you a leaking valve. Then, you have to determine the amount of leakage you can tolerate.” (Bernstein, 2006:3).

In workplaces, risk management holds a significant position in terms of occupational health and safety. The risk management process is a continuous operation that prevents the occurrence of problems in the business. In a general sense, it is a system that plans to eliminate or reduce the likelihood and the adverse effects it may cause to a harmless level. In this context, the goal is to eliminate or minimize the harm to the business, the environment, and the employees caused by the adverse effects of the likelihood.

4. Historical Development of Risk Management

Studies specifically related to risk management in the modern sense began in the early 1900s, becoming prominent in our lives due to wars, economic crises, and especially the increased security problems after World War II, primarily in the field of military security practices.

The need for risk management arose with the development of industry, as the use of products such as machinery, chemicals, and technical equipment in

workplaces increased. After the Industrial Revolution, workers faced health and safety risks. During those times, employees were employed under conditions where health and safety measures were insufficient. Instead of taking preventive measures in the event of a workplace accident, employers opted to change the injured employee's workplace (Info, 2023).

The first principles related to risk management in the world were introduced in the early 1960s in the United States. Robert Mehr and Bob Hedges addressed the principles of risk management in their work titled "Risk Management in the Business Enterprise" highlighting its ability to increase productivity and efficiency in businesses (Moosa, 2007:169).

The "Occupational Safety and Health Act (OSHA)" was established in 1970 to ensure the employment of workers under national safety and health conditions and protect human rights. In Turkey, the responsibility for ensuring occupational health and safety was assigned to the "Directorate General of Occupational Health" under the "Ministry of Labor and Social Security" in 1945."

In the 1990s, the concept of risk management began to gain importance. During this period, the scope of risk management expanded beyond financial risks to include operational risks. With a change in the perspective on risk, enterprise risk management came to the forefront. Alongside enterprise risk management, in the 2000s, the focus widened to encompass risks arising from the structure and processes of businesses, workplace-related operational risks, and strategic risks. This widespread adoption of enterprise risk management brought a new perspective to workplace risks and aimed to create businesses that evaluate risks from a broader perspective.

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5. The Importance of Risk Management in Workplaces

In today's rapidly changing world influenced by advancing technology, the ability to adapt to these changes has become crucial for both individuals and

businesses to sustain their existence. To adapt to these changes, businesses must develop measures to eliminate existing risks or those arising from change. This is because the risks that emerge with change can pose hazards in the working environment (Schöning et al., 2018:15).

The implementation of risk management is a strategic matter for businesses. Companies that prioritize risk management not only control their risks, reducing losses but also enhance their operations more efficiently in light of risk analysis. Businesses with robust risk management examine risks, identify potential losses in crises in advance, and take preventive measures to minimize these losses. On the other hand, businesses with weak risk management overlook the possibility of events and fail to identify potential damages in incidents (Alataş, 2007:64).

For the effective implementation of occupational health and safety risk management processes in businesses, it is essential for both the top management and all employees to adopt and implement these processes. Workplace environments harbor numerous hazards and risks, and the measures to be taken against these risks are not limited to laws and regulations. In today's evolving technological and business practices, laws and regulations are not expected to encompass all necessary precautions. Moreover, the implementation of risk management practices does not solely imply fulfilling legal responsibilities. Therefore, a perspective is needed where all processes related to risk management in occupational health and safety are approached from a higher level that prioritizes both business and human health (Çelenk Kaya et al., 2020:26).

The responsibility for the implementation and improvement of occupational health and safety risk management practices lies not only with businesses and employees but also with regulatory authorities. In this regard, obstacles to corporate risk management practices include the lack of preventive rules, avoidance of individual and institutional applications, negligence of misuse, audit, and regulatory deficiencies, and ignoring issues that may create quality problems when not penalizing the offense or when there are no deterrent penalties.

To eliminate or minimize the frequency and impacts of incidents that may occur in the workplace, there must first be a desire to combat risks (Leitch, 2004:27). In this context, it is crucial to have professionals who are aware of the risks and understand the importance of risk management. These professionals, capable of managing the risk management process, should formulate risk management policies and design risk management plans. Subsequently, risk analysis and evaluation studies can be conducted.

The organizations responsible for preparing documentation such as standards, laws, and regulations related to occupational health and safety risk management, implemented globally, are listed below (Özkılıç, 2004:21).

- “Standards New Zealand (SNZ)
- American Society of Mechanical Engineers (ASME)
- American Petroleum Institute (API)
- National Fire Protection Association (NFPA)
- NZ Chemical Industry Council
- British Standards Institute (BSI)
- Occupational Safety and Health Administration (OHSA)
- NZ Chemical Industry Council
- Occupational Safety and Health Service
- Standards Australia
- International Organization for Standardization (ISO)”

Some of the applied standards include QS 9001, BS ISO 45002 (“Guide to Occupational Health and Safety Management Systems”), ILO-OSH “Occupational Health and Safety Management System Guide,” ISA 2000, NEN NPR 500, OSHA AS/NSZ 4360, OSHA AS/NSZ 4804, OSHA AS/NZS IEC 31010, which serve as implementation guides.

6. Benefits of Risk Management

With the advancement of technology and industrialization worldwide, the number of workers has also increased. The use of machinery and substances such as chemicals, explosives, and petroleum products in industrial and production areas poses a threat to the health and safety of employees when these products are not used safely, leading to accidents and occupational diseases.

According to ILO, there are 250 million work-related accidents annually worldwide, resulting in the loss of lives of more than two million people (Kılış and Demir, 2012:25). In Turkey, according to the data from the Social Security Institution (SGK) in the last 10 years (2013-2022), 14,094 workers have lost their lives due to work accidents, with an annual average of 1409 people. Furthermore, due to temporary and permanent disabilities resulting from work accidents and occupational diseases, the gross national product has suffered significant losses (Çelenk Kaya, 2020:62). Understanding and implementing concepts such as occupational health and safety, risk, hazard,

risk assessment, and risk management can prevent these negative outcomes. The implementation of risk management processes in workplaces can yield the following benefits:

- Reduction in the loss in gross national income due to work accidents and occupational diseases,
- Decrease in the number of employees unable to work,
- Contribution to workplace harmony,
- Decrease in health and rehabilitation expenses,
- Acceleration of transformation into a welfare society,
- Time savings,
- Enhancement of our country's international prestige.

The risk management process is a dynamic one that not only provides benefits to the business but also offers advantages to the employees. Preserving the health of employees in the workplace and their realization of this contribute to high motivation among the workforces. Employees with elevated levels of motivation and corporate commitment consistently highlight the business. A successful risk management process leads to a reduction in the rates of work accidents and occupational diseases within businesses (Bateman, 2005:19).

7. Risk Management Process

According to Article 4 of Law No. 6331 on OHS, “The employer is obliged to carry out or have a risk assessment conducted in terms of occupational health and safety.” As stated in Article 3, risk assessment is defined as “the necessary studies to identify existing or potential hazards in the workplace, analyze the factors causing these hazards to turn into risks, rate the risks arising from hazards, and determine control measures.” However, the employer's responsibility does not end with the conduct of risk assessment; it also includes taking risk-reducing measures and ensuring the use of suitable equipment and devices within the necessary protective workplace organization (OHS Law, 2012:3).

In the risk management process, the evaluation of risks and hazards is described under Article 7 of the OHSRAR. It states that for all workplaces, starting from the design or establishment phase, the identification of hazards, determination and analysis of risks, comparison of risk control measures, documentation, updating of conducted studies, and, if necessary, renewal stages are conducted (OHSRAR, 2012:2).

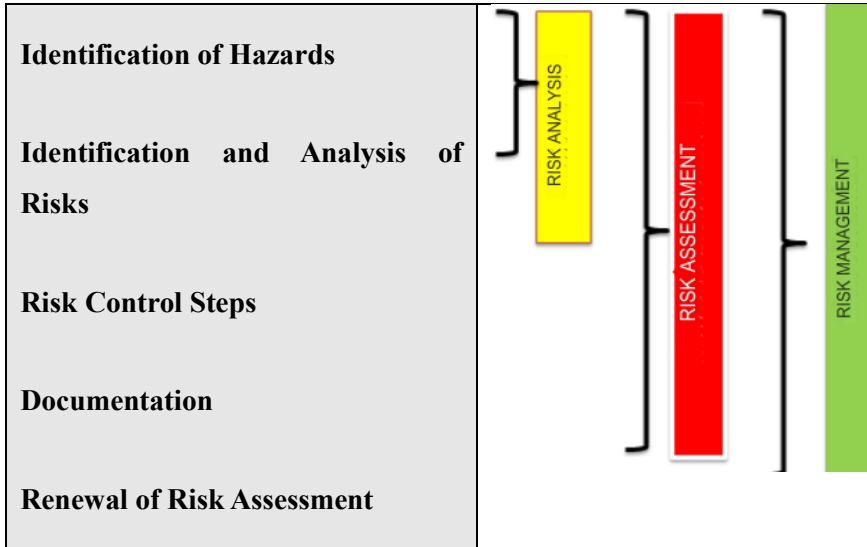


Figure 3. Risk Management Process

The steps in the risk management process are detailed below:

7.1. Identification of Hazards

There is more than one definition of danger;

- According to Article 3 of the OHS Law No. 6331: “Potential harm or damage that may exist in the workplace or come from outside, with the potential to affect employees or the workplace.”
- According to TS ISO 45001: “A source with the potential to cause injury and harm to health.”
- According to WHO: “An object or certain conditions containing negativity for human health and the environment.”
- According to the Turkish Language Institution: “A situation that could cause significant harm or destruction.”
- According to ILO: “Sources or situations that could lead to injury or illness of individuals, damage to property or materials, harm to the workplace environment, or their occurrence” (Alli, 2001:67).

Identifying hazards is one of the crucial steps in the risk management process. In the process of identifying hazards, all factors that could potentially cause damage or harm must be objectively analyzed. There are various methods

for identifying hazards. During these identifications, the opinions and views of occupational safety specialists, workplace physicians, technical personnel, employee representatives, and all employees should be considered, and two separate risk maps should be created regarding potential occupational diseases and workplace accidents (Özkılıç, 2005:58, and Emhan, 2009:211).

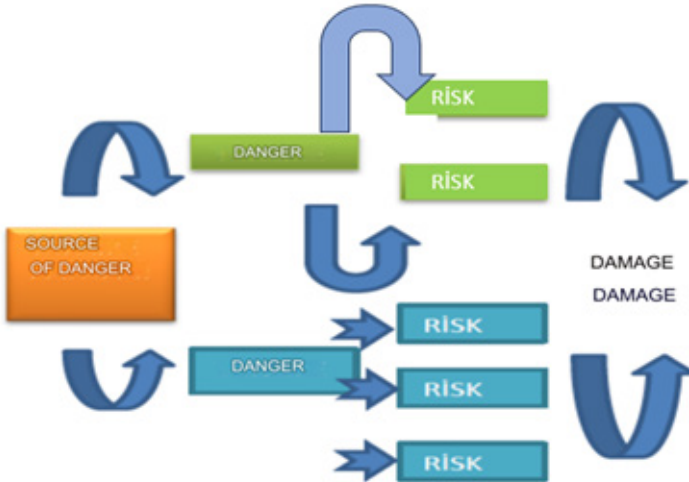


Figure 4. Emergence of Risk (Zeydan, 2017:7)

When identifying hazards, according to Article 8 of the OHSRAR, information specific to the workplace environment, employees, and the workplace is collected. These include:

- a) “Workplace buildings and attachments
- b) Activities conducted in the workplace and related tasks and processes
- c) Production processes and techniques
- d) Work equipment
- e) Substances used
- f) Procedures related to residues and wastes
- g) Organization and hierarchical structure, duties, authorities, and responsibilities
- h) Employees’ experiences and thoughts
- i) Work permits required by relevant legislation before starting work
- j) Training of employees, age, gender, and similar characteristics, as well as health surveillance records

k) Status of special groups requiring specific policies, such as young, elderly, disabled, pregnant, or breastfeeding employees, and the situation of female employees

l) Inspection results of the workplace

m) Records of occupational diseases

n) Records of occupational accidents

o) Records of incidents in the workplace that did not cause injury or death but resulted in damage to the workplace or work equipment

p) Near-miss incident records

q) Material Safety Data Sheets

r) Results of environmental and personal exposure level measurements

s) Previous risk assessment studies if available

t) Emergency action plans

u) Documents that must be prepared in specific workplaces, such as health and safety plans and explosion protection documents.” information about is collected. (OHSRAR, 2012:2).

To identify hazards based on the information collected, hazards are identified that consist of or result from chemical, physical, biological, ergonomic, and psychosocial sources present in the workplace, or hazards that may arise from the interaction of these risks (Çelenk Kaya, et al., 2018:12). Attention should be paid to certain points when identifying all these hazards. These include:

- “Hazards arising from the location of the business,
- Hazards that may arise from the improper placement of workplace buildings and extensions in the selected area or additions not included in the plan,
- Hazards arising from the construction style of workplace buildings and extensions and the selected construction materials,
- Hazards that may arise from factors such as work procedures, shift arrangement, teamwork, organization, supervision system, hierarchical order, visitors, or other individuals not employed in the workplace during any activity, including maintenance and repair work, to be conducted at the workplace,
- Hazards arising from the conduct of work, production techniques, substances used, machinery and equipment, tools and equipment, and their failure to be designed or used in accordance with the physical characteristics of the workers,

- Hazards that may arise from components of the electrical installation such as high current, lighting, lightning rod, grounding, and auxiliary installations and equipment such as heating, ventilation, protection from atmospheric and environmental conditions, drainage, treatment, and fire prevention and fighting equipment,
- Hazards that may arise from the processing, use, transportation, storage, or disposal of substances that may pose a risk of combustion, ignition, or explosion at the workplace,
- Hazards arising from hygiene conditions in the working environment and personal hygiene habits of employees,
- Hazards that may arise from the use of traffic routes within the workplace by employees,
- Hazards that may arise from employees not receiving sufficient training on occupational health and safety, not being informed, not being given appropriate instructions, or working without the required permission procedure in situations where this permission is required” (OHSRAR, 2012:3).

If environmental measurements and research studies have not been conducted previously to identify risk factors and sources of danger in the workplace, necessary controls, measurements, and investigations should be carried out to determine the exposure of employees to these hazards when preparing the risk assessment.

7.2. Identification and Analysis of Risks

After the hazards are defined, the next step in the process is the identification and analysis of risks. It involves determining under what conditions, to whom, what, how, and to what extent the risks arising from the hazards can cause harm. Each hazard is considered separately, and the risks that may arise from these hazards are identified (Ateş, 2019:75).

In our country, there are no limitations on the methods to be used in risk assessment. Article 9 of the OHSRAR, it is states, “Risks identified in the light of the information and data collected are analyzed using one or more methods selected based on factors such as the characteristics of the business’s activities, the nature of the hazards or risks in the workplace, and the limitations of the workplace, or based on national or international standards” (OHSRAR, 2012:3).

With the method determined for risk analysis, all hazards and risks are evaluated and classified. Analyzed risks are ranked based on the magnitude

of their effects and measures. When ranking risk levels, high, medium, and low risks are listed. High risks indicate that the damage level of the risk is intolerable, requiring immediate intervention. Medium risks are situations that require intervention as soon as possible, while low risks indicate situations that do not require urgent intervention (Tuna Öztürk, 2020:209).

In the risk identification and analysis step of the risk management process, it is also revealed how employees will be affected by accidents and occupational diseases that may arise from workplace hazards. For example, in a facility where cement production is conducted, a risk analysis is conducted to determine how many people will be exposed to the dust generated in the clinker production section, to what extent, and over what period, and what health problems may arise as a result of this exposure. These analyses ensure the establishment of a healthy and safe working environment (Akpınar and Çakmakkaya, 2014: 275; Selek, 2018:68).

7.3. Risk Control Steps

The third stage of risk management, known as the risk control steps, is conducted to reduce risks from the “unacceptable” level to an “acceptable” level based on the results of risk identification and assessment. According to Article 10 of the OHSRAR, this stage is conducted in four steps:



Figure 5. Risk Control Steps (OHSRAR, 2012:3)

➤ **Planning**

In the planning process, a risk plan is developed by considering the risk scores resulting from the risk analyses conducted for each department in the workplace. Within the risk plan, risks are prioritized based on their severity and preventive measures. In this process, it is crucial for every personnel involved to possess knowledge, experience, and expertise regarding risk management processes (Acuner, 2006:2).

➤ **Determination of Risk Control Measures**

Following the creation of a risk plan in organizations where risk assessments have been conducted, it is essential to take necessary measures to prevent risks from causing material and immaterial harm to employees, equipment, and the environment. The measures taken to eliminate the hazards and risks specified in the risk plan should prioritize the complete elimination of risks. In cases where complete elimination is not possible, efforts should focus on reducing the risk to an acceptable level.

To bring the risk to an acceptable level, the following three steps should be applied.

- ❖ “Elimination of danger or sources of danger.
- ❖ Substitution of the hazardous with the non-hazardous or less hazardous (substitution).
- ❖ Combating risks at the source.” (OHSRAR, 2012:3).

In the stage of determining risk control measures, plans are prepared and implemented by the employer to address the hazards and risks present in the workplace. This plan includes information such as the areas where the identified measures will be implemented, the tasks and stages of work, start and end dates or termination periods, and the person or persons responsible for implementing the process. The implementation steps outlined in the plan are regularly monitored, inspected, and necessary preventive and protective measures are taken.

During the implementation of these steps, a work plan should be developed, prioritizing collective protection measures over personal protective measures. Collective protection measures are designed to protect one or more individuals from hazards and risks in the working environment. Personal protective measures, on the other hand, include materials, tools, devices, and equipment worn, used, or carried by individuals to avoid exposure to one or

more hazards. When determining risk control measures, the following sequence should be followed.



Figure 6. Risk Control Hierarchy (ÇSGB, 2018:5)

The priority in risk control measures, as specified in the legislation, is the elimination of the hazard, and if this is not possible, the use of substitution methods and combating risks at the source. In the fight against risks at the source, the hazard can be isolated. If the hazard cannot be isolated, efforts should be made to combat risks in the environment, and engineering controls should be implemented to isolate workers from the danger. In engineering controls, measures such as design, automation, distance, ventilation, lighting, isolation, and ergonomic precautions should be taken by working on technical aspects. In cases where engineering controls are insufficient, administrative controls should be identified. Administrative control measures include training, alternating work schedules, workplace organization, planned maintenance, and repair. Finally, when all measures prove inadequate, the protection of workers is ensured by using personal protective equipment (Özkılıç, 2005:58).

➤ **Implementation of Risk Control Measures**

Once risk control measures are decided upon by management, they are put into effect. After the measures to be taken for the risks in the environment

are implemented, the risk level is reassessed. The risk control steps are repeated until the newly determined risk level returns to an acceptable level. This plan should be conducted by the employer (OHSRAR, 2012:3; Aydınlı, 2010:21).

➤ **Monitoring of Implementations**

In the risk control steps, it is necessary to systematically monitor and conduct inspections to ensure that the planning, assessment, decision-making for risk control measures, and the timely implementation of safety measures aimed at eliminating or reducing the impact of risks are conducted. Since risks in the work environment are a dynamic process, their complete elimination cannot be expected. Even though safety measures against risks may seem sufficient, the implemented measures should be checked. The monitoring process of implementations is crucial for repeating risk control steps based on the adequacy of the measures taken.

7.4. Documentation

As much as proper planning of the risk assessment study is important, documenting it effectively is equally crucial. A document should be prepared that records every stage, from the initial to the final phase of all processes conducted in the risk management process, including plans made, decisions taken, and measures implemented. This document may vary based on the characteristics of the business, the analysis method used, the document tracking system, and the requirements of relevant institutions or organizations. Although the preferences of institutions and organizations may differ, the pages of the document are numbered, and each page is initialed by each member of the risk assessment team, with the final page being signed and stored in the workplace. This document can be prepared and archived in electronic and similar environments.

According to OSHRAR, the risk assessment should be documented to cover at least the following points

- ✓ “Workplace title, address, and employer’s name
- ✓ Names and titles of individuals involved, including those with occupational safety specialist and workplace physician credentials issued by the Ministry
- ✓ Date of implementation and validity period
- ✓ If risk assessment is conducted separately for different sections of the workplace, the name of each section
- ✓ Identified sources of hazards and the hazards themselves
- ✓ Identified risks

- ✓ Methods used in risk analysis
- ✓ Analysis results including the importance and priority order of identified risks
- ✓ Corrective and preventive control measures, implementation dates, and post-implementation risk levels” (OHSRAR, 2012:3).

7.5. Renewal of Risk Assessment

The responsibilities of the risk assessment team in occupational health and safety do not end with the completion of the risk assessment process. The team determines the necessary precautions in the workplace and regularly monitors, audits, and implements corrective and preventive activities by these measures. While conducting the auditing function, the effectiveness of implemented measures is determined, and any deficiencies, hazards, or risks identified during this process lead to a review and repetition of the risk assessment process (Ateş, 2019:82).

According to the OHSRAR, the risk assessment is periodically renewed based on the hazard class of the workplace: every six years for low-hazard, every four years for moderate-hazard, and at least every two years for high-hazard workplaces. In addition to periodic renewal, the OHSRAR states that “risk assessment is completely or partially renewed in the following situations, taking into account the possibility of new risks arising that may affect the entire workplace or a part of it” (OHSRAR, 2012:4).

- “Relocation of the workplace or changes to the buildings
- Changes occurring in the technology applied, substances used, and equipment used in the workplace
 - Changes in the production method
 - Occurrence of a workplace accident, occupational disease, or a near-miss incident
 - Legislative changes related to exposure limits in the work environment
 - Necessity based on workplace measurements and health surveillance results
 - Emergence of a new hazard originating from outside the workplace that may affect the workplace”

In situations like these, the risk assessment is renewed. (OHSRAR, 2012:4).

8. Conclusion

With the increasing emphasis on occupational health and safety globally and in Turkey, along with the growth of safety culture, occupational health and safety practices, and risk assessment studies have begun to form the foundation of workplace safety. The risk assessment process involves identifying hazards, analyzing the risks arising from these hazards, determining and implementing necessary measures, and monitoring through corrective and preventive activities. In this process, the risk assessment team, employers, and employees must fulfill their responsibilities to eliminate negatives.

One of the most fundamental and crucial responsibilities imposed on employers by legal regulations is the duty to protect and supervise employees. To fulfill this responsibility, employers must make the necessary arrangements and take measures for occupational health and safety in the workplace. Negative situations such as accidents, explosions, and fires in workplaces highlight the importance of occupational health and safety. To ensure the implementation of workplace safety practices, efforts must be made to combat dangers and risks that could lead to adverse situations.

In conclusion, to establish a secure working environment, it is essential to eliminate or reduce to an acceptable level the dangers and risks present or that may arise later. Measures such as environmental measurements, explosion protection documents, material safety data sheets, and inventory records should be taken against accidents such as fire, ignition, explosion, and leakage that may occur in the workplace. By the identified hazards and risks in the risk assessment, necessary measures should be taken to provide employees with a healthy and safe working environment. In cases where the implemented measures are found insufficient upon monitoring, corrective and preventive activities should be organized, and the risk management cycle should be repeated. Continuous improvement of the risk management cycle will result in a reduction in the number of incidents in workplaces, such as accidents, fires, explosions, near misses, injuries, occupational diseases, and fatalities.

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CHAPTER IX

GOVERNANCE SOLUTIONS FOR COASTAL MANAGEMENT: INSIGHTS FROM TÜRKİYE

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1. Introduction

Coasts and coastal hinterland regions have been important historically and advantageous for various human and commercial endeavors. However, it is recognized that coasts are susceptible areas with their unique ecosystems. Nowadays, many activities take place on the coasts owing to their distinctive features. In particular, coasts are a hub for tourist and recreational pursuits. Coasts are utilized for housing, commercial, and industrial purposes.

Growing population and economic activities have led to intensified human presence on coasts, exerting significant pressure on the coastal ecosystem from both land and sea. Therefore, it is crucial for each country to safeguard their coastlines with their inherent qualities and pursue a sustainable development approach when utilizing coastal areas. This occurrence has resulted in the creation of legal regulations at both the national and international levels¹.

1. The first example of coastal regulations at the national level is the Coastal Zone Management Act enacted by the United States of America in 1972, which brought a new perspective to coastal management. This law emphasizes the need to take more holistic and successful measures in coastal areas instead of traditional sectoral approaches (Kay and Alder, 2017).

An essential global legal regulation on coastal management that has a significant bearing on Türkiye is the “Convention for the Protection of the Marine Environment and Coastal Zone of the Mediterranean Sea”, which became effective in 2004². This Convention is a refined and modernized rendition of the “Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention)”. In 1995, in accordance with the approach taken at the UN Summit on Environment and Development held in Rio de Janeiro in 1992, the Barcelona Convention was extended to encompass coastal areas as well as the marine environment. Elements such as sustainable development goals, public participation, and environmental impact assessments were also incorporated into this Convention. The revised Barcelona Convention was ratified by Türkiye in 2002, and 21 countries along with the EU are currently parties to the Convention.

Türkiye has developed its own legal regulations for safeguarding its coastlines through a combination of adhering to international treaties and prioritizing the preservation of its natural and ecological assets. In this context, Article 43 of the Constitution, adopted via referendum in 1982, stipulates that “the coasts are under the sovereignty and disposal of the State,” whilst also specifying that the public interest shall be a consideration in the utilization of these coasts. In keeping with the constitutional regulations regarding coasts, legal provisions pertaining to the same have been instituted. The Coastal Law No. 3621, which came into force in 1990, continues to regulate the utilization of coastlines in accordance with public interests. The Coastal Law No. 3621, which came into force in 1990, continues to regulate the utilization of coastlines in accordance with public interests. Furthermore, Environmental Law No. 2872, which has been in effect since 1983, also plays its part in safeguarding Türkiye’s coastal ecosystem.

This study aims to investigate coastal management as a governance matter in Türkiye, using the Integrated Coastal Zone Management (ICZM) framework. This study aims to investigate coastal management as a governance matter in

2. After deciding to prioritize the protection of the Mediterranean Sea as part of the “Regional Seas Programme” initiated by the UN Environment Program (UNEP) in 1974, the Mediterranean Action Plan (MAP) was officially formed in 1975. The riparian countries and the European Union actively participated in its establishment. The legal foundation for the MAP’s activities came in the form of the “Convention for the Protection of the Mediterranean Sea against Pollution” (Barcelona Convention). This convention, prepared to provide a legal framework for MAP initiatives, was adopted in Barcelona in 1976 and became effective in 1978 (<http://www.mfa.gov.tr>).

Türkiye, using the Integrated Coastal Zone Management (ICZM) framework. Initially, the research will focus on ICZM as a governance approach, highlighting the intricacies and multiple stakeholders involved in managing coastal zones. The paper will analyze the topic of coastal management in Türkiye with reference to existing legislation and practices. It will discuss the different dimensions of coastal zone management in Türkiye and present the current situation and practices in the context of climate change. Finally, the significance of effective coastal management in the current socio-economic and environmental landscape will be discussed.

2. Coastal Governance as A Coastal Management Model and Integrated Coastal Zone Management

Coastal regions are significant zones that draw focus for their plentiful natural resources, range of economic pursuits and cultural diversity. The preservation of these coastal regions through sustainable management is of utmost importance in safeguarding ecosystems, sustaining economic activities and safeguarding cultural heritage. At present, two primary strategies employed in coastal zone management, namely Integrated Coastal Zone Management and Ecosystem-Based Coastal Zone Management, are prominent. Both approaches prioritize local participation of various stakeholders to provide effective solutions to problems arising from current practices. Given that coastal management is a fundamental public duty, these perspectives consider natural and cultural factors and evaluate human activities, assets, spaces, and structures as interconnected.

The growing human population, evolving socio-economic structures, environmental conditions and rapid depletion of resources underline the need for integrated management strategies to achieve long-term sustainable development of coasts (El-Sabh, Demers, and Lafontaine, 1998). At first, coastal management typically drew upon the disciplines of marine geology and biology for guidance. However, concrete initiatives on coastal zone management emerged in the mid-1970s, particularly in developed countries. Zoning planning's widespread usage during this period has also increased its influence on coastal management in this context. The effects of this process are the identification of diverse forms of utilization in coastal areas through zoning, the establishment of public open spaces, and the emphasis on health measures that are generally applicable. However, the expansion of urbanization towards coastal areas during this era also resulted in unfavorable ecological consequences. This situation has given rise to novel methods, such as ecological management and resource management (Kay and Alder, 2017).

With this brief background in mind, two primary approaches are presently recognized for the management of coastal areas. These approaches are Integrated Coastal Zone Management and Ecosystem-Based Coastal Zone Management (Nobre, 2011). In essence, both approaches emphasize the implementation of multi-actor and local solutions based on the shared goal of addressing the challenges associated with current practices. At the outset of the discourse, it is crucial to emphasize that the administration of coastal regions is a communal duty geared towards societal welfare. The said responsibility, referred to as coastal area management, encompasses a range of undertakings that consider ecological and cultural aspects, human operations, resources, areas and constructions as fundamental constituents (Muñoz, 2010).

Environmental and resource management approaches provide engineering-based solutions to control activities in coastal areas. Traditional coastal management has primarily focused on addressing erosion prevention, wetland conservation and public use. However, recent approaches have included local and regional units as new actors in the process. Currently, it is widely acknowledged that issues emerging in coastal and marine regions result from land-based undertakings. However, activities conducted in the sea can also have adverse effects on neighboring coastal areas. Therefore, coastal management ought to be addressed comprehensively with a land and sea perspective. In this context, coastal zone management refers to the process of managing resources in order to achieve sustainable development through continuous actions. The objective is to facilitate collaborative actions by the public and local groups, while taking into consideration the public, sensitive, and limited nature of coastal spaces, which are already under significant pressure. In this context, a shift from conventional coastal management to “integrated coastal zone management” has occurred due to changes observed in coastal areas during implementation (Kaypak, 2012).

Integrated Coastal Zone Management (ICZM) comprises several significant elements, typically involving spaces, structures, assets, and human actions. ICZM centres around geographic features along the coast, such as shorelines, natural ecosystems, wetlands, and beaches. Building components include coastal infrastructure, protection facilities, harbors, marinas, and other structures. Biodiversity in both marine and terrestrial ecosystems, endemic species, and resources that represent the economic potential of coastal areas are significant considerations of the ICZM. Human activities, including fisheries, tourism, agriculture, industrial activities, and socio-economic interactions of local communities, must also be taken into account. By synthesizing these

factors, the ICZM facilitates sustainable use of coastal areas and aims to harmonies various activities.

Integrated Coastal Zone Management (ICZM) is a strategic approach that aims to manage resources in coastal areas sustainably, with a focus on cultural and economic dimensions. To attain these objectives, a collaborative and participatory approach involving all stakeholders is essential. This management model addresses the complex interactions and linkages in the transition zone between land and sea. Technical term abbreviations in this text will be defined as they are introduced. Culturally, ICZM aims to preserve the traditional lifestyles and cultural heritage of coastal communities, while also considering economic development. Simultaneously, the objective of Integrated Coastal Zone Management entails the sustainable management of activities, for instance, fishing, tourism, and agriculture in coastal regions. This fosters the strengthening of local economies and ensures protection of natural resources and coastal sustainability. As a strategy, Integrated Coastal Zone Management supports the development of coastal areas by emphasizing cultural and economic values and guarantees environmental sustainability.

Integrated Coastal Zone Management (ICZM) places a high priority on involving multiple stakeholders and adopts a governance-focused strategy to bring together local and central actors. This approach aims to engage a range of stakeholders, including local communities, private sector representatives, scientists, civil society organisations, and government bodies in the pursuit of sustainable coastal area management. The principle of multi-actors strives to guarantee comprehensive involvement in decision-making procedures and utilizes such diversity to comprehend and tackle various requirements in coastal regions. The major drive behind this policy is raising environmental awareness and promoting sustainability. The strategy strives to safeguard coastal ecosystems and resources, with the aim of preserving the natural balance, supporting biodiversity, and providing a healthy environment for generations to come. This basic motivation leads to a participative approach as the management decisions for the coastal zones are directly influenced by people residing in the areas and other respective stakeholders. Additionally, transparency and openness are vital for participatory procedures. This strategy underlines the importance of keeping all stakeholders well-informed, managing participative processes in a transparent way, and ensuring openness in decision-making. Ensuring trust in the process, responsibility among participants, and the establishment of environmentally sustainable and fair decisions are the cornerstones of Integrated Coastal Zone

Management. This strategy underpins sustainable development in coastal zones by emphasizing participation, openness, and transparency. Ensuring trust in the process, responsibility among participants, and the establishment of environmentally sustainable and fair decisions are the cornerstones of Integrated Coastal Zone Management. Furthermore, its status as an international approach strongly supports its governance-based nature. Duru (2003) highlights that effective management of coastal areas requires collaborative efforts among neighboring countries in the area to attain the desired outcomes. Effective coastal area management necessitates cooperation from both international and national actors. This issue displays a complex and multi-actor structure. Coşkun (2006) asserts that Türkiye's adherence to international conventions has had a positive impact on the protection of its coasts. These conventions, implemented as a result of numerous UN initiatives, demonstrate the multi-actor and international nature of coastal management. They highlight the significance of a coastal area management model, involving international actors and variables collectively, to ensure effective and accurate coastal management.

In Türkiye, Integrated Coastal Zone Management (ICZM) stands out as an important strategic approach. Türkiye boasts a lengthy coastline with abundant economic and cultural resources. The Integrated Coastal Zone Management (ICZM) approach focuses on maintaining ecological equilibrium between both marine and terrestrial ecosystems while sustaining various economic activities in coastal areas including tourism, fisheries, and agriculture. The high population density and economic activities in Türkiye's coastal regions necessitate the efficient management of resources. By addressing this challenge, ICZM facilitates economic development in coastal areas while simultaneously leading the way in natural resource conservation. Therefore, Integrated Coastal Zone Management holds vital significance in Türkiye to ensure sustainable development and to transfer coastal areas to future generations in a healthy and balanced manner.

3. Coastal Management in Türkiye

Türkiye's coastline extends to 8592 km (excluding islands) and covers the Mediterranean Sea, the Aegean Sea, the Sea of Marmara and the Black Sea. These regions exhibit distinct characteristics, and support a diverse range of over 5000 plant and animal species. Coastal ecosystems are noteworthy as areas where marine and terrestrial ecosystems intersect and make up 4.1% of Türkiye's land area. The Mediterranean may cover a mere 0.82% of the planet's oceanic

surface, yet it serves as a habitat for 4-18% of the globe's marine biodiversity. Due to vast coastal regions with significant differences in geography, economy and culture, the subject of coastal management has brought forth a multifarious and intricate framework in policy-making and implementation. This study will explore the involved structure of coastal management within the context of primary public institutions. Also, this section of the study will examine the matter of coastal management in relation to the fight against climate change.

The cornerstone of coastal management regulation in Türkiye is the Coastal Law No. 3621³ and the corresponding Regulation⁴ for the Implementation of the Coastal Law. As per the law, its objective is to establish regulations for protecting the coastal areas of the sea, natural and artificial lakes, and rivers, and the adjoining coastlines, considering their natural and cultural attributes. Its aim is also to identify principles for utilizing them for the public's benefit. The law covers the regulations applicable to coastal areas of the sea, natural and artificial lakes, and rivers, including the coastlines surrounding the coasts and lakes regarding the potential and conditions for utilizing these areas for public benefit. The general principles set out in the Coastal Law are as follows: Coastlines are under state sovereignty and are available for the equal and free use of all. Public interest is the primary consideration in the utilization of coasts and coastlines. In order to plan and execute, it is mandatory to establish the coastal edge line. In areas where the coastal edge line has not been established, it must be determined within three months of the request. Buildings constructed on the coastlines can approach the coastal edge line no closer than 50 metres. The space between the point of approach and the edge of the coast can be utilized for pedestrian paths, recreational activities, and leisurely cruises. The depth of the coastline is determined by natural thresholds and its intended usage. Vehicle roads can be organized in the area beyond the building approach limit on the coastline's land side. The regulation determines the building conditions for structures located on the coast, which vary depending on their intended purposes. The Coastal Law grants municipalities within the municipal boundaries and governorships outside the boundaries of neighboring areas the power to monitor and regulate the coasts. Table 1 presents the key institutions with public authority and responsibility for the coasts, according to various laws.

3. <https://mevzuat.gov.tr/mevzuat?MevzuatNo=3621&MevzuatTur=1&MevzuatTertip=5>

4. <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=4897&MevzuatTur=7&MevzuatTertip=5>

Table 1. Public Institutions with Authorities and Responsibilities Regarding Coastal Management

Republic of Turkey Ministry of Environment, Urbanisation and Climate Change	Coastal Law No. 3621 Zoning Law No. 3194 Law No. 4803 on Building Inspection
General Directorate of Environmental Management Department of Marine and Coastal Management	Law No. 2873 on National Parks
Republic of Turkey Ministry of Transport and Infrastructure	Coastal Law No. 3621 618 Law on Harbours
General Directorate of Maritime Affairs General Directorate of Shipyards and Coastal Structures General Directorate of Water Management	
Directorate General of Coastal Safety	Environmental Law No. 2872
Republic of Turkey Ministry of Agriculture and Forestry General Directorate of Fisheries and Aquaculture	Law No. 1380 on Fisheries
Republic of Turkey Ministry of Culture and Tourism	Law No. 264 on Tourism Incentive Law No. 3683 on the Protection of Cultural and Natural Heritage
Republic of Turkey Ministry of Treasury and Finance Privatisation Administration	Coastal Law No. 3621
Republic of Turkey Ministry of Interior Gendarmerie General Command Coast Guard Command Disaster and Emergency Management Centre	Special laws and related legislation
Republic of Turkey Ministry of Health General Directorate of Turkish Borders and Coastal Health	Environmental Law No. 2872 General Hygiene Law
Governorships Metropolitan Municipalities Municipalities Special Provincial Administrations	Coastal Law No. 3621 Relevant Municipal Laws
General Staff Force Commands	Special laws and related legislation

At the central government level, the departments directly responsible for the coasts are the Marine and Coastal Management Department⁵ under the General Directorate of Environmental Management of the Ministry of Environment, Urbanization and Climate Change of the Republic of Türkiye and the General Directorate of Maritime Affairs under the Ministry of Transport and Infrastructure of the Republic of Türkiye. In this context, the Department of Marine and Coastal Management performs various tasks to ensure the sustainable use, protection and prevention of pollution of marine and coastal waters. In this context, it is responsible for establishing the objectives, principles and policies for the use of marine and coastal waters and preparing action plans for the elimination and control of pollution. It monitors national and international developments, conducts negotiations and establishes policies/strategies. It establishes procedures, principles and measures for the protection of the marine environment and the prevention of marine pollution and ensures their implementation. It determines policies for the prevention of pollution caused by ships in Türkiye's maritime jurisdictional areas and carries out studies for their implementation. It also prepares strategic action plans for the marine environment, determines policies and strategies for the management of coastal waters and the prevention of pollution. It determines the procedures and principles for emergency intervention and damage compensation and prepares plans in this area. It formulates and implements policies on issues such as dredging, sewage discharge standards and marine litter action plans. It also carries out research and projects to protect and improve marine and coastal waters. The Directorate-General for Maritime Affairs ensures that maritime and inland waterway transport activities are carried out in an economic, safe, environmentally friendly and sustainable competitive environment. In this context, it defines the rights, obligations and responsibilities of ship operators, organizers, agencies and other service providers, and sets and monitors professional standards. Maintains the register of seafarers and determines the professional qualification requirements. Regulates and supervises the registration, licensing, technical inspection and safety conditions of ships, sea-going vessels and inland waterway craft. Organizes communication and notification services related to maritime traffic and establishes the technical infrastructure. Establishes and supervises services related to coastal structures such as ports, piers and dolphins. Establishes the procedures and principles for dealing with accidents and emergencies and organizes these services. It takes measures to prevent marine and air pollution

5. <https://cygm.csb.gov.tr/birimler/deniz-ve-kiyi-yonetimi-dairesi-baskanligi/205>

and carries out monitoring and surveillance. At the local government level, the main public organisations responsible for coastal management are governorates, metropolitan cities and municipalities. In different provinces, different units within the municipal organisations are responsible for coastal areas. For example, in Istanbul Metropolitan Municipality, the Marine Services Branch Directorate is the main unit responsible for the coasts, while in Muğla Metropolitan Municipality, the Marine and Coastal Facilities Branch Directorate is the unit that takes an active role in coastal management.

When analyzing the relevant academic literature in the field of coastal management in terms of doctoral theses completed in higher education institutions in Türkiye, it can be seen that a total of 11 doctoral theses, four of which are Ph.D. theses, were completed between 1993 and 2019⁶. Of these, 3 were in public administration, 3 in environmental engineering, 2 in marine sciences and aquaculture, 1 in urban and regional planning, 1 in tourism and 1 in landscape architecture. As can be seen from this situation, a small number of academic studies in the field of coastal management, which is the subject of research in different fields and disciplines, focus directly on coastal management policy and legislation in this area. Among the above-mentioned dissertation studies, the studies completed in the field of public administration that can be evaluated in this framework are dissertation studies on integrated coastal management in the cities of Samsun, Giresun and İzmir and focus on coastal management policies (Tenikler, 2001; Duru, 2001; Gürsoy, 2019). Again, the main focus of the studies that address the issue of coastal management with a focus on legislation and policies is on the shortcomings of current practices and legislation.

Yontar and Yılmaz (2013) reviewed the laws and regulations on coastal management and stated that the responsibilities of many ministries and public institutions are transitive, and this situation causes problems in terms of intervention and clarity of responsibilities. The researchers note that despite the abundance of legislation related to the coast, an effective public administration cannot be established in this area and there is a problem of multiplicity. The study, which stresses the importance of a participatory structure and clearly defined roles for integrated coastal management, emphasizes that a joint action mechanism should be established between governmental units and that non-governmental organisations should contribute to the management process. Demir (2018), on the other hand, in his study entitled Coastal Urbanization in

6. This data was obtained on 27 November 2023 as a result of a search through the YÖK Thesis Centre.

the Context of Integrated Coastal Zone Management, emphasizes that coastal areas should be managed in a sustainable and protective manner, and it is stated that the central government should provide effective management of coastal areas. The study, which draws attention to the difficulties in understanding management due to differences between communities, stresses that particular attention should be paid to urbanization activities in coastal areas. The researcher emphasizes that issues such as coastal planning and management, integrated coastal zone management and coastal urbanization are important for public administration departments as well as coastal engineers, architects, urban and regional planners, cartographers and geographers, and stresses the need for more scientific studies in the field of public administration.

3.1. Coastal Management in The Context of Climate Change

In Türkiye, public institutions, particularly the central government, have taken important initiatives in recent years to address climate change. In this framework, the Ministry of Environment, Urbanization and Climate Change, which is the National Focal Point for Climate Change, carries out national coordination on climate change-related issues. Prior to 2004, when Türkiye became a party to the United Nations Framework Convention on Climate Change (UNFCCC), an institutional restructuring was carried out and the Climate Change Coordination Board (CBCC) was established with Prime Ministry Circular No. 2001/2. This Board was deemed appropriate to be restructured with Prime Ministry Circular No. 2013/11 and continued its activities under the name of Climate Change and Air Management Coordination Board (CBCCAC). The Circular states that the Board will meet at least once a year, that the working procedures and principles will be determined by the Board, and that the decisions taken will be implemented by the relevant institutions/organisations. It also states that the secretariat and coordination of the Board will be provided by the Ministry of Environment and Urbanization. The Circular also states that the Board may establish sub-boards, committees, advisory groups, temporary and permanent working groups as required, and that representatives of relevant public institutions and organisations as well as universities, non-governmental organisations, professional associations and the private sector may be invited to attend Board meetings and participate in sub-boards, committees and working groups. The Board consisted of fourteen members drawn from various ministries, public institutions and some non-governmental organisations. In summary, the Coordination Board for Climate

Change and Air Management (CBCCAM) constituted the national decision-making mechanism at the political level, bringing together relevant institutions and organisations. The Ministry of Environment and Urbanization was renamed the Ministry of Environment, Urbanization and Climate Change by Presidential Decree No. 85 amending certain presidential decrees.

In addition, the same decree replaced the IDHYKK with the Coordination Council for Climate Change and Adaptation (IDUKK)⁷ and stated that climate change negotiations will be conducted by a chief negotiator (relevant deputy minister). It is also stated that the secretariat of the Coordination Council will be provided by the Climate Change Presidency established by the above-mentioned decree. The Climate Change and Adaptation Coordination Board (İDUKK), which is responsible for identifying, monitoring and evaluating plans, policies, strategies and measures related to climate change, is chaired by the Minister of Environment and Urbanization and includes the Chief Negotiator for Climate Change, the Ministry of Foreign Affairs, the Ministry of Energy and Natural Resources, the Ministry of Treasury and Finance, the Ministry of Interior, the Ministry of National Education, the Ministry of Health, the Ministry of Industry and Technology, the Ministry of Agriculture and Forestry, and the Ministry of Trade. It consists of twenty-two members, including deputy ministers from the Ministry of Transport and Infrastructure, the Head of Strategy and Budget, the Head of the Council of Higher Education, the Head of Climate Change, the Head of the Scientific and Technological Research Council of Türkiye, the Head of the Turkish Environmental Protection Agency⁸, the Head of the Turkish Statistical Institute, the Head of the Union of Chambers and Commodity Exchanges of Türkiye, the President of the Turkish Industrialists' and Businessmen's Association, the Independent Industrialists' and Businessmen's Association, and the President of the Union of Municipalities of Türkiye. As you can see, the fight against climate change in Türkiye is led by this body, where many central and local public administrations and private sector umbrella organisations are represented in a multi-stakeholder structure. As part of this body, the Turkish Environment Agency, which started its activities on 24 December 2020, and the Presidency for Climate Change⁹, which started its activities on 29 October 2021, carry out important studies in the context of public policies in Türkiye's fight against climate change. In parallel with this structure, the fight against climate

7. <https://iklim.gov.tr/idukk-i-13>

8. <https://www.tuca.gov.tr/sayfa/kurumsal>

9. <https://iklim.gov.tr/hakkimizda-i-4>

change in Türkiye's coastal areas is also being carried out in a multi-actor and complex structure.

Türkiye's Climate Change Action Plan¹⁰, Climate Change Adaptation Strategy and Action Plan¹¹ and Türkiye's Climate Change Strategy Document¹², prepared by the Ministry of Environment and Urbanization of the Republic of Türkiye, form the backbone of the work done in this field. The 7th National Communication of Turkey, authored by the Ministry of Environment and Urbanization in 2018 under the United Nations Framework Convention on Climate Change (UNFCCC), underscores that Turkey's overarching climate change policy is structured by diverse cross-cutting and sector-specific policies, strategies, and action plans grounded in national legislation within relevant sectors. The primary policy documents guiding Turkey's climate change strategy, as highlighted in this Communication, include the National Climate Change Strategy (CCS) for the period 2010-2023 and the National Climate Change Action Plan (2011-2023) derived from the CCS. Additionally, the 10th Development Plan spanning 2014-2018 assumes significance as it marks the first instance of the inclusion of 'green growth' in governmental policies across various sectors such as energy, industry, agriculture, transport, construction, services, and urbanization. The National Climate Change Strategy, the National Climate Change Action Plan, and the 10th Development Plan collectively serve as the foundational framework for both common and sector-specific climate change policies and measures. The 2018 publication of Turkey's 7th National Communication reports a significant risk to coastal structures and fishing activities in 27 provinces situated along the sea coast, emphasizing the potential severe damage in these regions.

Climate change models show that the Mediterranean is one of the most vulnerable regions to extreme events. Coastal areas may be more vulnerable to risks related to climate change, sea level rise and disasters. The CVI analysis assessed the coastal regions of Türkiye and identified provinces with delta areas such as Adana, Çanakkale, Samsun, Balıkesir and Aydın as the most vulnerable regions. Studies show that climate change will affect coastal deltas with intensive agricultural production, wetlands and low-lying tourist areas the most. The

10. https://webdosya.csb.gov.tr/db/iklim/editedosya/file/eylem%20planlari/iklim_degisikligi_eylem_plani_EN_2014.pdf

11. https://webdosya.csb.gov.tr/db/iklim/editedosya/file/eylem%20planlari/uyum_stratejisi_eylem_plani_EN_Final.pdf

12. [https://webdosya.csb.gov.tr/db/iklim/editedosya/iklim_degisikligi_stratejisi_EN\(2\).pdf](https://webdosya.csb.gov.tr/db/iklim/editedosya/iklim_degisikligi_stratejisi_EN(2).pdf)

most visible impacts of climate change include changes in water masses due to warming caused by climate change, the direct impacts of sea level rise in areas such as urbanization, agriculture and tourism, and the rapid increase in invasive species due to changes in seawater temperature and the resulting changes in marine and coastal ecosystems. As a result of climate change, Türkiye's water resources are affected by various developments, including rising summer temperatures, reduced winter precipitation, heightened occurrences of droughts, and increased losses of surface water (Babaoğlu, Kulaç, Erdoğan, Memiş, and Karasoy, 2023).

4. Why Coastal Management Is Important?

Coastal areas are not only economic or environmental, but also social issues. For instance, the coastal urban development in Türkiye has drawn a significant influx of people to the region, leading to the emergence of a highly intricate situation and giving rise to numerous problems (Uzun and Celik, 2014). These areas are the location of many uses such as urbanization, trade, industry, resources, tourism, recreation, waste and food (Doğan, Burak and Akkaya, 2005). In this framework, coastal management is of great strategic importance considering the different coastal regions of Türkiye and the different dynamics of these regions. From an environmental point of view, Türkiye's long coastline and the biodiversity found along these coasts represent a unique natural wealth at the interface between marine and terrestrial ecosystems. Coastal management plays a strategic role in protecting this wealth and making it resilient to environmental threats such as marine pollution and erosion. Economically, Türkiye's coastal regions are home to important sectors such as tourism, fisheries, agriculture, energy production and trade. Coastal management is a strategic tool to strengthen the sustainability of these sectors, increase the economic potential of coastal zones and support local economic development. The tourism sector in particular is an important driver of economic growth in Türkiye's coastal regions, and sustainable management of this sector is critical to ensure environmental and economic balance. In addition to economic and environmental aspects, the cultural dimension of the issue is also important and is one of the priority components of coastal management. Culturally, Türkiye's coastal regions are characterized not only by their natural wealth, but also by their rich cultural heritage, historical remains and local traditions. Coastal management plays an important role in protecting, preserving and promoting these cultural elements. At the same time, by encouraging the participation

of local communities and people living in coastal areas, it supports cultural diversity and strengthens local identity.

It is also necessary to discuss the security dimension of coastal management in Türkiye, especially in the context of emergency management and the continental shelf of the Mediterranean coast. In terms of security, Türkiye's coastal areas require special attention in dealing with maritime accidents, natural disasters and other emergencies. Coastal management focuses on developing strategic planning and response strategies to ensure that people and property living in these areas are prepared for natural disasters, marine accidents and other emergencies. This is essential to enhance the security of coastal areas and strengthen emergency response capabilities. The Mediterranean is a region rich in energy resources and its coastal zones are of strategic importance. Türkiye's coastal management strategies focus not only on natural disasters and maritime accidents, but also on strategic issues related to energy and security. The continental shelf dispute in the Mediterranean is an important issue affecting Türkiye's coastal security and strategic interests. Coastal management involves strategic planning to ensure access and security of energy resources for Türkiye's coastal areas. This may require active participation in international legal and diplomatic processes related to maritime boundaries and the continental shelf. Coastal security includes maritime transport, security of territorial waters and defense of coastal zones in the Mediterranean. Coastal management has the responsibility to integrate land and maritime security strategies in order to protect Türkiye's strategic interests in this area and to ensure regional security. In this context, Türkiye's coastal management strategies include not only environmental and economic factors, but also current and future strategic steps to ensure coastal access and security of energy resources. The continental shelf disputes in the Mediterranean highlight Türkiye's sensitivity to coastal security and energy strategies, increasing the importance of coastal management as a strategic priority.

5. Conclusion

The safeguarding of coastal ecosystems and their exploitation in line with sustainable development is a crucial worldwide concern. Consequently, international institutions, particularly the United Nations and supranational entities such as the European Union, establish policies and conduct examinations concerning the conservation and exploitation of coastal regions. The presence of diverse activities such as tourism, recreation, industry, and port management in

coastal areas, along with the involvement of various public authorities including central government, local governments and different central government organisations, has led to the evident requirement for effective coordination. Moreover, a holistic approach to managing these areas has become crucial. The conventional ‘coastal zone management’ approach has recently been substituted with the more comprehensive ‘integrated coastal zone management’.

In Türkiye, the integrated coastal zone management approach has been implemented as a part of public policy. This academic research scrutinizes coastal management in Türkiye, specifically exploring Integrated Coastal Zone Management as a governance strategy. The study’s main objective is to conduct a thorough evaluation of this strategy’s applicability and effectiveness in Türkiye. The analysis of Türkiye’s long coastline and diverse ecosystems has taken into consideration the multi-actor and complex nature of Integrated Coastal Zone Management (ICZM), with a detailed examination of the existing coastal management legislation and practices. Another critical aspect of the research is to explore the matter of coastal management in Türkiye from multiple perspectives. The significance of coastal zone management in the current socio-economic and environmental situation is underscored. Moreover, the study evaluates the effects of climate change on coastal zone management and elucidates Türkiye’s current position and measures taken in this area. This stage enables us to examine Türkiye’s coastal management from a wider viewpoint and recommend strategic solutions to the present obstacles. Nevertheless, there are still some issues related to the execution of the integrated coastal zone management technique in Türkiye.

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CHAPTER X

WASTE MANAGEMENT AND ITS IMPACT ON TOURISM MARKETING

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1. Introduction

Particularly in recent times, waste management is an important issue from the largest cities to the smallest village. Moreover, the larger the settlement, the greater the complexity of this problem. For this reason, many governments have prioritized waste management under the environmental theme. Waste management is also one of the most critical health and environmental issues facing local authorities in particular. After all, no one wants their country to resemble the back streets of India. (Olukanni & Nwafor, 2019:63). The problem of waste management is particularly acute in developing countries. These impacts include lack of management tools, sloppy and inefficient use of resources, interest in imported products, inappropriate financing methods and inadequate technological implementation, unequal services and insufficient technical expertise (Tsydenova et al., 2018:73).

Statistics show that household waste in particular is a major problem. All statistics regarding the environmental management approach show that due to the increase in human population and consumption frenzy, more and more waste is produced and a significant amount of this waste is not managed safely. The same statistics show that the amount of waste produced by each person per

day is approximately 0.74 kilograms. It also shows that high-income countries (16%) account for 34% of this waste. Calculations show that by 2050, twice as much waste will be produced as the human population increases (The World Bank, 2023).



Figure 1. Take-Make-Waste

Source: Circular Economics Guide (2020).

Because the “take-use-dispose” approach has not become widespread yet, environmental pollution is becoming more severe day by day (Cao et al., 2020:708). Plastic wastes, which stand out with their take-use-disposal practices, are waste materials that seem innocent in wastes but pose a very dangerous environment in terms of environmental effects. One million plastic bottles and nearly five trillion plastic bags are used every minute worldwide. At least half of these plastics are consumed for single-use purposes. Estimates suggest there are 199 million tonnes of plastic waste in the oceans. Moreover, a significant part of these parts cannot dissolve on their own in nature, but can only be broken down into micro parts. Moreover, they are often eaten by fish. Microplastics in the oceans enter the human body through respiration or absorption and accumulate in organs. (UN, 2023). Microplastics and nanoplastics are the least known wastes in the oceans and seas, and potentially one of the most hazardous (Koelmans, Besseling & Shim, 2015).

Most of the plastic used in tourism is produced to be discarded and is often not recycled, leading to a large amount of pollution. As the most common type of solid waste produced by seaside tourism, plastic waste is a major threat to the future of coastal tourism and human health. For example, plastic packaging played a significant role in the 10% increase in wastegeneration in the city of Lisbon between 2015 and 2018.



Figure2. The Plastics On The Seaside

Source: <https://www.oneplanetnetwork.org/programmes/sustainable-tourism/global-tourism-plastics-initiative/tourisms-plastic-pollution-problem>

As a result, bars and restaurants in Lisbon have been banned from serving drinks to customers in single-use plastic containers since 2020, and a nationwide ban on single-use plastic plates and cutlery was imposed in September 2020. In addition, according to a report published by the World Wide Fund for Nature (WWF), as of 2018, plastic constitutes 72% of the waste found on Portuguese beaches (Oliveira et al., 2023). 22% of respondents said that seeing trash made them feel sad or depressed (Watts, 2020).

Recycling waste is a very laborious and expensive process. Only 20% of the waste produced in the world can be recycled. A significant portion of the remaining 80% is sent to landfills for recycling (Filipenco, 2023). Turkey, Latvia and Chile are among the worst OECD countries in terms of waste management, generating over 420 kg of waste per capita. The recycling rate is 47 kg/person, over 340 kg/person of waste has been opened, and about 175 kg of waste has remained in landfills (Filipenco, 2023). In Sensoneo's ranking of 36 countries on waste management, Turkey ranked 1st among the countries with the lowest score value. The most successful country on the list with 100 score points is South Korea.

Table 1. Country Waste Management Scores

Rank	Country	Waste Generated	Recycling	Incineration	Landfill	Open Dump	Unaccounted Waste	Final Score
01	Turkey	1.11	0.00	0.00	1.49	10.00	0.59	0.00
02	Latvia	1.25	1.69	0.00	1.72	0.00	10.00	11.63
03	New Zealand	4.17	0.00	0.00	5.00	0.00	0.00	24.37
04	Mexico	1.08	0.38	0.00	2.16	5.03	0.00	32.15
05	Chile	0.73	0.03	0.00	2.27	1.86	3.04	32.19
06	Italy	1.76	2.31	0.37	0.89	0.00	7.89	32.28
07	Estonia	0.45	1.62	0.74	0.18	0.00	6.83	48.98

Source: Sensoneo 2022

For example; Municipalities manage the solid waste produced by the public. Solid waste production is 0.88 kg per person per day in the Czech Republic. While in the USA it increases up to 2.0 kg. Solid waste generation rates in touristic areas are significantly higher than municipal solid waste generation rates. This can cause serious environmental problems in tourist areas whose infrastructure is not sufficient to support touristic activities and who have difficulty coping with the waste produced by the low indigenous population (Munoz & Navia, 2015).

2019 Data shows Canada is the world's largest waste producer. A significant part of these wastes are industrial wastes. The USA is the leader in solid waste production for domestic consumption. In 2021, the USA and China are the largest producers of municipal waste (Statista, 2023). An estimated 35 million tons of hazardous materials are produced in the U.S. each year. The data highlights that the majority of hazardous waste involves wastewater from chemical manufacturing (HWH, 2023). Although China is the largest producer of solid waste, the USA produces the most waste per capita in terms of population. In the United States, which accounts for about 5% of the world's population, 12% of solid waste is produced. The U.S. is also the world's largest producer of food waste.

While 48% of low-income country waste is in cities, it drops to 26% outside urban areas. High waste production has a negative impact on poorer countries. Most of the waste plastic produced in rich countries (especially plastic)

is exported to poorer countries. In these countries, waste is incinerated, leading to greater pollution and health problems. While most of the waste produced in low-income countries consists of biological materials, this share shrinks as income increases.

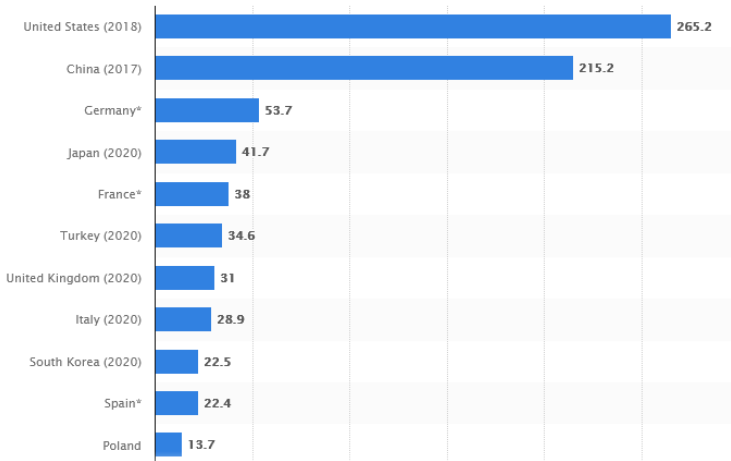


Figure 3. Generation of Municipal Waste Worldwide as of 2021, by Select Country

Source: Statista 2023

There is a relationship between the amount of waste produced by people and their income, both in terms of tourism enterprises and waste management of municipalities. In places with high income, increasing income increases consumption, and with the increase in consumption, the amount of waste increases. However, due to various reasons, the amount of waste is expected to increase in low-income countries. For example; The amount of waste is expected to triple in Asian and Eastern countries. The figure below shows estimated amounts until 2050.

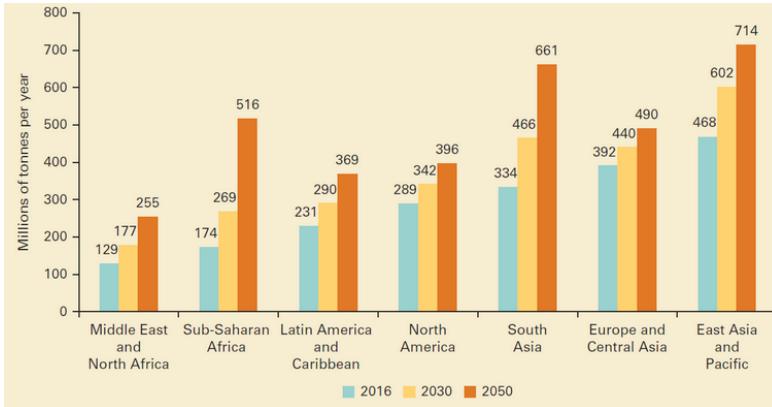


Figure 4. Projected Waste Generation, By Region (Millions Of Tonnes/Year)

Source: The World Bank-2023

The most interesting part is that the highest waste production per capita in the world is seen in countries where tourism has an important place in their economies. In some of these countries, there is a lack of storage areas due to the small size of the land and, most importantly, the lack of solution suggestions on how to dispose of the waste obtained. On the other hand, the melting of glaciers due to global warming and the rise in sea level as a natural consequence of this cause land areas to become more scarce. (IMF, 2020).

2. Waste Management and Zero Waste

2.1. Waste Management

The term waste is used for materials or objects that are not expected to be reused. The term garbage, on the other hand, is a term used to refer to materials or objects that can be used a little more (Newton, 2020:4). The main purpose of waste management is to ensure the management of wastes generated by human influence without harming the environment and human health (İnciel, 2022). Waste management is extremely important in terms of corporate sustainability policies implemented by businesses. According to waste management, it is a wrong approach to see waste as garbage (Değirmenci, 2022:183). In this context, waste should be considered as a resource.

Regarding waste management, Dileep (2015) explained that “waste management is an approach to dispose of waste in the most appropriate way possible, without causing any negative impact on the environment in which people live or the society in which they live.” Essentially, waste management

has many processes within itself. It is a process that has many functions, such as first collecting wastes, then separating them according to appropriate processes, processing them through various processes according to the technological possibilities at hand, recycling them in a way that can serve industry or other areas again, and reusing wastes if possible. Who should dispose of the waste is a matter of debate. Should countries that produce waste dispose of it? It is debatable. However, there is a known fact that finding a solution to the problem of inefficient use as soon as possible in order to use the limited resources that are increasingly disappearing in the world more effectively and efficiently, eliminating the negative health problems such as environmental pollution and cancer that it often causes, and eliminating the social/biological effects on humanity. It is of critical importance to eliminate all physical negativities. Of course, it is possible to show municipalities or businesses that are very successful in waste management in the world. In this sense, governments even have very serious strategic plans. However, there are also practices that can be described as bad examples in many areas of the world. As stated before, the tourism industry, which contributes the most negatively to waste management, needs to get itself in order. Especially in countries where tourism income is an important national income, the amount of waste resulting from tourism activities exceeds the amount of waste produced by industrial zones (Dileep, 2015).

We see that more than 50 percent of the many resources transferred to the economy every year are released into the environment as waste, causing the climate crisis and increasing greenhouse gas emissions. (Circular Economy Guide, 2020:12).



Figure 5. Amount Of Waste Produced In The World Per Year

Source: Circular Economy Guide, 2020:12

Wastes can be classified as solid, liquid or gaseous. Solid waste can be given as garbage (municipal solid waste MSW), which everyone usually throws away on a daily basis. Wastes that are not included in the MSW category are called agricultural and industrial wastes. Waste disposal refers to the processes by which used objects and materials are produced and then disposed of. Waste management refers to all procedures and mechanisms by which waste products are produced, transformed, and eliminated or otherwise processed by humans (Newton, 2020:5). According to another definition, waste management; It encompasses a range of activities that ensure the collection, separation at source, storage, transportation and processing of discarded materials, thus capturing and reusing or recycling useful components, as well as the proper disposal of residues (Budu et al., 2015:2).



Figure 6. Phases of Waste Management

Source: Huley, 2020:72.

The main purpose of waste management is to limit and eliminate the negative effects of waste on human health and the environment in order to sustain economic development and a higher quality of life. There are six functions in relation to waste (Hulley, 2021:8);

- Waste generation: It covers activities related to determining which materials can be reused or disposed of.

- Direct processing (Collection, classification, storage and processing): It is related to actions that simplify collection in the field of waste generation. For example, placing waste bins on sites to facilitate the separation of waste at its source.
 - Waste collection: It includes activities such as adding waste collection bins, collecting waste directly from these bins, as well as collecting waste at the place where the assembly vehicles are unloaded.
 - Transfer and transportation of waste: These are the actions related to the transportation of waste from the local waste collection point to the waste management point by transport vehicles.
 - Waste processing and recovery: Refers to the equipment and methods used to recover reusable or recyclable components from waste sources.
 - Disposal: This is the last option of waste management, which includes actions that focus on the systematic cleaning of waste products into facilities such as incineration and landfill.

The waste generated must be collected, transported, and disposed of in a healthy and cost-effective manner, taking into account its environmental impact (Obersteiner et al., 2021). Unfortunately, most of the solid waste, which is produced more than 2 billion tons every year, cannot be managed in a safe and healthy way in terms of the environment. Problems caused by poorly planned waste management or lack of planning can further increase the high emission rates of the waste disposal chain. In most communities, common problems identified when it comes to inadequate waste management include: (i) a lack of awareness of health hazards, (ii) inadequate financial resources and human resources, and (iii) improper management of waste disposal facilities (Hulley, 2020:50).

Zero waste, which is an important concept; It reveals principles that focus on preventing non-recyclable waste, increasing the recycling opportunities of waste as much as possible, and even encouraging the redesign of resource use. Essentially, the basic principle of zero waste management is to ensure that waste is not sent to waste pools before it is produced. Perhaps one meaning of this is choosing a suitable lifestyle or developing appropriate production systems. The zero waste approach rejects the use of materials only once. This approach encourages the reuse of waste to the fullest extent possible. The main thing is not to create waste. For example; Preference for paper packaging instead of plastic packaging materials. Perhaps such a choice could even lead to the development

of forest areas. Moreover, zero waste management means consuming every resource we use more responsibly, minimizing burning or burial, minimizing the damage to the ecosystem and even restoring the health of the ecosystem, thus protecting all resources. (Hulley, 2021:16).

2.2. Zero Waste

“Zero waste”; It is a philosophy that includes the more effective and efficient use of natural or produced resources by preventing unnecessary use, preventing or reducing situations that allow or disallow recycling, collecting/separating/processing waste even if it is unwanted, and recycling it within this scope. In this context, zero waste; It is a form of approach that takes into account the life cycle of waste (Çevre ve Şehircilik Bakanlığı, 2023:6).

In the emergence of the zero waste approach, Murray (2002) prioritizes the understanding of total quality management, Curran and Williams (2012), Song et al. (2015) and Lehmann (2011) the connections of the approach with the circular economy, and Connett and Sheehan (2001) prioritize the impact of social movements against waste disposal in the emergence of the approach. In this direction, researches on the historical origins of the zero waste approach were carried out in the context of “total quality management and zero waste”, circular economy and zero waste, and “social movements against waste incineration” (Bilgili, 2021:687).

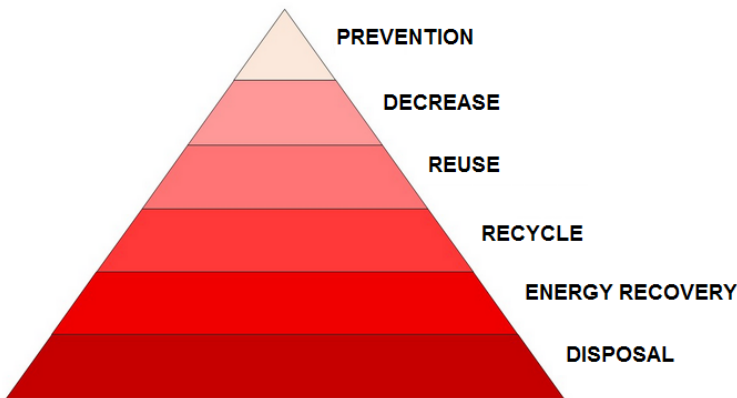


Figure 7. Waste Management Hierarchy.

Source: Escarus, 2019, Gökçe, 2018

The lowest step in the hierarchy pyramids is the option that everyone can do or reach relatively easily. However, it is not a priority option because it is not

an option that will solve the problem quickly. However, the top of the pyramid is the most prioritized option and does not concern the aftermath of the occurrence of the problem. The top rung is usually a rung that prevents the problem (Model, 2023). In order for wastes to be collected separately at the source, they must first be collected separately and in designated areas within the “waste temporary storage areas” within the boundaries of the enterprise before being sent for recycling and/or disposal (Nevü, 2023).

Murray (1999) tries to explain the emergence of the zero waste approach for the following three reasons (Bilgili, 2021:690).

- Increased concerns about waste disposal systems,
- Global-scale environmental problems such as global warming and depletion of natural resources increase ecological concerns, and,
- Advances in technology create new opportunities in waste management.

Table 2. Waste Management Hierarchy

Prevention	Reduction	Reuse
Using less natural resources, Reusing waste products, To extend the life of the products.	To develop cleaner technologies in industries and to minimize the amount of waste produced, Reducing the use of packaging, Buying in large volumes to reduce the amount of packaging.	Cleaning and reusing the materials used, especially glass bottles, To use plastic containers of purchased materials as needed (pot making, etc.).
Recycling	Energy Recovery	Disposal
Producing compost from food, garden waste and other organic waste, To ensure that glass, plastic, battery, metal, paper, organic wastes are collected in separate garbage bins.	It is the production of gas from non-recyclable wastes by anaerobic (oxygen-free) digestion, incineration, gasification and landfill methods.	The last option to be preferred is disposal.

Source: Escarus, 2019

Before the zero waste debate, waste was largely disposed of through incineration or landfill. Incineration of waste reduces the amount of waste and leads to the release of ash, gas and toxic gases. Storage, on the other hand, has a significant disadvantage such as the mixing of leachate from wastes with soil and water (Bilgili, 2021:690).

3. Waste Management Market in Turkey

The waste market in Turkey is growing. Waste values within the framework of estimated values are shown in the figure below.

The total revenue of the Turkish waste management sector in 2019 was 886.9 million dollars and the total revenue in 2020 was 1.4 billion dollars. Industrial consumption volume reached a total of 33.1 million tons in 2020. Municipal waste coverage has improved significantly in recent years. It has grown from 77% in 2004 to over 90% now (Research & Markets, 2021; Report Linker, 2023).



Figure 8. Turkish Waste Management Market.

Source: Research and Markets, 2021

With the increase in waste generation in Turkey, urban areas have become increasingly dependent on landfills. Generally, considering the waste management infrastructure in our country, it will be seen that the system is quite inadequate. The system has problems in meeting the needs of our country. In

order to eliminate these problems, a more effectively managed system must be established and developed. According to the National Waste Management Action Plan, the municipality aims to recover 35% of its waste. In our country, 32 million tons of municipal waste was produced in 2020. From 2010 to 2020, the amount of municipal waste increased by 28% (CSB, 2022). However, recycling is intended to reuse waste. However, with zero waste, the main goal is not to increase recycling in society, but to prevent and reduce its amount (AA, 2019). As a member state of the EU, Turkey has also implemented some economic and policy instruments in recent years. In this way, it has managed to reduce the generation of plastic waste. However, Turkey's legislation on waste management is "partially compatible" with the EU *acquis* and is at risk of becoming a "waste dump" on behalf of major plastic waste exporting countries (Bostanoğlu, 2021:1).

Thanks to the regulations on waste management in both industry and tourism, waste recovery rates have shown a significant positive development. Thanks to these regulations, the total amount of waste processed has increased and the amount of waste that is impossible to recycle has also decreased. The total capacity of the landfills was determined as 1.2 billion m³. A total of 77.8 million tons of waste, 31.9 million tons of which was hazardous, was disposed of in 174 landfills (İnciel, 2022).

4. Waste Management in Tourism

The world's most important economic development indicators are mostly associated with heavy industry. However, when evaluated in terms of its contribution to employment, the tourism sector has a significant share. Since tourism activities are related to service production, they involve many people (Obersteiner, 2021). Especially after an epidemic such as Covid, people's longing for nature has caused tourism activities to grow and become a globally important economic power. Considering the economic development, tourism activities are an important financial source, especially for developing countries (Munoz and Navia, 2015). The tourism sector accounts for 10% of global gross domestic product, 7% of global exports, and one in ten jobs worldwide. It is an important pillar of economic growth and development, especially for least developed countries (LDCs) and small-island developing countries (SIDC), with its capacity to attract significant investment, create jobs, increase exports, and adapt to new and emerging technologies (UNEP¹, 2023). The reasons underlying the rapid growth in the tourism sector are varied. the rise of the

sharing economy with more affordable accommodation like Airbnb and new sources for transportation like Uber; expansion of the air ticket market through diversification of routes; easement for the reduction of rates and reservation procedures; Growing prosperity in countries such as China and India creates a huge demand for tourism, among others (UNWTO, 2023). Although the tourism sector seems to be more ineffective than other branches of industry in terms of waste production, it has been realized as of the 21st century. For this reason, legal regulations have been introduced to protect the environment for the tourism sector. In order to survive, the tourism sector needs to protect nature and should evaluate its wastes within the framework of legal regulations (Kızıldemir & Sandıkçı, 2014:44).

Although the developments in the tourism industry contribute to economic development, this increase in tourism activities raises serious concerns, especially about waste management and environmental impacts. Natural environments such as forests, beaches, rivers and mountains create a good source of income for tourism, but at the same time, they are damaged by being exposed to waste production by tourists. The conservation costs required for the protection of these areas can be covered from the tourism revenues obtained from these areas if they are well managed with carefully prepared strategies by laws and institutions. Uncontrolled and poorly managed tourism causes very negative environmental and urban consequences. Increasing greenhouse gas emissions and air pollution as a result of increased transportation services due to tourists, high rate of waste production and illegal disposal of wastes in visited places, and pressure on water resources and sewage systems due to increasing demand will have severe consequences in terms of environment, health and economy if they are not well managed. In addition, with climate change, the increase in summer months will cause travel times to increase (Oliveira et al., 2023).

With the adoption of the Paris Agreement in 2015, the goal of “achieving zero emissions” became an economic and political trend. Various country leaders signed the agreement regarding zero emissions. Accordingly, 2050 is an important year. First of all, humanity’s awareness of the seriousness of the issue should be increased by this year and production should be adapted accordingly. In this sense, the UN climate change conference in 2021 has attracted attention (Chuenwong et al.2022:2).

While the tourism sector consumes a high percentage of energy and water resources, it also produces a high rate of solid waste in accommodation and recreation areas (Munoz & Navia, 2015). The tourism industry is an extremely

dynamic sector. The duration of a tourist's stay in any accommodation facility is short. For this reason, a significant part of the managers in the sector focused on generating income from tourists during this period. This focus often causes managers in the tourism sector to fail to fulfill their environmental responsibilities. The tourism sector produces a significant amount of solid waste. Therefore, it has an important place in total waste. For example, the daily waste production of a tourist staying in a hotel can reach up to 1 kilo. This amount is even higher in luxury consumption hotels. Although the amount of waste is high, tourism activities are more focused on consumption. This situation creates a paradox in itself. Hotel owners, whose most important income is nature, are increasingly destroying nature. Industry leaders claim that the disposal of waste, which is a by-product of tourism activities, is very expensive. These activities are also time consuming. Therefore, they do not show a very responsible behavior in terms of waste reduction. For this reason, the tourism sector may move away from waste management targets (Perkumiene et al., 2023:2). UN Environmental research shows that the tourism sector's capacity to generate solid waste, sewage, biodiversity loss and greenhouse gas emissions is growing with the consumption of essential resources such as water, energy, land and materials (such as minerals, fossil fuels, biomass and metals) (UNEP, 2023). In order to achieve sustainable development, we have environmental externalities that need to be reduced towards our development goals. If the planned reduction does not occur, we will be far from the 2050 targets and the tourism sector will produce much more energy/water/solid waste and cause emission values to increase (Koiwanit & Filimonau, 2023:1).

Some scientific articles emphasize that there is a wide range of solid waste generation in tourist areas, stating that between 1 and 12 kg of waste is generated per person per day. These high rates vary depending on the type and occupancy rate of tourist facilities, tourist characteristics, the season of the year and the environmental laws of the country. Solid waste generation is considered one of the most important environmental impacts of touristic activities today. In particular, many tourist businesses, such as hotels, bars, and restaurants, use large quantities of consumer disposable products as part of their operations (Munoz & Navia, 2015).

Tourism waste management is a very difficult field as it is more complex than domestic waste management. (Xu et al.2022:15335); First of all, the structure of tourism waste is quite simple; A significant portion of tourism waste consists of packaging waste. While some of this waste consists of what tourists

throw away during their trips, the other part consists of the waste of businesses serving tourists. These businesses produce food and packaging waste, especially for daily use.

Secondly, the structure of tourism waste is extremely simple. However, the waste production structure of tourism stakeholders who cause waste in tourism activities is much more complex. As a result, since tourism activities themselves are already complex, it may be difficult to determine the sources of the resulting waste. This network includes many stakeholders, from hotel services to logistics. The third is related to the nature of tourism activities. Since tourism activities are uncertain in terms of time and destination, the occurrence of these wastes is also uncertain. During peak tourism seasons, pressure on treating tourism waste in natural areas is higher.

Although solid waste management is an important problem in tourism destinations, it is a topic that needs to be researched in more depth in the tourism literature. The lack of sustainable waste management leads to the loss of tourism revenues. Interestingly, managing this waste has the potential to increase tourism revenue by 30%. Therefore, sustainable management of waste in tourism helps protect sensitive ecosystems and has the potential to increase tourism revenue (Krishnan et al.2023:253). Tourism activities take place in nature. Although nature is protected within the framework of the decisions taken due to these activities, negative effects may also occur on natural resources and biodiversity. Moreover, these effects occur in a very wide area. For example; All kinds of mobile mobility of tourists cause carbon dioxide emissions to increase. Again, waste production increases due to the mobility of tourists. As a result, water resources and nature are polluted. This pollution causes deterioration in the environment. On the other hand, there is also sound and light pollution that we do not pay much attention to. This pollution negatively affects the lifestyles of living creatures in nature. Many negative situations like these that we cannot count are the results of the tourism sector. Due to tourism activities, the physical environment is deteriorating and wildlife is endangered (Perkumiene et al., 2023:4).

It is unfair to burden hotel owners with the management of waste resulting from tourism. Because there are many stakeholders in this sector. These stakeholders include many businesses from the retail sector to the logistics sector. For this reason, waste management is too important an area to be left to tourism businesses. This problem can be solved in cooperation with stakeholders. So there is no single side to the problem. It is the problem of everyone involved

in the industry or providing support. Everyone will either participate in the solution equally or in proportion to their responsibilities. Since each stakeholder has different expectations and therefore different interests, it is normal for their contributions to the solution to be different. However, the problem should be looked at more holistically. Stakeholders of tourism activities include local people, state, non-governmental organizations and local administrations, as well as tourism businesses.

Improper disposal of waste (especially plastic waste) contributes to ocean pollution, negatively impacting marine ecosystems and biodiversity (Jamal & Camargo, 2021). Many oceanographers have emphasized the urgent need for effective waste management systems in tourist areas, stating that sea creatures consume microplastics in their studies (Wilcox et al., 2015). Another situation that endangers the future of touristic areas is the visual pollution caused by waste. Pollution of natural beauties that attract the attention of tourists with waste causes negative feedback, reducing the touristic value of the region and causing it to lose its attractiveness. Pollution caused by plastics and bottles in tourism destinations reduces the duration of residence of tourists (Perkumiene et al., 2023).

4.1. Waste Management in Hotel Businesses

Sustainability has become much more important in the 21st century due to global environmental problems such as climate change, depletion of natural resources, social injustices and the increasing need for energy resources, which require urgent action. Governments, organizations and individuals have recognized the need to integrate the principles of sustainability into their decision-making processes and include them in their action plans (Doğan, 2001:309). The sustainability performance of a business depends on the environmental, economic, and social impacts of the resources the business uses, the products and services it offers, and the emissions, waste, and by-products it produces (Baumgartner & Rauter, 2017). The existence, development and survival of hotel businesses mostly depend on the natural resources of the destination. However, the realization of the use of natural resources for tourism purposes only with an economic approach causes natural resources to be destroyed, deteriorated and lose their attractiveness. Waste management is one of the important areas in the environmental management practices of hotel businesses. Good planning of this process not only reduces the amount of waste for hotel businesses, but also saves materials, resources, energy and money. The table below shows the waste types of hotel businesses (Baytok et al., 2015:2-3);

Table 3. Non-Hazardous and Hazardous Types of Wastes in Hotel Establishments

Non-Hazardous Wastes		
Type of Waste	Components	Source
Domestic Waste	Food/kitchen waste or dirty paper and wrapping rolls, rolls mixed with different materials	Different parts of the hotel
Cartons	Packaging	Hotel purchases and other Partitions
Paper	Written documents, brochures, menus, maps, magazines, newspapers	Administration, reception, guest rooms, restaurants
Plastic	Boxes, bottles (free of hazardous substances), household products, single portioning materials for various products	Kitchen, restaurants, bars, guests Rooms, Management
Metal	Cans, dried soda, food containers, mayonnaise, tomato cans, jam lids, aluminum packages	Kitchen, restaurants, bars, guests Rooms
Glass	Bottles, jams, flasks	Kitchen, restaurants, bars, guests Rooms
Cloth	Tablecloths, bedspreads, napkins, utensils, shabby items	Kitchen, restaurants, bars, bathrooms, guest rooms,
Wooden	Wooden packages, pallets	Purchase
Organic waste	Fruit and vegetable peels, flowers and plants, herbs, twigs and leaves	Kitchen, restaurants, bars, guests Rooms, gardens
Hazardous Wastes		
	Components	Source
	Frying oils	Kitchen, restaurant
	Mineral oils	Technical service
	Solvent residues	Technical service
	Flammable materials (gas and petroleum derivatives)	Kitchen, garden, Technical service
	Artificial fertilizers and chemicals (insecticides, fungicides, herbicides)	Garden
	Cleaning chemicals	Technical service
	Ink cartridges	Management
	Floppy disks and CDs	Management, guest rooms
	Batteries	Technical service, management, guest rooms
	Cleaning chemicals and solvent used in dry cleaning	Laundromat
	Fluorescent, neon and long-lasting lamps	Technical service

Source: Baytok et al., 2015:3-4.

In hotels, each customer weighs about 1 kg on average per day. It creates waste. Waste generation in hotel establishments; It varies according to the type of hotel, guest characteristics, guest and employee activities and occupancy rate.

In order to make an effective waste planning in hotel businesses, the wastes generated (CSB, 2023);

- Source and quantity,
- Types and characteristics
- Causes of occurrence (important in determining the methods that can be applied in the prevention and reduction of waste.)
- Relevant personnel status
- Methods of accumulating, collecting and transporting
- Waste temporary storage areas
- The collection system should be put forward according to the municipal/ recycling facilities where the waste is delivered

Since the amount of solid waste generated in large-scale hotel enterprises is higher than in other scale hotel enterprises, waste management here is more comprehensive. Accordingly, waste management in hotel businesses; It is defined as “the sum of the processes of making decisions that will ensure that the hotel management personnel, financial resources, equipment and external environmental elements such as companies and organizations that can evaluate the wastes work in a harmonious, efficient and effective manner in order to achieve the objectives such as preventing waste generation and minimizing the amount of waste, implementing these decisions and evaluating the results” (Kızıldemir & Sandıkçı, 2014:45).

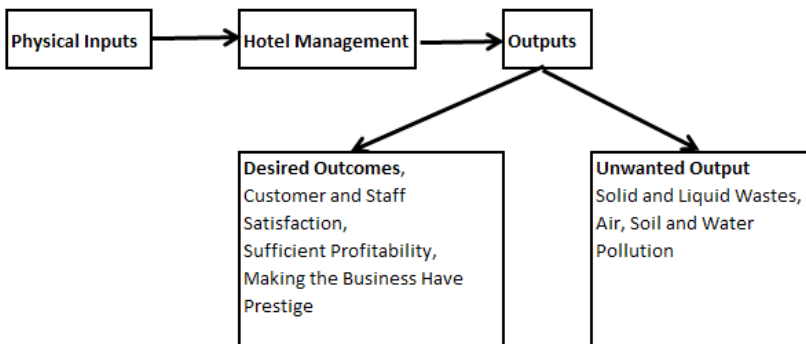


Figure 9. Inputs and Outputs of Large-Scale Hotel Management.

Source: Kızıldemir and Sandıkçı, 2014:45

Reducing waste or waste in accommodation facilities is related to the competence and efforts of the personnel working in these facilities. The average tourist consumes 1 kg per day. It produces waste around . Preventing this waste and utilizing recycling as much as possible is not an action that only municipalities can do. Therefore, it is recommended that accommodation facilities in the region develop an integrated “Touristic Waste Management” system. (Obersteiner, 2021).

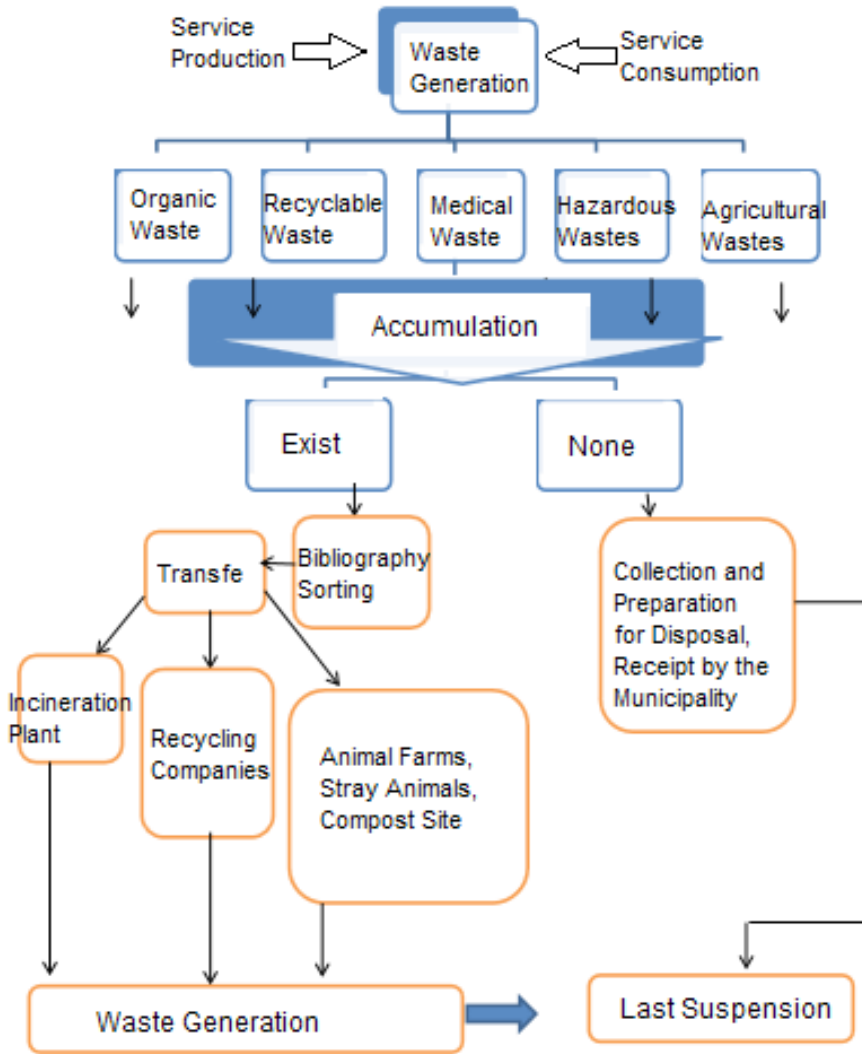


Figure 10. Flow Chart of Waste Types in Large-Scale Hotel Enterprises

Source: Kızıldemir and Sandıkcı, 2014:47

In the figure, (Exist) means that there is a waste evaluation program in the hotel, and (None) means that there is no waste evaluation program.

4.2. SSWM (Sustainable Sanitation and Water Management) Integrated Management Process

An effective SSWM design is needed to reduce pollution in tourism activities. Three TBL areas of sustainability should be considered here. The table proposed by Tsai et al. (2021:3) has three perspectives and 21 criteria for the tourism economy.

Table 4. Hierarchical Framework

Perspectives		Aspect		Criteria	
P1	Tourism economy	A1	Funding and expenditures	C1	Financial return and income
				C2	Residents' consumption
		A2	Tourism activities	C3	Civil construction debris
				C4	Tourist flow
				C5	Accommodation
P2	Coastal and marine environment	A3	Policy and legal framework	C6	Legislation cooperation and coordination
				C7	Marine environmental regulation
				C8	Political leadership support
				C9	Ecological security
		A4	Environmental co-creation	C10	MSWM facilities and services
				C11	Technological implementations
				C12	Green practices
P3	Socio-culture	A6	Stakeholder participation	C13	Coastal and marine ecosystems
				C14	Cost-sharing and mutual strategies adoptions
				C15	Technical cooperation
				C16	Guest environmental concern
				C17	Citizen's participation
		A5	Community awareness	C18	Cultural operant resources
				C19	Information provision
				C20	Health and wellbeing
				C21	Local community attitude

Source: Tsai et al.(2021:3).

The tourism economy (P1) is interconnected by a number of different economic activities. When economic development and urbanization increase, a greater amount of solid waste is generated. Financing (A1) is required to optimize the cost of the system. Tourism activities (A2) cannot be managed by waste management authorities. On the other hand, the coastal marine environment (P2) is a very important tourism sector. Yachts and cruises, which

make up the largest sector of marine tourism, are responsible for high levels of marine environmental pollution. For example; In relation to ports, legal cooperation (C6) and the support of political leaders (C8) are required. In terms of creating the tourist experience, creating environmental cohesion (A4) is another important aspect. In addition, tourism consists of a series of social and economic activities. Therefore, the sociocultural perspective (P3) needs to be included in the decision-making process. Multi-stakeholder engagement (A5) is required to maximize total benefit. Social awareness (A6) contributes to SSWM solutions (Tsai et al.2021:3-5).

4.3. Challenges in Waste Management

There are a number of obstacles in front of effective waste management systems such as inadequate infrastructure, financial deficiencies, lack of awareness and training of institutions and managers. In addition, the lack of awareness of tourists coming to the region worsens the current situation. The most important obstacles to waste management are the lack of environmental awareness of tourists to protect the environment and their lack of behavior in this direction, and the low level of awareness of domestic tourists about separating wastes according to their types and sustainable waste management. While intensive waste generation is a major problem, especially in rural destination areas, how to dispose of the generated waste with environmentally friendly waste management practices poses a bigger problem (Perkumienė et al., 2023).

Islands and island communities are further challenged by climatic conditions, topography, financial constraints, changing consumption patterns, solid waste management, planning issues, and transient populations. However, conflicts of interest between stakeholders in the design, construction and operation of tourist facilities hinder the implementation of new initiatives and programs (Ezearh et. al., 2015). In developing countries, the most important obstacle to the establishment of comprehensive waste management systems is financial resources (Nzediegwu & Chang, 2018). The fact that local people in touristic areas prioritize economic development rather than protecting natural resources also makes waste management difficult. Overcoming these challenges requires a holistic approach that brings together technological advances, policy reforms, and community engagement. Carrying out the sustainable waste management process with individuals with high awareness will be more effective in conducting an environmentally friendly waste management process. The lack of suitable landfills in tourism destinations, large seasonal population variations,

and the presence of widespread commercial enterprises are other factors that limit sustainable waste management practices. Due to the lack of sustainable waste management practices, the illegal dumping or disposal of waste in tourism destinations poses a threat to human health on the one hand, destroying natural resources and on the other hand, causing a decrease in the value of destination areas in terms of tourism (Perkumienė et al., 2023). Ineffective solid waste management reduces the attractiveness of tourism destinations and increases operating costs (Obersteiner et al., 2021).

4.4. Sustainable Waste Management

Overcoming the challenges of waste management requires a comprehensive approach that encompasses structural improvements and behavioral changes in waste disposal practices. It is essential to improve cooperation between the public and private sectors in order to facilitate waste management processes and ensure the successful implementation of sustainable practices (Brouder et al., 2019). Governing bodies need to play a proactive role for effective waste management. Policies specifically designed to address the complexities of waste management in the tourism sector are indispensable. Financial and technical support to municipalities is the cornerstone of the sustainable solution of waste-related problems. In addition, tourism organizations should invest in strengthening waste infrastructure systems to meet peak tourism seasons (Mowforth and Munt, 2009). For example, the circular economy model is an important practice that minimizes waste production by promoting resource efficiency (Ellen MacArthur Foundation, 2015). Many EU and non-EU countries take care to implement sustainable solid waste management practices within the framework of the circular economy. Encouraging manufacturers to take responsibility for their products throughout the entire lifecycle through extended producer responsibility (EPR) programs can encourage the development of environmentally friendly products, facilitating proper disposal for waste management.

The World Tourism Organization (UNWTO) was established by the United Nations to advise on ways and means to promote the development of sustainable and resilient tourism. UNWTO and UNEP, with the support of the Ellen MacArthur Foundation, launched the “*Global Tourism Plastics Initiative*” to address plastic pollution in the tourism sector. Signatories to the initiative declare commitments to eliminate unnecessary single-use plastics, transition to reuse models, and use of reusable, recyclable, or compostable plastic packaging and items (UNWTO², 2023).

While developed countries have established a good waste management infrastructure with successful practices, developing countries continue to struggle with inadequate systems and inadequate resources (Wilson et al., 2015). Inappropriate waste management practices of developing countries; It has many negative consequences for the environment and health such as air pollution, water pollution, soil degradation, and the spread of epidemics. Some countries have started to take certain measures in the face of this situation. China has banned plastic bags in major cities. Single-use plastic products have been removed from restaurants and takeaways, and plastic straws have been banned. In addition, significant investments have been made in recycling. In Germany, the Ministry of the Environment has launched an action plan to combat plastic waste. Japan, which is extremely obsessed with hygiene, has announced that it wants to reduce the use of plastic by 25% by 2030 (Botham, 2022). A survey of litter in Scotland found that many people believe waste has a negative impact on their mental health.

In order to reduce waste production in tourism destinations, first of all, feasible waste management programs should be determined and it should be aimed to encourage as many waste reduction actions as possible. These goals can be achieved by raising awareness among the employees of the organization and tourists about the environmental consequences of the waste produced as a result of consumption styles. Without reducing the quality of the services provided during restaurant and accommodation services, more environmentally friendly and wise choices can be made in the necessary supplies for the services. Care should be taken in the selection of alternative products to reduce waste production. For example, fountain drinks, returnable returnable bottled drinks, large family-sized packages can be offered as alternatives to plastic water and beverage bottles. Less packaged products may be preferred in restaurant services. Instead of disposable products (jam, honey, butter, sugar, etc.), large-sized bulk products stored in dispensaries can be used. Domestically produced products can be used to limit packaged food products and reduce packaging waste, especially in rural areas. Glass products should be preferred instead of disposable cups in the rooms, and restrictions should be placed on courtesy products offered as gifts for guests. Batteries can be replaced with rechargeable batteries to minimize the production of hazardous waste. Delivery points can be created by determining responsible personnel for other hazardous wastes (batteries, cartridges, ampoules, spray cans, expired medicines and others) of employees and guests other than batteries. Disposable tablecloths and

napkins used in restaurants should be replaced with durable and long-lasting products. Cleaning products can be purchased in bulk from distributors who offer bottle and tank dispensers instead of single-use products. In addition, composting for household solid waste and food waste can contribute greatly to waste management. Instead of composting in rural tourism, kitchen waste can be used to feed farm animals. The successful implementation of all these proposed solutions will significantly reduce the amount of waste. The results of all these situations and practices can only be effective if guests and employees are trained on the correct selection and use of products, food waste and waste management. Some practices and measures to reduce waste generation in tourism destinations are summarized in table 5 (Giurea et al., 2018).

Table 5. Practices And Actions To Reduce Waste Production in Tourism Structures.

Main Consumer Goods	Practices	Actions
Food and drink	Setting up a separate collection for packaging waste, including home composting in waste management options	Preferring local products; choosing bulk products; preferring glass to plastic; reducing the volume of waste; avoiding sample packs and disposable products; using re-usable bottles, dishes, and containers; allowing and encouraging the taking away of left over food; implementing home composting. Implementing separate collection for packaging waste
Paper	Setting up a separate collection for paper waste	Implementing a separate collection for paper waste
Hygiene products		Avoiding sample packs
Detergents		Preferring bulk products with refillable containers
Special products (e.g., batteries, toner, medicines, lightbulbs, etc.)	Implementing recycling centers for the direct delivery of these products	Storing products in suitable rooms; periodic conferring of these products to their recycling center; preferring rechargeable batteries.
Breakfast and restaurant service		Using cloth kitchen cloths; avoiding disposable dishes.

Source: Giurea et. al. (2018). <https://www.mdpi.com/2079-9276/7/3/51>

With the food saving plan implemented since 2013, London has saved £350,000 in waste reduction and disposal costs by removing 1000 tons of waste from landfills by 2015. Since 2015, Oakland, California has diverted approximately 250,000 tons of compostable/recyclable waste from landfills, reducing greenhouse gas emissions by more than 450,000 tons per year. Between 2012 and 2015, Milan reduced the amount of residual waste from 450,000 tons to 315,000 tons and tripled the amount of municipal solid waste recycled. Since 2010, Delhi has transformed the Ghazipur landfill into a facility that can generate energy from waste. By 2016, 12MW of electrical energy was produced daily with 15% of the wastes removed from landfills (<https://citychangers.org/urban-waste-management/>) Successful tourism waste management practices can be achieved by re-planning the waste management strategies implemented by the municipalities in the touristic regions to include the residents, tourism stakeholders and tourists. These cases underscore the feasibility of effective waste management through regulatory measures, community engagement, and innovative solutions in tourism destinations. In order to achieve effective results from waste management practices in tourism destinations, it is essential to increase the education level and awareness of all stakeholders, to determine national strategies for sustainable waste management programs and to introduce legal regulations (Perkumienė et al., 2023).

5. Results

Although there are many options to be applied for sustainable waste management in tourism, it can be started by preventing all kinds of waste. The key point in sustainable waste management practices is the effective implementation of waste management practices in order to produce successful results rather than the amount of waste produced. According to the waste directive, separate collection for recycling and preparation for reuse should be the preferred next steps (Obersteiner et al., 2021). It is necessary to provide information and define focal points well to municipalities, politicians and those responsible in tourism organizations so that they can determine which measures to be taken within the framework of waste management practices provide higher benefits or which measures have a lower value impact (Giurea et. al., 2018). High-standard solid waste management programs have become a necessity in tourist areas, which can also create positive opportunities for the local community, higher competitive advantages, new employment opportunities, and the potential to increase tourist attractiveness by reducing environmental impacts (Munoz & Navia, 2015).

Comprehensive studies focusing on the environmental benefits of waste management practices for tourism, effective waste prevention in the tourism sector, and the environmental impact of appropriate treatment methods remain insufficient in the literature (Obersteiner et al., 2021). As a result, waste management in tourism emerges as a critical challenge that requires urgent intervention to mitigate its negative environmental impacts. In many tourist destinations, the current state of waste management is often inadequate, posing serious threats to ecosystems and local communities. However, through the adoption of sustainable practices, investment in infrastructure, and collaborative efforts among stakeholders, the tourism industry can significantly reduce environmental pollution. Pioneering initiatives, exemplified by projects such as URBANWASTE funded under Horizon 2020, offer innovative solutions to reduce waste problems in tourist-centric cities. Assessing the effectiveness of such strategies is becoming crucial in shaping future interventions and policies.

Sustainable waste management in tourism requires a stable process to be effective and successful. The positive and negative effects of the waste management strategies implemented in the process should be monitored, positive strategies should be reinforced, and practices that cause negative results should be abandoned. Individual actions alone cannot succeed in waste management practices, so a number of criteria must be mandated by official lawmakers. The environment, which we can describe as the “raw material” of tourism in both urban and rural areas (Giurea et al., 2018), is the most fundamental value that must be protected for the future and sustainability of tourism.

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CHAPTER XI

MANAGEMENT OF AGRICULTURAL POLICIES IN TURKEY FROM PAST TO PRESENT

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1. Introduction

The management of the agricultural sector in Turkey dates back to the Ottoman Empire. The innovation movement, which started with the Tanzimat Edict during the Ottoman Empire, continued until the Republic with different intensities. The innovation movement first took place in the military field, and later spread to all areas. This movement aimed to take new steps in the agricultural sector and increase production. During this period, the production of products such as cotton, silk and tobacco was encouraged, but since it was not possible to utilize the increased production domestically, the export of the products came to the fore. In addition to these products, the production of new products such as merino breeding, tobacco, figs, grapes and sugar beets has begun. In addition to these positive developments, domestic production could not compete against foreign products and the country's needs could not be met due to the freedom of export caused by capitulations. This situation has caused Turkey to allocate a share to the import of products such as wheat, flour and rice. On the other hand, in this period, the agricultural infrastructure was quite backward and most farmers could not find land to farm. A large part of the agricultural land is in the hands of the state, it is operated by the villagers on behalf of the state, and in return they are left with some products for their subsistence. Landowner farmers also produce with traditional agricultural methods, and the yield obtained remains low. The

absence of infrastructure, transportation and communication creates difficulties in evaluating the product. The tithe tax collected from the product made the farmer unable to produce in terms of its application method and amount. The state's inability to achieve a balanced land distribution, the absence of a fair tax system based on production, and the absence of policies that provide opportunities such as product evaluation and transportation have hindered the development of the agricultural sector. During this period, attempts made to increase agricultural production were superficial or ineffective as a result of the failure to implement an effective agricultural policy. In a period when economic activities are closed to the outside world, farmers can only meet their own needs, while the needs of the cities are met through imports. During this period, while the demand for agricultural products increased in industrializing countries, agricultural enterprises entered a transformation process to meet this demand and became a structure engaged in intensive agriculture that makes best use of technology and the obtained input. While the size of trade is constantly developing, the place of the agricultural sector in economic policy has been constantly supported. With the increase in transportation opportunities, transportation has become easier, and this has further increased production. While there were positive developments in the agricultural field in European countries, the Ottoman Empire remained far away from these developments and production continued in a traditional structure and under primitive conditions. The agricultural structure of developed and underdeveloped countries and the difference in development between countries have continued similarly from past to present.

The agricultural sector management in Turkey has faced the restructuring process of neo-liberal policies, which started in the 1980s and reached its highest levels in the 2000s. In the process of change in the sector, agreements made by the European Union (EU), World Trade Organization (WTO), World Bank (WB), International Monetary Fund (IMF) were effective rather than internal dynamics.

The agricultural policies implemented in Turkey were carried out in accordance with the spirit of general economic policies. When we divide the economic policies into before and after 1980, it is possible to characterize the period before 1980 as a period in which the mixed economic model was implemented. Agricultural policies were examined as 1923-1960, 1962-1979, 1980-2000 and the post-2000 period in order to better analyze them within the context of changing understanding.

2. Agricultural Policies of the Republic Period (1923-1950 Period)

Studies on agricultural policies of the Republican period started with the Atatürk period. This period covers the years 1923-1938. In the first years of the Republic, the state took the lead in the development of agriculture as well as industry. The only state enterprises in the field of agriculture are Dalaman Farm and Gazi Orman Farm in Ankara. The aim of these farms was to lead farmers and to raise animal species and breeders suitable for the country's conditions. During this period, T.R. to encourage and develop private entrepreneurship in agriculture. Ziraat Bank and Agricultural Equipment Institution have established a model that allows the spread of tools and machinery with agricultural loans, the import, production and use of agricultural tools by farmers (Kaya and Kalaycı, 2021: 25).

By 1929, the effects of the world economic depression also shaped agricultural policies. The crisis experienced in the world has caused a deterioration in the terms of foreign trade and a major collapse in the prices of commercial goods. In order to stop this bad trend caused by the world economic crisis, the government provided direct and indirect price supports for wheat and tobacco purchases in 1932. At the same time, Ziraat Bank and Soil Products Office tried to protect the farmers by purchasing wheat (Eşiyok, 2004: 7). With the end of the wars, the opportunity to increase production increased when the young male population was integrated with working animals. When we add to this situation some improvement in the terms of trade of agricultural products, the amount of production increased and thus the impact of the economic crisis was reduced. During this period, there was a 100% increase in production, the annual population growth rate was 1.7%, and there was no significant migration from villages to cities (Kazgan, 1999: 83).

During the Atatürk period, many steps were taken for structural transformation in agriculture. The transition from the totalitarian Ottoman regime to the Republic was achieved under very difficult conditions and with limited resources. The Izmir Economic Congress and the 1929 World Economic Depression were influential in the economic policies of this period (Şener, 2004: 74). The period 1923-1929 was accepted as the period of liberalization in agriculture, and by the 1930s, a model suitable for the political preferences of the regime was created. In this period, a closed, centralist structure dominated by protectionist and statist policies was introduced. Although the import substitution industrialization policies established in the 1930s showed certain changes later, they became the basic development model of the country's economy for half a century (Pamuk, 2012: 181). There were significant changes in Turkey's agricultural policies between 1938 and

1946. It was a period when interventions in agricultural policies and strict statism practices increased in Turkey (Şener, 2004: 74). The decline in national income, industrial and agricultural production was shown as the reason for the intervention in the economy in the 1940-45 period. During the said period, industrial production decreased by an average of 5.5% annually, agriculture by 7.1% and national income by 6%. Wheat, one of the most important agricultural products of the period, decreased by an average of 9% annually. After the war, the government of the period took some measures to develop the agricultural sector and ensure that it became the locomotive of the economy (Eşiyok, 2004: 8). The Law on Landless Farmers was enacted in 1945, aiming to make landless farmers landowners and to ensure efficiency in the cultivation of large lands by breaking them up. A rapid mechanization process began within the scope of the Marshall Plan, which was implemented in 1948. This situation was reflected in the number of tractors, which was 1800 in 1948 and increased to 16 thousand in 1950. To prevent unfair gain and solve the food shortage during the war years; Asset and Soil Products data have been put into practice.

In addition to the transition to multi-party political life, the infancy period was also completed, and liberalism, which was interrupted by the 1929 Great Depression and the war, was returned with the influence of the external conjuncture. During this period, rural areas were opened to the market and rapid urbanization took place. The growth rate in agricultural production was over 3% per year. The development of irrigation methods and the use of high-efficiency vehicles and machines provided an increase in soil fertility, and this started to show its effect in the 1960s (Kepenek and Yentürk, 2003: 142, Pamuk, 2012: 224-225).

3. Planned Development Period in Agricultural Policies (1962-1979)

Within the framework of the First Five (1963-1967) Year Development Plan, which was put into practice in 1963, the country's development rate was determined as an annual average of 7 percent. During this period, while the annual development target of 7 percent was tried to be achieved, on the other hand, the share of the industrial sector in national income was tried to be increased (Salep, 2017: 209). The Second Five-Year Development Plan (1968-1972) showed a negative approach towards agriculture and completely highlighted industry. In the policies implemented in this period, the main goal was to become a country that sells its own produced and processed products, rather than being a country that sells raw materials. With the emphasis on policies that prioritize industry, the share of the industrial sector in the Gross National Product (GNP) increased from

25.5% to 30.7%. In this period, it was accepted that the number of people making a living from agriculture should be reduced in order to achieve the desired goal. However, there was no real exclusion of agriculture; rather, the transition from primitive agriculture to technological agriculture was highlighted. The agricultural policies of the state were shaped within the framework of this idea (DPT, 1968).

The 1970s took their place in history as a period of economic and social crises. The most important development that left its mark on this period was the implementation of the 3rd Development Plan in 1973. During this period, it was determined that 65% of the workforce worked in the agricultural sector and 28% of the national income was provided by the agricultural sector. This situation was subject to great criticism in the 3rd Development Plan, and it was revealed that the increasing population no longer had the opportunity to keep it in the agricultural field. During this period, the idea that the income share of agriculture should be reduced from 28% to 10% within 20 years was accepted. In 1979, the Fourth Five-Year Development Plan (1979-1983) was put into effect. With this plan, it is emphasized that agriculture should benefit from technological innovations in order not to be affected by climate changes. During this period, incentive conditions for the production of products to be sold abroad and foods that are important for nutrition have been improved. Apart from this, more importance was given to the development of irrigation methods and soil cultivation activities (DPT, 1979).

4. Agricultural Policies in the Transition to Market Economy Period, 1980-2000

During this period, the problems of “inequality in land distribution and “hidden unemployment in agriculture” came to the fore. It is emphasized that within the framework of the 4th Development Plan, the agricultural growth targets of 5.5% in the period until 1982 were not achieved. In this planning, emphasis was placed on social issues such as cooperatives in agriculture and the extent of non-producing lands. Later, the 5th Development Plan was put into practice between 1985 and 1989. In this development plan, emphasis was placed on irrigation and cooperatives in agriculture in order to develop agriculture. During this period, it was decided to distribute short and long-term agricultural loans for the products whose production was given priority. In this plan, producer support policies are discussed comprehensively for the first time, and it is emphasized that cheap input, education and technological developments should be prioritized to encourage production, improving the

quality of agricultural products, breeding studies and standardization should be given priority (DPT, 1985). Land consolidation, which became widespread in the 1990s, modern irrigation and certified seed incentives, rapidly decreasing agricultural land structure, frequently changing producer supports and European Union harmonization processes constitute the main paths of the path followed by Turkish agriculture. It is possible to find the traces of all these processes in the 6th Development Plan. The 6th Development Plan remained in effect between 1990 and 1994. In this plan, it is aimed to protect the earnings of people who earn their living through agriculture, to provide the necessary facilities for the marketing of produced products, and to increase product diversity and productivity. In addition to all these, it was decided to reduce dependence on weather conditions through modernization in agriculture (DPT, 1990). In 1996, the 7th Development Plan was put into practice. In this Development Plan, it is emphasized that since “agricultural areas have reached marginal limits”, priority will be given to increasing productivity through irrigation. For the first time, conscious use of fertilizers, training of technical personnel and producers, development of agricultural extension and research were included in the development plans. Although the enactment of the “Agricultural Labor Law” was among the goals of the 7th Development Plan, the law could not be enacted and put into effect. Towards the end of 1999, a supporting agreement was signed with the IMF.

5. Is Agriculture on the Way to Foreign Dependence? Turkish Agricultural Policies After 2000

The 2000s were the years when the migration of agricultural lands out of agriculture accelerated. Turkey gave a new direction to its agricultural policies with the agreements it made with the International Monetary Fund (IMF) and the World Bank (WB) in the early 2000s. In 2001, a new era was taken in the field of agriculture by signing the Agricultural Reform Implementation Project Agreement with the World Bank (Aytekin, 2012: 32). During this period, the share of Turkish agriculture in GDP decreased to 15%. The 8th Development Plan was put into practice in 2001. With this development plan, concrete steps were taken for the first time towards the goal of “land consolidation”. The plan, which is the Soil Conservation and Land Use Law that came into force in 2005, which was among the targets realized in the 8th Development Plan and the 3 previous development plans, aims to “eliminate unpaid labor in agriculture, in which 3/4 of women’s labor constitutes”. success was not achieved. The 9th

Development Plan was adopted in 2007, with a two-year delay. In this plan, it is emphasized that the use of high-productivity agricultural areas only for agricultural production purposes will be the basis. In line with this target, there has been a significant decrease in the use of agricultural lands. This situation emerges as the fundamental failure of the 9th Development Plan. In 2014, the 10th Development Plan was put into practice. In this plan, it is aimed to increase the amount of land consolidated to 8 million hectares, the self-sufficiency rate in oilseeds to 45 percent, and to bring 850 thousand hectares of land to water by 2018. However, when we look at today's figures, it is seen that the desired level has not been achieved in all three targets. As of 2019, the total width of consolidated lands in Turkey reached 6.1 million hectares. Between 2014 and 2018, the self-sufficiency rate in oilseeds increased by only 1% to 39%. In the same period, irrigation areas opened to operation remained at 486 thousand hectares. The biggest success of the 10th Plan is that the use of certified seeds exceeds expectations. While the usage rate of certified wheat and barley seeds was expected to increase from 60% to 70%, this rate reached up to 90% in 2018. In 2019, the 11th Development Plan was put into effect. This plan is based on supporting activities aimed at protecting the income of producers engaged in agricultural activities. At the same time, measures were taken in this plan such as increasing the effectiveness of agricultural training and extension activities, expanding the scope of agricultural insurance on the basis of product and risk, and increasing the capacity of producer organizations to provide training and extension services.

A number of agricultural targets have been determined within the framework of this development plan. This situation is revealed in Table 1. Within the framework of this plan, as in other agricultural targets, many deviations have occurred. The reasons for this may be the lack of stability in agricultural policies and the inability to determine exactly which items the budget allocated for agriculture is spent on.

Table 1. Targets of the Agriculture Sector within the Framework of the 11th Development Plan (2019-2023)

	2018	2023
Irrigation rate (%)	64	68
Oilseed Production (Million Tons)	4,02	5,40
Red Meat Production Amount (Million Tons)	1,12	1,70
Net Agricultural Area Open to Irrigation (Million Hectares, Cumulative)	3,34	5,34
Land Consolidation Activity Area (Million Hectares, Cumulative)	8,2	8,5
Production Amount of Medicinal and Aromatic Plants (Thousand Tons)	700	1.200
Cultural Breed Ratio in Cattle (%)	49	56
Land Consolidation Area with Completed Registration Procedures (Million Hectares, Cumulative)	3,6	6,2
Pasture Improvement and Management Area (Thousand Hectares, Cumulative)	68	518
Ratio of Forest Areas to Country Area (%)	29	30

Kaynak: Republic of Turkey Presidency Strategy and Budget Directorate, 11th Development Plan, p.57.

6. Analysis of Turkish Agriculture

The agricultural sector in Turkey has been the fundamental element of the economy from past to present and has effectively continued its duties in the economic and social development of the country until today. Over time, industry, service and trade sectors took their place in the economy. However, although its share in the economy has decreased, the contribution of agricultural sector employment to exports and GDP is considerable. There have been significant changes in agricultural management policies between 1923 and today. In the first years of the Republic, a three-stage program was put into effect to develop agriculture, and efforts were made to develop agricultural policies until 1980. In the early days of the Republic, the share of agriculture in the Turkish economy was around 40%, but its share in the Gross National Product at constant prices decreased to 36% in 1970, 25% in the 1980s, 16% in 1990 and 10.1% in the 2000s. The agricultural sector, which has a strategic importance, has pioneered

important breakthroughs in Turkey, especially in recent years, and accordingly, the Agricultural Law, which forms the basis of the EU Common Agricultural Policy, was enacted in 2006. As of today; the agricultural sector, which accounts for 8.4% of GDP and 25% of employment per capita; In addition to the raw materials and capital it provides to the industrial sector, it continues to be an economic and social sector today, as it concerns the whole country in terms of creating a healthy environment, establishing and maintaining ecological balance, food production and nutrition, and the high values of the population and workforce (Öncü, 2022: 45-46).

Although agricultural policies implemented so far in Turkey have been tried to be strengthened by taking indirect measures such as input support, market price support and loans to producers, these supports are not sufficient to meet the need. When the regulations regarding the agricultural sector are examined, it is seen that they are not limited to national policies only, but the views of international organizations such as the IMF, the World Bank and the World Trade Organization regarding the agricultural sector also have a significant impact on determining policies in this field. Although general economic agreements have not been made with organizations such as the IMF in the last 10 years, the negative effects of the last stand-by agreement made with the IMF in 2005 on national agricultural policies still continue. With this agreement, support for many products has been terminated.

Although there is an agricultural policy determined by law in Turkey, it cannot find a place in practice. In particular, the ruling party that comes to power through elections adopts and implements a policy that is in line with the goals of its party programs. However, even during the same party period, different ministers can implement different policies. Various factors can be effective in determining agricultural policies and policy instruments. In this study, the management of agricultural policies in Turkey from past to present is discussed. It is also understood from the data obtained that the agricultural policies implemented by the governments are unsuccessful. Especially in times of economic crisis, the agricultural sector acts as a buffer against crisis.

Although Turkey is self-sufficient in terms of agricultural production, its agricultural structure draws a contrasting picture to developed countries and the agricultural potential of the country cannot be used at an optimal level. Disorders in agricultural structure; It makes it difficult to integrate agriculture with other sectors and prevents the efficient use of agricultural potential. As a result, it hinders the potential contribution of agriculture to the national economy.

It is seen that countries that attach importance to agricultural activities are industrialized through agriculture. Bringing a new perspective to the policies implemented in the agricultural sector and creating concrete agricultural policies is very important for Turkey. Otherwise; It will be inevitable that the agricultural sector, which remains under free market conditions, will be sacrificed to growth policies.

7. Main Problems of Agricultural Policies in Turkey and Planning Search for Solutions

While Turkey was among the agriculturally self-sufficient countries until the 1980s, as a result of free market policies implemented in the 1980s, it became a net importer. Due to the liberalization in terms of imports, the food monopoly of multinational companies undermined domestic production, which resulted in an increase in the dependence on imports in agricultural products. Mobility from rural areas to cities was witnessed as result of these problems experienced. This situation brought along countless socio-economic problems. Particularly with the implementation of contract production dependent on the food monopolies of multinational companies, the conditions for global exploitation were created. Thus, handovers in the food sector were experienced, and this sector went under the control of domestic and foreign monopolies over time. On the other hand, due to the political developments experienced in the eastern regions and import-oriented policies implemented, the animal husbandry sector was faced with a dissolution process.

It is seen that among the ultimate goals of agriculture policies applied in Turkey are increasing production and productivity, increasing the level of self-sufficiency in terms of agricultural products, development of the urban population, increasing the export of agricultural products, meeting the needs of increasing population, increasing agricultural income and making it sustainable, and ensuring the use of new technologies in agriculture. However, the point we have reached necessitates serious self-criticism in order to realize these ultimate goals determined.

Factors such as economic transformations experienced in the world, economic crises, price fluctuations, fluctuations as a result of devaluation, privatizations, local economic conditions, incorrect policies, developments experienced in the supply and demand balance that negatively affect both producers and consumers, and price increases in fertilizer, gasoline, and other agricultural inputs have an impact on agricultural production. These developments

experienced and ensuing processes also affect Turkey's agricultural policies. In the face of these fluctuations, the government resorts to secondary methods such as discount sales and imports that are both temporary and not targeting the essence of the problem and far from solving the basic problems of people in rural areas and farmers.

The impact of agricultural policies implemented in Turkey is rather limited in terms of increasing productivity. Many changes have been introduced in this regard, but the desired results could not be obtained. The transfers made have a limited effect on the income of the target population, the resources allocated for policies are met from sources other than the budget, the cost of transfers multiplies over the years, and the transfers provided to the producers are made in the form of intervention in input and output prices. Agricultural policies implemented in the global markets, on the other hand, mostly aim at productive policies.

The leading problem among the agricultural policy issues in Turkey is production with deficient capacity. Rather than high subsidy policies implemented, the unjust distribution of income and burden emerges as a significant policy problem. In addition, the lack of priority in the policies implemented, the uncertainty of policy goals, and the announcement of more than one target are among the leading problems regarding agriculture policies.

The high amount of unused agricultural land and the continuous shrinking of agricultural fields are another chronic problem in the agricultural sector. In addition to the shrinkage in arable agricultural fields, not using technology at the desired level in agriculture affects productivity, and this may turn into an economic deficit.

The policies implemented in Turkey to support the agricultural sector also create results that disrupt macroeconomic balances. Particularly, due to the lack of programming the priorities of the expenditures, a long-term prosperity in agriculture cannot be achieved. The main problem regarding agricultural subsidies is that it is not exactly determined what product will be supplied how and at what level (Dogruel, 1993: 2).

Price interventions applied to agricultural products lead to undesired outcomes in the economy. Today, most of the agricultural added value is faced with price intervention. As a result of these interventions, an increase in the stock of certain agricultural products has emerged. Financing the interventions has created inflationary pressure on the economy, and this has become a chronic situation (Bulmus, 1978: 4).

Subsidiary policies implemented to date have been realized in the form of continuing production, guiding it, increasing production, or introducing new products. In order to create a reliable policy in the agricultural economy, policymakers should take into account the fact that households are both producers and consumers.

It cannot be claimed that subsidy policies implemented to date to protect the producers have been successful. These policies have turned out to be policies that bring severe costs to the economy, lead to inflation, guide the producers toward unproductivity, and negatively affect competition in foreign markets. Therefore, the agricultural subsidy policies must gain a sustainable structure by getting the sector to benefit from technological developments to increase the productivity, quality, and demand for the products. Moreover, the possibility of selling the products in local markets in line with market conditions and the announcement of the base price not at the time of harvest but before planting will encourage the farmers to produce the types of the products in demand in high amounts and to increase the quality (Tecer, 2005: 9-11)

While evaluating the agricultural sector, a holistic approach should be adopted in its relationship with other sectors, and the evaluations should be made with a rational approach. In order to develop the agricultural sector and increase its commercial dimension, agricultural infrastructure that requires voluminous agricultural investments and long-term financing should be created. Ensuring the participation of women and young people in agricultural employment and improving technological developments in this process are anticipated. Furthermore, access to insurance and financial tools that cover risk management should be facilitated, and steps should be taken to reduce business costs for small-scale farmers.

Based on all this information, it is possible to solve the problems of hunger and undernutrition in developing and underdeveloped countries provided that the necessary importance is attached to the agriculture sector. All these components will ensure the connection of agriculture with nature through water energy, and land use as well as providing sectoral improvement and protection of nature and natural resources (Akova, 2019: 199).

8. Conclusion and Recommendations

The villagers who were considered the “master of the people” in the early years of the Republic and the agriculture sector that was supported significantly lost this support in the coming years. Although a liberal economy approach was

adopted between 1950 and 1960, state support and protection for agriculture continued, but with the economic decisions of 24 January 1980, the number of agricultural products included in the support purchase program was decreased, and in the ensuing years within the framework of the agreements made with IMF and the World Bank under the administration of Kemal Dervis in 1999, the purchase of agricultural products by the state was terminated, and agricultural products were started to be imported.

In our country, the agricultural sector suffered great losses in terms of foreign trade in the last quarter of the century. Nevertheless, in the Agriculture Law numbered 5488 passed on 25 April 2006, it was ruled that the total resource to be allocated from the budget for agricultural subsidies could not be lower than 1% of the gross domestic product (GDP). There are chronic problems regarding the use and efficiency of the budget allocated for agriculture. At this point, it is highly important to determine and measure how the budget allocated for agriculture is used.

Although the agriculture sector in Turkey has great potential, it has always been a matter of debate that it cannot make use of this potential sufficiently. With the agricultural imports realized in recent periods in Turkey, which used to be known as an agricultural country, a significant increase was caused in expenditures in the economy of the country. As the financial burden brought about by the agriculture sector on the economy leads to severe economic losses, policymakers in the Ministry of Agriculture should assume great responsibility in terms of solving the problems experienced in this sector.

From an agricultural perspective, changes in food prices can be positive for the producers but negative for the consumers. It is necessary to primarily know how producers will be affected by different policies in terms of affecting agricultural outcomes. A policy that will have a positive effect on large-sale farmers can negatively affect small-scale farmers.

The priority agenda items of policymakers and governments should include the protection of domestic farmers, preventing political issues and compromises to the detriment of the country, and encouraging production. It should be noted that in the case of agriculture remaining as a small family business, these businesses will not endure the competitive conditions of the market, and certain encouragements including cooperatives should be provided.

Agricultural subsidies should be channeled in the correct direction. In this context, acting in line with transparency and productivity principles is of critical importance. At this point, cooperatives fulfill a significant function. For

instance, necessary steps needed for the benefit of the whole society should be taken regarding the “Sugar Law”, which is recently one of the debated issues.

The most significant official document regarding agricultural policies in Turkey is the five-year plans. However, the issues written in the five-year plans are mostly unrealized and doomed to stay on paper. One of the reasons for the unstable course of the Turkish agricultural policy is that the country was forced to adjust to the common agricultural policies of the EU in the full membership process. Turkey should stop trying to integrate its agricultural structure and policies to adapt to the agricultural policies of the EU without solving its structural and functional problems.

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CHAPTER XII

THE EFFECTIVENESS OF GOOD GOVERNANCE IN WATER RESOURCES MANAGEMENT IN CREATING PUBLIC VALUE

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1. Introduction

Administration is a concept as old as human history. In the most common sense, where there are two people, there is administration. From past to present, people have debated what the best administration should be like. Now, in many parts of the world, there is a trend that different situations should be managed differently. Administrator now produce policies that take this understanding into account. While making these policies, it has become clear that other actors in society should also participate in the decision-making processes.

Public policies can be described as the attitude, activity or discourse determined by administrators regarding an issue. As a result of these policies, some outputs related to the social field are obtained. These outputs are what the society has; It may affect many values such as justice, faith, solidarity, cooperation, trust and ethics. If these values are affected positively, they gain strength; if they are affected negatively, they begin to erode.

Pressures on water resources are increasing. Global climate change, excessive and unconscious water use, pollutants, population growth, excessive urbanization and wrong water policies cause this situation. In recent years, we have come across good governance principles as a method that has been emphasized both in the field of public administration and water governance. Considering the facts defended by each of the principles of good governance,

we can say that they are public values. In the water governance process, both the transcendent value of water and the relationship between the implementation of good governance principles and processes and public value phenomena constitute the subject of the study.

2. Public Values

There are some facts, elements and principles that keep societies in order and prosperity. We call these values. When values show themselves in the political, administrative, legal and social fields, and if they affect the actors that make up the society and are affected by these actors, they are called public values. Therefore, public value priorities are a result or justification of a public policy, action, discourse or activity made by a state actor. While understanding public value is the first step towards implementation, the second most important step is planning and implementing strategies and actions towards public value (Parlak and Gençosman, 2020: 323). Public value could refer to individually held values that focus on the welfare and just treatment of others (Moore, 2014: 468).

Although value originates from people's expectations and experiences, it does not express the values given by individual individuals, but something greater than the sum of values is meant here (Prebble, 2015: 475). Public value can also be expressed as the value and satisfaction created through services, legal regulations and other activities of governments (Benington, 2005: 15). Social actors need to work together to create public value. In this understanding, public administrators and public service providers are seen as actors who research, determine and create public value together with other actors (Wang and Wang, 2019: 2). The value created here is not business and service-based phenomena created by classical public administration. It is aimed to protect and use public values at all stages encountered during business and service delivery. Therefore, public value is based on the opinions of the public as a result of the services provided by the state and its institutions (Prebble, 2015: 477).

Public value, which benefits individuals and society, is related to the implementation of public policies as well as their content (Benington, 2005). As can be understood from here, the first basic thing required to create public value is to define public value or to have a mindset about what is intended (Collins, 2007: 175). According to the understanding of public value, the main goal of public administrators is to create public value with appropriate democratic and legal authority (Prebble, 2012: 401). While the services, laws, actions and regulations produced by the state can all create public value, the existence

of public value depends on the compliance of all actors in society with them (Mulgan and Muers, 2002). However, results, trust and services are three basic and founding elements that are effective in establishing public value and are independent sources of public value (Kelly, 2002: 11). For example, tax amnesty can be seen as an economic relief for citizens and the private sector, or as a means of avoiding taxes. Here, the situation of people who pay their taxes should be specifically considered. Tax amnesties must be prevented from causing people to lose faith in the law. On the other hand, we may enter a process in which trust in law and the state is eroded and the public value that corresponds to this situation is eroded.

Public value attaches importance not only to results and outputs but also to inputs and processes (Alford and Hughes, 2008: 132). There is a similar situation in organizations. Here it is necessary to draw attention to the importance of the culture of the organization. Organizational culture is an important criterion that shows which services are effective in creating or destroying public value (Kelly, 2002: 13). Public value is a concept that has the capacity to help organizations achieve better harmony with their internal and external environment (Meynhardt et al., 2017: 143).

The traditional approach to analyzing public service delivery is to learn how the public reacts to policies and to measure who benefits from different public services and programs (Besley and Ghatak, 2007: 129). Public value theory has challenged orthodox management thought on three main issues (Benington and Moore, 2011: 4):

The first concerns the role of the state and governments in society. According to Moore, the state does not just set rules and monitor whether the rules are implemented. At the same time, the state follows all the events from the setting of the rules to the implementation process. The decisions made during this process contribute to the creation of public value.

Secondly, the main issue here is about the role of public administrators. Moore states that public personnel are not people who only deal with office work and carry out the orders of their superiors. According to Moore, public personnel is an active person who establishes relationships with both the internal and external environment. Therefore, the outputs of their activities are important to affect public value.

Third, this challenge involves the techniques needed by public managers. According to Moore, public administrators do not carry out a static task. Public administrators have the technical and tactical knowledge to activate previously

determined strategies in many fields from politics to economy. These features make them effective in creating public value.

Facts of public value are interconnected. They can affect each other positively or negatively. Therefore, actions, practices and discourses of public value are eroded and deteriorated; It may cause situations that previously seemed out of value to be perceived as normal and gain a place in society as a public value (Firidin, 2023: 137).

3. Good Governance Principles As Public Values

Governance is one of the approaches that develop depending on neoliberalism and new right ideologies (Doğan, 2023: 9). While administration is a structure carried out with the norms of traditional administration functions, this is not a new governance activity characterized by multi-layered and collaborative work (Lockwood, 2010: 754). While an administration mentality based on a single truth was emphasized in classical administration, the things presented as the only truth have been changed many times, and efforts to find the right organization continue even today (Drucker, 2014: 17). Governance is the decision-making processes that social actors carry out on an issue by complying with certain principles. The aim of the governance process is to bring together actors with different expectations and perspectives in society to achieve the common good as much as possible. Governance is a concept that explains the processes that need to be carried out when making a decision on an issue, within the framework of actors and principles. The first use of the concept in the European Union was “subsidiarity” and in the World Bank it was “good governance”.

Governance has brought about some changes in the structure and functioning of the state as well as in the effectiveness of the private sector. In general, while the private sector was both steering and rowing in the period from the 1800s to 1930, it was the state that was both steering and rowing during the welfare state period until the 1940s and 1970s, and after the 1980s. It can be said that we are faced with a period where the state is the one holding the helm and the private sector is the rower (Faur, 2005: 16). After 1990, with the influence of globalization and economic conjuncture, it entered the literature; Concepts such as tolerance in management, stakeholder society, multi-actor society and compromise have come to the fore in the field of application within management science (Güler, 2003: 93). The emergence of governance can be seen as the result of a bureaucratic structure and political culture that may not be able to keep up with the sudden and rapid changes brought about by globalization (Bayramoğlu, 2002: 114).

Public policies pursued to create public value can be used as an alternative method to solve problems (O'flynn, 2007). Good governance principles can be guiding in the decision-making processes of actors in society. Good governance principles will contribute to trust and cooperation between actors participating in the governance process. Public value is not created by the public sector alone; public value outcomes can be generated by the private sector, the voluntary sector and informal community organizations, as well as by governments (Benington, 2009: 238). This contribution can turn into public value output. In fact, each of the principles of good governance is a public value.

Participation: Participation can be considered as the starting principle of the governance process. Because the part where the actors who will take part in the decision-making processes communicate with each other is the participation process. It was intended to emphasize that participation should be carried out with representatives from different segments of the society and that appropriate conditions should be provided at every stage of the management process (Crompton et al, 1981:68).

Rule of Law: The functionality of legal rules and the establishment of justice are one of the most important facts in the structure of society and state. As one of the principles of good governance in the governance process, the rule of law has the nature of public value. People living in states where the rule of law exists and therefore the rules of law are strong have a strong belief in the correctness of the decisions taken or activities carried out (Johnston, 2015: 4). It is important for the rules of behavior valid in a society to be based on the system of values adopted by the dominant will in that society in terms of ensuring legal order (Sargin, 2009). Although public value is not to be reduced to a legislative frame, the public sector is special in that its "search" is bound by the legal obligation, intentionally not benefiting only specific individuals or groups but the public (Meynhardt, 2009: 213).

Accountability and Responsiveness: Accountability and responsiveness are principles that ensure communication and trust between actors. These principles are complementary to each other. It increases the ability to obtain information regarding the activities to be carried out in decision-making processes and, moreover, the sense of social trust. Accountability is of critical importance for the legitimacy of the work of both the state, the private sector and NGOs, and it will be easier for society to accept the decisions taken thanks to more information transfer in the multi-actor platforms where they will be together (Dore and Lebel, 2010: 124). Public value efforts to ensure public order have

constructed accountability as complex and multi-actor (Uzun and Demir, 2019). These principles are increasing the role and effectiveness of NGOs in decision-making processes and are functional in meeting the expectations of NGOs on water management (Susskind, 2013: 669).

Transparency: The principle of transparency means that the activities undertaken in the governance process are open to observation and audit. In this way, all phases of the activity will increase the sense of trust among the actors. Transparency allows the public to whom services or products are offered to evaluate the performance of those undertaking the activity. Therefore, it also serves as a transparency control mechanism.

Apart from these principles, which are the principles of good governance; There are many supporting principles such as effectiveness, sincerity and solution-oriented. As stated, each of the principles of good governance is a public value in itself. If these principles are implemented, the values that have an impact on the formation of these principles will be protected and these values will also positively affect other public values to which they are linked.

4. Water Resources Management and Good Governance

Water resources are under serious threat today. Excessive and unconscious use of water, pollutants, excessive population density and global climate change put pressure on water resources. This makes water resources management a more vital issue. Today, Water Framework Directives, developed for the protection of water resources and adopted by many organizations, especially the European Union, are being prepared. These directives emphasize that water should be handled in a holistic manner. However, what needs to be considered here is that all segments of society should take responsibility in water management. It is beneficial to implement the management of water resources within the framework of governance principles. Therefore, in addition to policies aimed at a solution to the consequences of the problems arising in water resources management, there is also a need for information and communication channels that will fully mobilize social actors towards the source of the problems.

According to the Sustainable Water Future programme, it is emphasized that the solution to water resources will be solved with a water governance approach supported by good governance principles, rather than water management. The recommendations developed by the Sustainable Water Future program for the use of water resources are as follows (Water Future Programme, 2023):

- Conduct basic research on water governance theories and practice addressing key water governance challenges;
- Synthesise insights related to water governance from the various working groups;
- Develop evidence-based governance indicators and pathways following a global comparative, synthesising, integrative approach to identify gaps in water governance (particularly develop governance indicators, assess and compare policies towards SDGs implementation);
- Nurture a global community of water governance scholars including early career researchers; and
- Develop a global educational course on water governance for different stakeholders.

At this point, the need for water governance principles and processes has become more evident, as water management has begun to be perceived as a management problem.

Water management is of vital importance due to the increasing pressure on water resources and the risk of reaching levels that threaten living life. However, in order to reduce this pressure on water resources or to combat the problems, not only the state actor, but also other actors in society and international efforts are needed. Protecting and using water resources requires taking precautions, strengthening coordination and ensuring cooperation in a number of areas from industry to domestic use.

Management; It is the mobilization of all resources in an institution, organization or organization in a coordinated manner towards a purpose. In this respect, management can be defined as the process of decision-making and implementation on previously determined issues in order to achieve a specific goal. Management of water resources is related to many material and spiritual values, considering the value of water.

Water management; It is defined as the planned development, distribution and use of water resources (Aküzüm et al, 2010: 699). Water resources management is among the welfare indicators for a country (Draper, at al, 2003: 155). In the 21st century, the effects of global warming and increased water use due to urbanization and industrialization have brought the importance of water to a different dimension (Bulut and Birben, 2019: 231). What makes water especially different from many other resources in the world is that it is one of the few resources that are indispensable and non-substitutable for life on earth.

It is essential not only for agriculture, industry and economic growth, but also it is the most important component of the environment, with significant impact on health and nature conservation (Cartzoulakis and Bertaki, 2015: 889). Therefore, every step to be taken and every activity to be carried out in water resources management will have reflections on different aspects and different actors of the social field. self-development of the citizen, citizen involvement, protection of the rights of the individual, justice, benevolence, the voice of the future, and equity (Jorgensen and Bozeman, 2007: 262). In order for these reflections to find a response in society, good governance principles and governance process are needed.

Considering all these policies and steps to be taken, we come across the idea that water resources management should be ensured through water governance. Water governance; It means that actors are active in the decision-making and implementation processes in the observation of the water cycle, protection, management and use of water resources.

5. Public Value Dimension of Water Governance

Water is a right and value. The most important feature that makes water valuable is that it has a vital value. Therefore, the fact that water has such an important value will mean that the processes and results of water management also correspond to a social value. This value is related to the value of water as well as the effectiveness of the relationship between actors in society in the water management process.

Good governance principles adapted to the issue of water resources will contribute to values such as justice, transparency, participation and social benefit. The water governance capacity that one has or will have will affect the success of public policies regarding water resources (Feingold, at al: 2018: 11). Water governance allows citizens and private and public institutions to work together, and as a result, to take responsibility and own the process. The point that should be emphasized here is that social unity and trust are values. This value emerges in water resources management within the governance process. Moreover, it is inevitable that the policies to be implemented on a vital issue such as water will affect public value positively or negatively.

Values such as ethics and legitimacy are also values defended by governance. Social ownership is as important as the existence of an activity or purpose of public value. This goal means more than the individual preferences of citizens or public service producers (Stoker, 2006: 42). A collective effort

is needed to create value. Value is formed within a negotiation process and is therefore variable (Erten, 2021: 120).

One of the important functions of governance is to contribute to the strengthening of democracy and ensuring social peace and justice (Doğan, 2023: 12). The success and effectiveness of water governance depends on actors and practices (Tortajada, 2010: 312). Therefore, the meaning of public value is formed in the process through social cooperation, repetition and verification (Erten, 2021: 108). With this feature, water governance can make many values effective and active in society. However, water governance processes can also be a public value process in themselves. Therefore, each of the principles to be implemented in the water governance process will be a public value.

OECD emphasizes the need to identify deficiencies in water governance and show determination to close these deficiencies and lists the principles of water governance as follows;

Table 1: OECD Water Governance Principles

Trust and commitment	Capacity	Clearly Defined Tasks	Stakeholder Engagement	Administrative Framework
Effective	Policy Compliance	Monitoring and Evaluation	Integration and Transparency	Financing
Efficient	Suitable Scales for Basin System	Expectations and demands from users	innovative governance	Data and Information

Source: OECD, 2015: 4.

OECD evaluates water governance principles within a number of basic ideas. Some of these basic ideas are as follows (OECD: 2015: 8):

- Su yönetiřimi, genel su politikasının önemli bir bileřenidir; genel iyi yönetiřim ilkeleri su sektörü için de geçerlidir. Su yönetiřiminden iyi sonuçlar elde etmek su politikası içinde yer alan diđer alanların geliřmesine de baęlıdır.

- Along with the legal, administrative and cultural structures between countries, climatic, geographical and economic conditions also cause water problems and solution methods to differ. For this reason, a uniform political solution method that can be used to combat water problems and is valid all over the world is not possible.

- Effective, efficient and inclusive water governance; It contributes to the design and implementation of strong public policies in collaboration with

appropriate stakeholders at all management levels, on the basis of shared responsibilities to counter current and future water threats.

As can be understood, OECD stated that good governance principles will be valid in water governance. The importance of social actors is emphasized. It has been stated that many actors in society have different expectations and demands. Attention has also been drawn to the relationship between water governance and some social values.

When implementing water governance, attention should be paid to the relations between actors and the principles of good governance that guide the process. Good governance principles, which also apply to water governance, can contribute to social acceptance and public order.

Participation in decision-making processes is extremely important for the effective and fair use of water resources. Thanks to participation in decision-making processes regarding the use and management of water, which is of vital importance for everyone in the water governance process; Different actors of the society can benefit from water, information can be shared about the usage areas of water, different demands and expectations, and suggestions for efficient and effective use of water resources can be made. All these reasons will encourage society to act together. It will create synergy in society. It will strengthen the sense of empathy between individuals.

The rule of law and justice are important for actors in water governance, as in all areas of life. Justice is as important as the fair sharing of water resources, as well as the value that the application of legal rules will create in society in the process. If the rule of law is applied as a principle of governance in the management of water resources, society will respect the rules of law. Trust will be established more quickly in relations between social actors. An actor involved in the water governance process will have to fulfill its own responsibilities, and other actors will not have doubts about whether they fulfill their responsibilities.

Transparency is a principle of water governance as well as a phenomenon that has an impact on ensuring social welfare and peace. Therefore, it supports facts of public value. In water governance, decision-making processes, activities and transactions must be open to everyone, without causing suspicion. The principle of transparency plays an important role in establishing the trust that will enable social actors to act together, and the results of the country of transparency applied in the water governance process will be reflected in other activities that social actors will carry out together as positive outcomes.

Accountability and responsiveness are vitally important, as is the importance of mutual communication in water governance and other governance processes. However, this communication must be done with a sense of responsibility. This responsibility relationship takes place in line with the principles of accountability and responsiveness. The ability of an actor participating in water governance to obtain information about the activities of other actors and for each actor to fulfill their responsibilities will have a positive impact on values such as belonging, trust, respect for rules and integrity.

It can be said that the adoption of water governance principles in water resources management will serve the actors involved in this process to protect public values. Since both the activities of governments, non-governmental organizations, the private sector and other stakeholders and their relations with each other are public values, the positive and negative outcomes to be obtained from these will affect the phenomena that are public values.

6. Conclusion

Water is an extremely important resource for life on Earth. But water resources are under threat. The need for effective water resources management; It is more important today due to global climate change, population growth, unplanned urbanization and other pollutants. Therefore, reducing the pressure on water resources can be resolved as an ethical issue in line with water governance principles and processes.

The consequences of the relationships between actors within the water governance process are a matter of ethical values in themselves. In fact, while the water problem, which causes actors to come together, concerns public values because it is a problem that needs to be solved; How much social actors comply with the principles they follow during the process will also affect the protection and construction of public values.

Each of the good governance principles valid in water governance corresponds to a public value phenomenon. Successful implementation of the principles within this process will protect the relevant public value. Otherwise, both the relevant public value phenomenon will be damaged and this situation may have a chain effect and be negatively reflected on other phenomena and situations.

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CHAPTER XIII

ENVIRONMENTAL MANAGEMENT

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1. Introduction

Humanity is inherently connected to and dependent on nature in all its existence. From ancient times to the Enlightenment Period, humans, as part of nature, transitioned to an era where reason was emphasized with the Renaissance and Reformation Age, separating themselves from nature. In the Reformation century, the idea emerged that nature could be mechanized, and it could be dominated or seized by using reason. Throughout these periods, the prevailing belief was that human despair and ignorance in the face of nature could be overcome with science and technology developed through reason.

The transition to the Industrial Revolution marked a significant starting point in these matters. This era witnessed the entry of machines into human life, especially the rapid development of technology, and from the 19th century onwards, the perception that all resources of nature could be inexhaustibly exploited with the accompaniment of science to technology prevailed. The 19th and 20th centuries saw extraordinary developments in science and technology. By the 21st century, a period dominated by digital technologies had begun. However, despite all awareness and warnings, destruction and annihilation continue unabated. Consequently, there has been a transition to times when natural resources are rapidly depleted, forests are destroyed, species become extinct, and pollution of land, air, and water reaches extraordinary proportions. This ongoing situation has reached dangerously risky dimensions for humanity, especially with the consequences of climate change resulting from global warming.

It must be acknowledged that everything related to the environment is crucial for humanity. Developed policies, environmental research, thought

systems, and management systems are of great importance. Here, information will be provided about the environmental management systems that states largely implement similarly. States have the responsibility to determine rules within the framework of laws and regulations regarding environmental management, and with institutions and organizations, they are responsible for implementing, supervising, supporting with research, and achieving the best within their borders according to the new emerging situations. Although all these falls within the framework of public administration practices, there is another area that states are also obliged to carry out, which is within the scope of international relations, although it may seem different, where they must harmoniously carry out environmental management with other states. Due to the borderless nature of the environment and environmental issues, practices carried out by states in public administration regarding the environment also limit environmental practices.

In general, when decisions are made regarding environmental issues, the most commonly used concept is the public interest. In this context, as Ruşen Keleş (1996:73) also stated, “As natural resources are increasingly destroyed, values centered on living beings are corrupted, and the violation of human rights becomes the focus of the whole world, the concept of public interest has become even more important... Considering the global consequences of this situation, there is a need for a new definition of the public beyond the entities called state and nation-state” (Simonis, 2007:393). Therefore, especially in environmental issues, there is a significant need to redefine the concept of public interest. As long as states continue to make decisions in favor of development in a crucial issue that is also environmentally important, this important need will continue. Also, the borderless nature of environmental issues arises here as well. In summary, the question of “whose public interest and whose not” is very important in environmental issues in international relations. For example, in the case of “pollution havens,” developed countries did not get rid of environmental problems by exporting heavy industrial factories, especially with the promise of development, to less developed countries.

On the contrary, they exported pollution and problems in every sense. In this way, the citizens of developed countries allegedly eliminated pollution in terms of “public interest” and public health. Citizens of less developed countries also became factory owners and job owners again in the name of “public interest.” However, nothing else has been done here except expanding the problem area from an environmental perspective.

2. Concept of Environment and Environmental Issues

Although the concept of the environment came to the world's agenda in the 1970s, environmental issues have roots in much earlier times. Over time, environmental problems have generally evolved from being local or regional to national and eventually reaching a global level, dating back to ancient times. Therefore, the 1970s marked the years when these issues, if not fully global, acquired an international character. Additionally, it is observed that the concept of the environment is not only about nature or the destruction and pollution of nature. Within this framework, the definition of the concept has both broadened and deepened over time in terms of its content.

2.1. Definition of the Concept of Environment

While the concept of the environment is generally used to signify anything that surrounds or encompasses, in the Urban Planning Terms Dictionary, the environment is defined as “all the biological, physical, climatic, and social factors that affect and shape a person's material and spiritual development and determine their life” (Keleş, 1998:33). The broadest definition of the concept of the environment is found in the Republic of Turkey's Environmental Law No. 2872. Here, the environment is expressed as the “biological, physical, social, economic, and cultural environment in which living beings maintain their relationships throughout their lives and interact mutually” (URL-1). Thus, when referring to the concept of the environment, it is evident that it encompasses not only nature and natural resources but also the entirety of both living and non-living entities.

The concept of the environment is examined within the framework of two main elements: natural and artificial environments. The natural environment is an entity that comprehensively covers the known nature and natural resources. The artificial environment, on the other hand, is an entity that encompasses all things created entirely by human hands, including immovable cultural assets, cities, and everything built within cities. Especially within the scope of environmental policies, cultural assets are recognized as the “common heritage of humanity” (Keleş, 2013:24). In addition to this, social, political, and economic actions related to humans are closely interconnected with each other, and since they are also in direct relationship with nature and natural resources, it is more accurate to speak of a comprehensive concept of the environment and understand a whole when referring to the environment.

2.2. Environmental Issues

Environmental issues can be defined as the impacts of the artificial environment created by humans on the natural environment, problems existing in the artificial environment, and problems observed in both artificial and natural environments. The Enlightenment's expectations for the world or the general design of the world have significantly increased the problems faced by humanity. The emergence of problems in human-environment relationships is due to human-made practices disrupting the natural relationship system and its balances (Görmez, 2018:4-5). Nature has its own balance. Currently, this balance, which started to be disrupted visibly with the Industrial Revolution that began in the 15th century and continued through the Enlightenment Period, is due to the prevailing idea of overcoming nature, dealing with nature, dominating nature, or owning nature, which emerged as a result of the mental transformation that humans, who were part of nature in ancient times, underwent. Consequently, environmental problems such as pollution and depletion of resources have become evident. In short, at the core of environmental problems is the negative transformation and progression of the human-environment relationship. Industrialization, rapid losses of plant and animal species, urbanization, population growth, pollution of air, water, and soil, and the decline in soil quality for various reasons, loss of forests, unemployment, hunger, thirst, desertification, and environmental migrations are among the prominent environmental problems worldwide.

While the awareness of environmental problems internationally is commonly attributed to the 1970s, significant environmental events are known to have occurred much earlier. One notable example is the cholera epidemic in Europe in 1832, where 100,000 people died due to water shortages and lack of hygiene. The dropping of atomic bombs on Hiroshima and Nagasaki on August 6-9, 1945, changed many things in the world. The world became acquainted with the destructive effects of radioactivity. The effects of not only people living in Japan but also the geography in the vast hinterland of Japan were affected by the radioactivity spread by winds over the years. Additionally, in the 1950s, 4,000 people lost their lives in London due to air pollution.

The consequences of the Chernobyl Nuclear Power Plant accident in 1986 are still ongoing. Between 1990 and 2005, various natural events such as floods, landslides, forest fires, storms, and earthquakes occurred due to environmental degradation (Keleş, 2013:25). The Fukushima Nuclear Power Plant accident in 2011 continued to cause problems depending on the direction of the wind after the

earthquake and tsunami. In summary, it is not possible to restrict any malfunction or accident in a nuclear power plant only locally. Moreover, not only problems related to radioactivity but also many other issues can be internationalized. Especially in the last decade, the most significant global environmental problem is climate change due to global warming caused by greenhouse gases. Primarily, fossil fuels, methane, and sulfur compounds accumulate in the atmosphere as greenhouse gases, creating a greenhouse effect. This prevents the return of solar radiation, increasing the Earth's temperature. Rising temperatures result in the melting of glaciers, forest fires, floods, and many natural events. As a result, climate changes occur, disrupting the balance of the entire world. Therefore, the emergence of events that are increasingly prevalent due to reasons such as the rise of consumer society and technological development also leads environmental problems to become global environmental problems at all levels.

In conclusion, environmental issues depict a broad perspective. Fundamentally, the surpassing of nature's self-renewal rate and, similarly, the surpassing of nature's carrying capacity led to thousands of problems, such as lakes drying up, streams and underground waters disappearing, desertification, forest fires, and the extinction of plant and animal species. These problems, in turn, result in global-level issues affecting humanity, such as hunger, thirst, environmental migrations, and unemployment.

2.3. The Concept of Environment and the International Dimension of Environmental Issues

Environmental issues make the borders of nation-states porous. While nation-states determine policies within their borders under the framework of sovereignty, the situation is different concerning environmental issues. In this context, it is known that the emergence and shaping of international environmental policies occurred in four historical periods. According to this (Kaplan, 1999:108):

- Up until 1960, environmental protection efforts were mainly applied in limited areas such as the preservation of nature, forest assets, and the protection of animals and plants.
- Between 1960 and 1970, discussions and research on environmental issues were intensified in the intellectual field. Reports like "The Limits to Growth" emerged during this period.

- Between 1970 and 1980, national environmental protection laws and organizations were established. Especially after the 1972 Stockholm Environmental Conference, environmental ministries were established in many countries.

- From the early 1980s onwards, there has been an increase in international cooperation efforts for environmental protection (Kaplan, 1999:108).

Since then, it is known that environmental problems have increased over time, and as a result, significant efforts have been made at the international level, primarily by the United Nations, to develop the field of global environmental policies. It should be emphasized that the borderlessness of environmental problems is their most important characteristic and challenge.

Although environmental degradation has increased after the Industrial Revolution, it is evident that these problems have been accumulating and persisting since the beginning of humanity. While environmental degradation was mostly at the local level, with advancements in science, technology, and industrialization, it started to occur regionally, nationally, internationally, and globally over time due to urbanization, population growth, and the emergence of a consumer society. In this context, global environmental problems can be attributed to the exporting of these problems by the country creating the environmental problem. In summary, problems that initially started at the local level are expanding their coverage, enveloping the entire world.

It is certain that environmental problems cannot be the problem of a single country and will affect at least neighboring countries in its region. Pollution can spread between countries through water or air, and the widespread dissemination of negative outcomes resulting from natural and cultural events is inevitable. Therefore, due to the international nature of environmental problems, international cooperation is necessary for their resolution (Keleş, 2013:121). Particularly, international cooperation is crucial for global environmental problems, and it is based on two fundamental principles: interdependence and solidarity. Interdependence and solidarity created by development and environmental issues have provided a new dimension and meaning to international policies, playing a decisive role in political and economic relations in international relations (Kaplan, 1999:8). The necessity of interdependence and solidarity for the solution of environmental problems is emphasized, and the United Nations Treaty, in its Article 74, states: "Members of the Organization agree that their policy should be based on the principle of good neighborliness in

the political, economic, and commercial fields, both in their home countries and in countries within the scope of this section, with due regard to the interests and welfare of the world” (URL-2), emphasizing cooperation within the framework of the “good neighbor” principles. Many other international agreements also highlight the need to approach all issues, including environmental problems, peacefully and cooperatively within the framework of interdependence and solidarity (Keleş, 2013:121).

In conclusion, due to the international nature of the environment, the understanding of environmental management used in national environmental administrations should also have an international character. In this context, the concept of public interest, which is the basis for environmental management, should be emphasized.

3. The Concept of Public Interest and Environmental Management

In public law, the principle that “the law itself is in the public interest” has been accepted since the process that progressed with the 1789 French Revolution. Within this framework, it is stated that every law adopted by legislative bodies is enacted in the public interest and that every law is in itself the public interest (Akillioğlu, 1988:12). Environmental management is comprised of two strong and extensive scientific fields, namely the environment and management. At the same time, the concept of environmental management represents an institutional structure determined by each state according to its own governance system. For states, the concept of “public interest” is central to environmental management.

3.1. The Concept of Public Interest

With the 1789 French Revolution, the origin of the concept of “common good” emerged, and due to being perceived as metaphysical and irrational, it transitioned to the more realistic and rational concept of “public interest.” The concept of public interest is quite widespread and comprehensive; it can conflict with individual interest but is compatible with societal interest (Akillioğlu, 1988:18-19). However, individual interest is an inseparable part of public interest. An individual can relinquish a part of something that benefits them for the sake of public interest. In summary, individual benefit is a significant part of societal interest, and the concept of public interest encompasses all of these (Şahin, 2022:17). Due to the ambiguity of the concept of public interest, defining what is in the public interest or not is also challenging. Especially in

the face of the uncertainty of the future, the ambiguity of the concept of public interest becomes more prominent here (Şahin, 2022:19).

In the field of administrative law, especially in administrative law, the concept of public interest plays a functional role and also demonstrates its determinative role in the implementation of the law-making process. In administrative justice, it is generally accepted that “every administrative act has a purpose, and that purpose is the public interest.” If the purpose is specifically stated in the prepared law, “private purpose” is mentioned. In this case, the issue of public interest is generally left to the administration. This is expressed with the concept of “discretionary power,” which is one of the fundamental concepts of administrative law. Some views equate discretionary power with administration. Decisions taken by administrations, especially in economic and environmental matters, are considered as discretionary powers. Also, it is not possible to make decisions that contradict discretionary powers. However, if such a decision is made, the necessity of conducting a “reasonableness review” arises. In this case, two methods of realizing public interest, discretionary power, and reasonableness are accepted (Akillıoğlu, 1988:21).

It is known that the concept of public interest is both one of the general principles of law and one of the fundamental principles of public law. Superior public interest is a measure based on the superiority of one public interest over another (Şahin, 2022:108). In conclusion, considering the importance of the environmental issue, the concept of superior public interest is mentioned. In practice, in environmental matters, the will used by the legislature, executive, and judiciary is entirely within the framework of superior public interest. In practice, in environmental matters, international agreements, public interest, and the limits set by public health are used within the framework of superior public interest.

3.2. Environmental Management

According to the Public Administration Dictionary, environmental management is defined as “the implementation of policies and strategies determined at the local, regional, national, and global levels to ensure the sustainable use and development of natural and artificial environmental elements using administrative, technical, legal, political, economic, social, and cultural tools” (Parlak, 2011:140). Another definition describes it as the “decision-making and implementation process directed towards regulating and guiding human impacts that may have destructive effects on the environment.” Environmental management should be seen as a tool that aims to integrate planning, decision-

making, policy setting, and ultimately implementation processes with societal development, with the continuous and balanced connection between the economy and the environment (Keleş and Ertan, 2002:253). Another definition describes it as the “use of natural resources such as air, water, and soil through environmentally acceptable practices” (Keleş, 2013:235).

Environmental management has a broad meaning in terms of content. In terms of content (Keleş and Ertan, 1999:254-255):

- It has an interdisciplinary nature.
- It is related to the planning, administration, and guidance of human-induced actions regarding environmental pollution or degradation.
- The primary goal of environmental management is to achieve sustainable development.
- It aims to improve the quality of life.
- It prefers a “preventive approach” to prevent problems before they arise rather than a “corrective approach” to fixing existing issues.
- It adopts the planning and guidance of short and long-term actions as a principle (Keleş and Ertan, 1999:254-255).

As for the purpose of environmental management, it expresses itself in the sense of achieving sustainable development. Emphasizing the necessity of considering certain methods to achieve the goal of environmental management, methods include (Barrows, 1998:18):

- Elimination of existing environmental pollution,
- Generation of solutions to prevent environmental problems from arising,
- Identification of the dimensions of environmental pollution resulting from any action,
- Establishment of institutions and organizations that will enable the improvement and control of the environment, including environmental research,
- Informing institutions and individuals within the scope of their duties about the risks that may pollute the environment,
- Development of new procedures to detect dangers in advance,
- Improvement of natural resources and ensuring their sustainability,
- Improvement of the quality of life of individuals and societies,
- Development of technology for the prevention or improvement of environmental pollution and degradation, and innovation in existing technologies.

The concept of environmental management refers to the establishment of an effective communication, planning, coordination, and control system in both the public and private sectors for the healthy and balanced living environment of all living beings in the world, the conservation, development, and utilization of natural resources. (Keleş and Hamamcı, 1998:259). In this context, to manage the concept of the environment within the legal and institutional framework by states, it is necessary to establish an institutional structure. The aim here is (Keleş, 2013:235):

- To prevent possible harm to the environment or, if harm has already been caused, to eliminate this harm.
- To encourage research on the environment, support those involved in the management and control process.
- To warn relevant institutions and citizens in the face of situations arising from environmental issues.
- To improve and elevate the quality of life of individuals and societies.
- To develop behavioral patterns, consumption habits, and ethical values of individuals regarding the environment.

Therefore, environmental management has two primary elements. Emerging from the combination of the concepts of the environment and management, environmental management encompasses all institutions and organizations, including all administrative units from top to bottom between central administration and local administration within states, foundations and associations, non-governmental organizations, public organizations in the form of professional organizations (Keleş, 2013:236).

In the world, states generally approach environmental management in three ways. These are:

- 1-The presence of an independent Ministry of Environment within the systems of each country,
- 2-The combination and joint operation of the Ministry of Environment with another ministry responsible for another subject,
- 3-The centralization of all actions related to the environment in a single public institution.

For example, the first and second groups can be exemplified by many countries, including the Republic of Turkey. For instance, in the Netherlands,

there is the Ministry of Public Health and Environmental Affairs, in Austria, the Ministry of Health and Environmental Protection, in Italy, the Ministry of Culture and Environment, and in the United Kingdom, only the Ministry of Environment. Examples falling into the third group include the Environmental Protection Agency in the United States, the Environmental Agency in Japan, and the Federal Environment Office in Switzerland (Keleş, 2013:236-237) (Keleş and Hamamcı, 1998:260).

3.3. Environmental Management in the Republic of Turkey¹

In the 1970s, like many other countries, awareness of environmental issues began to develop in the Republic of Turkey. Various ministries were acting at the level of implementing laws and regulations related to the environment according to their areas of interest.

- The first organization regarding the environment was realized with the establishment of the “Coordination Board for Environmental Issues” by the Council of Ministers Decision dated February 12, 1973, and numbered 7/5836. The name of this board was changed to the “Environmental Coordination Board” by the Council of Ministers Decision dated April 16, 1974, and numbered 7/8329.

- To determine policies for the protection of the environment, to implement plans and projects, and to ensure coordination among all relevant ministries, the “Prime Ministry Environmental Organization” was established by the Council of Ministers Decision dated July 27, 1978, and numbered 7/16041.

- The Prime Ministry Undersecretariat for the Environment was established by the Decree with the Force of Law dated August 12, 1978, and numbered 7/16375.

- The Environmental Law No. 2872, dated August 9, 1983, was enacted to address environmental issues as a whole.

- By the Decree with the Force of Law No. 222 dated June 8, 1984, the Undersecretariat for the Environment was transformed into the General Directorate of Environment, still affiliated with the Prime Ministry, and tasked with the implementation of the Environmental Law.

¹ This title is taken from the section titled “Our History” on the website of the Ministry of Environment, Urbanization, and Climate Change, as well as from the relevant Official Gazettes and the works of Ruşen Keleş and Can Hamamcı, titled “Environmental Science.”.

- By the Decree with the Force of Law No. 389 dated November 9, 1989, the General Directorate of Environment was re-transformed into the Undersecretariat for the Environment.

- By the Decree with the Force of Law No. 383 dated October 19, 1989, the “Presidency of the Special Environmental Protection Agency” affiliated with the Prime Ministry was established.

- On August 9, 1991, the Ministry of Environment was established, and the Undersecretariat for the Environment was abolished.

- The Ministry of Environment and Forestry was established by Law No. 4856 dated May 1, 2003.

- The Ministry of Environment and Urbanization was established by the Decree with the Force of Law No. 644 published in the Official Gazette on July 4, 2011, and came into effect (the Ministry of Environment and Forestry was abolished).

- By the decree published in the Official Gazette No. 27988 dated July 8, 2011, the Presidency of the Special Environmental Protection Agency was affiliated with the Ministry of Environment and Urbanization.

- With the Decree with the Force of Law No. 648 published in the Official Gazette No. 28028 dated August 17, 2011, the abolished Ministry of Environment and Forestry and the abolished Ministry of Public Works and Settlement were brought together under a single roof, strengthening the structure of the Ministry of Environment and Urbanization. In the same Decree with the Force of Law, the Presidency of the Special Environmental Protection Agency was closed, and the General Directorate for the Protection of Natural Assets was established.

- With the transition to the Presidential Government System on July 10, 2018, the Mass Housing Administration, Real Estate Participation Bank, General Directorate of National Real Estate, and the newly established Directorate General for Local Governments were affiliated with the Ministry of Environment and Urbanization.

- With the Presidential Decree No. 85 published in the Official Gazette dated October 29, 2021, and numbered 31643, the Ministry of Environment and Urbanization was reorganized as the Ministry of Environment, Urbanization, and Climate Change (Keleş and Hamamcı, 1998:261; URL – 3; URL - 4).

4. Results and Evaluation

When we look at the history of humanity, it is clear that with the transformative and transformative effect on the environment, humans play a

crucial role in the creation of environmental problems. This role has become more pronounced since the transition of humans to settled life. Subsequently, to strengthen the cognitive transformation of humans, it was necessary for the mechanistic worldview with the Industrial Revolution to become the mainstream thought system. The most significant turning point in human-nature relations is here. The fundamental stress point is the choices caused by the multidimensional relationship between the environment and economic interests (Kuran, 2022:1591). In addition, the boundaryless nature of environmental issues creates significant challenges, as every environmental problem can easily be transferred to the international arena. It is known that nation-states determine and manage their environmental policies and institutions based on their own systems. The general overview of such environmental management systems is outlined here, attempting to be explained.

As an example, in this section, the historical development of environmental management in the Republic of Turkey is briefly discussed in terms of headings. As mentioned by Nesrin Algan, except for changes in laws since 1973, 8 significant changes have been made in the institutional field. This situation makes it impossible to implement long-term environmental policies in a regular and balanced manner. Therefore, expectations in terms of efficiency and effectiveness in environmental management cannot be met (Algan, 2011). Another point to be emphasized here is that the emphasis of the Republic of Turkey on not hindering development in the implementation of environmental practices, as constantly emphasized in laws and regulations, creates a significant problem. The use of the concept of public interest also causes serious problems in environmental issues as it prioritizes development. In this context, it can be said that attention is paid to environmental management in the Republic of Turkey to the extent permitted by development policies. The situation is similar in many countries, both in domestic practices and in international arenas, and what is done by preference is debatable in terms of whose public interest it serves.

It is important to redefine the definition and scope of the concept of public interest. In terms of environmental management, it is necessary to evolve from a situation that prioritizes development to a situation that prioritizes public interest. Without this happening, environmental management will fail. However, it is also important to note how the concept of public interest is used. In the face of economic expectations within national borders, the environment always takes a back seat. Internationally, practicing environmental management

within your own borders while observing the superior public interest can lead to significant problems in your region or with neighboring states. This problem is frequently encountered, especially in the case of transboundary waters. The situation is the same with industrial facilities emitting waste gases, creating problems in your region or with neighboring states, such as acid rains, are also encountered frequently. The inclusion of environmental issues in the concept of superior public interest and the attempt to apply it in a legal sense cannot prevent the ineffectiveness of the environment against the economic policies of less developed countries.

In conclusion, for all these reasons, it is crucial to seriously consider the sanctions to be applied in the work of many international institutions and organizations, especially the United Nations, in the field of environmental management. Many international environmental agreements lack enforcement power. However, this situation should be prioritized. The current state of the world in environmental terms does not seem promising. As Udo E. Simonis stated, there is a need for a gradation in environmental policy. This can only be achieved by a global organization that goes beyond national sovereignty or an “Environmental Security Council” or a similar organization aiming at environmental security, as mentioned by the German Chancellor Helmut Kohl in the mid-1990s (Simonis, 207:306). Otherwise, humanity does nothing but accelerate environmental destruction with its current practices. In summary, it can be said that in the field of the environment, humanity is facing the consequences of times when it acted as if it did not know what has been known throughout history.

Here it should also be noted that there is another significant division in environmental management. When predominantly referred to as “environmental management,” there are far more examinations of environmental management for businesses than in the scientific field for public administration. Therefore, there are significant differences between environmental management for public administration and environmental management for businesses. Public administration is closely related to the state, government, and their practices, covering a very broad perspective with the society they are in. Generally accepted definitions state that “public administration consists of all practices carried out for the implementation or fulfillment of public policies” (Aydin, 2021:38). Businesses are responsible for regulating their relationships with the environment within a limited area with the practices of Public Administration. In this context, it is also noteworthy that the subject of environmental management is mostly neglected in books on public administration. It is worth mentioning that this is an important deficiency.

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CHAPTER XIV

EVALUATION OF DIGITALIZATION AND MOBILIZATION IN TERMS OF TOURISM MANAGEMENT

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1. Introduction

Tourism businesses, like other businesses, have to communicate and interact with both their immediate and remote environments in order to survive. Technology, which is characterized as an uncontrolled and remote environmental element for businesses, is among the external environmental elements that are not under the control of tourism enterprises. Tourism enterprises have to closely follow and use the technology, which is out of their control but greatly affected by it, in order to continue their activities, fulfill their functions and exist in the sector.

Especially in recent years, tourism businesses have started to feel the effects of digitalization and mobilization in all aspects and have started to use digital technologies frequently. The concepts and practices of “digitalization”, “digital transformation” and “mobilization”, which we frequently encounter today, have affected all functions of tourism enterprises, changing business and production processes, ways of doing business, organizational structures and business value chains.

In this study, it is aimed to explain the concepts of digitalization and mobilization, to focus on the changes and new generation technologies that occurred during the industrial revolutions and especially Industry 4.0, to examine the digital transformation process in detail and to evaluate what all these developments mean for the tourism sector.

Tourism businesses, like every other sector, have had and continue to have their share of digitalization and mobilization. The concepts and practices of “digitalization”, “digital transformation” and “mobilization”, which we frequently encounter today, have affected and significantly changed all functions of tourism businesses. In this context, in the first section, the concepts of digitalization and mobilization are explained, industrial revolutions and especially the changes that occurred in the Industry 4.0 process and new generation technologies are emphasized, and the digital transformation process is tried to be examined in detail.

In the second part, the effects of digitalization, digital transformation process and mobilization on tourism businesses and their efforts to keep up with digital transformation are examined. The second section focuses on how Industry 4.0, which initiated a holistic transformation process, affects business models, business and production processes, ways of doing business, organizational structures and business value chains in tourism enterprises. However, it is seen that the change is not limited to these issues. It has also been tried to reveal that it has affected many factors such as the goals, objectives, strategies, employee skills, effects on customer relations, changes in organizational climate and culture, relations with suppliers and competitors.

In the third section, the advantages and disadvantages of digitalization and mobilization for tourism businesses are listed. The fourth section focuses on the applications in tourism enterprises on the path of digitalization and mobilization.

In the last section, conclusions and evaluations are given. Tourism businesses have expanded their boundaries with digitalization and continue their activities in an environment that is a combination of the real and virtual world. In order for tourism businesses to continue their activities and survive, they need to closely follow technological change, keep up with it and take the necessary positions.

2. Digitalization and Mobilization

With the widespread use of computers and the internet after the 1950-60s, life has become increasingly digitized and the concept of “digitalization” has come to the fore. Digital data has gained importance instead of analog data,

and the methods and forms of data processing, storage and management have changed. Digitization has affected the business processes, business models and organizational forms of all operations. Thus, increasing digitization activities have had a great impact and initiated a “digital transformation” process in various dimensions in all fields.

Digitalization includes effective and efficient use of resources, fair and equitable governance practices, and efforts to use new and innovative technologies for sustainability, quality and standardization (Gretzel et al. 2015). The concept of digitalization refers to the idea of using information and communication technologies effectively to improve the quality of life of both employees and visitors (Vicini et al., 2012). In short, it means that technology and the business are a whole, creating synergy with the social components of the business.

While the change in technology and the spread of digitalization change our daily lives and all our habits, it also fundamentally affects our business life. Digital transformation has become a trend that affects all functions of the business. From production to marketing, from public relations to research and development activities, from management to financial issues, the wind of digitalization has started and continues in every field.

For tourism businesses, digitalization can be defined as the acquisition of new technologies, the use of these technologies to respond to the changing needs and demands of tourists, and the realization of structural change to develop new business models in the tourism sector. In other words, digitalization for tourism enterprises can be defined as the whole of the efforts to produce goods and services more effectively and efficiently than other tourism enterprises by using new technologies and taking advantage of the advantages of these technologies in the face of the changing demands and needs of tourists and to carry out activities that will increase tourist satisfaction through technology. With digitalization, it is aimed to provide the information and services they need to the employees and visitors in the tourism business with the help of communication technologies and the internet, and to provide solutions to systemic problems. The reasons that lead tourism businesses to digitalization, like other businesses, include attracting new tourists, retaining existing tourists and increasing their loyalty, creativity and innovation in tourism products, using the power of social media effectively, accelerating the decision process and integrating into new markets.

In order to understand digitalization in tourism, it would be appropriate to first look at the evolution of digitalization. In this context, it is seen that

the phases of digitalization and digital transformation are divided into four successive periods, one of which is a continuation of the other (Figure-1).

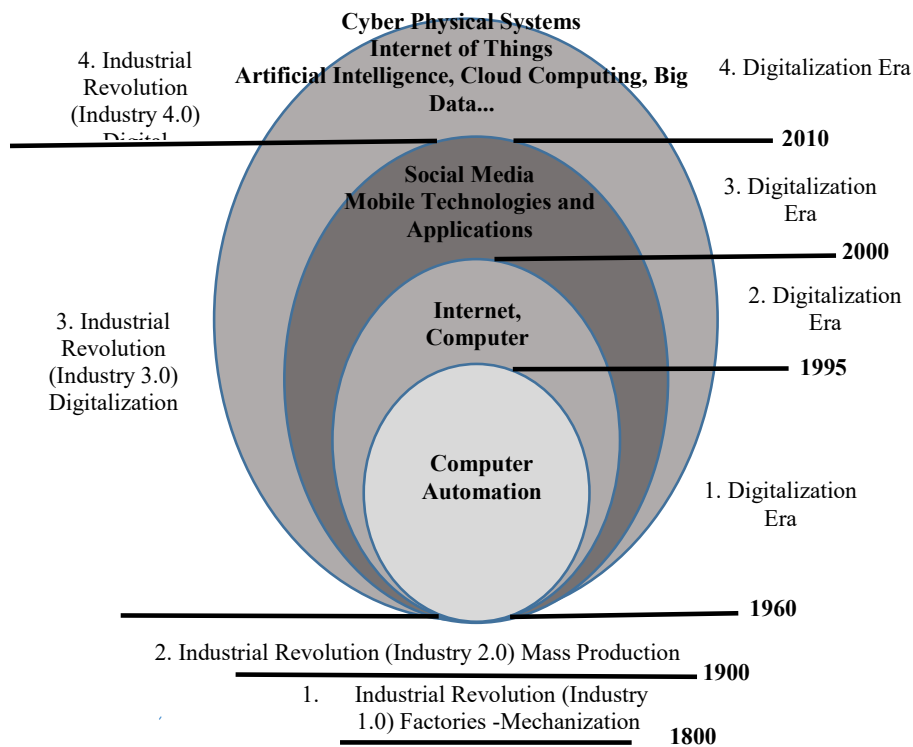


Figure 1: Digital Transformation Process (Akyurek et al., 2021).

In the first digitalization period, there is no internet usage yet. In other words, it is the pre-internet period. Data started to be digitized and processed on computers, personal computers entered businesses and the 3rd Industrial Revolution (Industry 3.0) began. With the facilitation and acceleration of work, computer technologies have been used more than traditional methods and have become widespread. Thanks to automation and integrated software, efficiency and productivity, and consequently production, increased and costs decreased. Other developments include the first databases and digital networks (Savić, 2019; Klein, 2019). From a business perspective, business processes have accelerated, communication has increased, and the era of data management has begun.

With the Internet, access to information has become easier and faster, new business models and communication tools have been developed and put into

practice (Bakirtas & Ustaomer, 2019). The e-mail era began in communication, various applications emerged and the concept of electronic commerce (e-commerce) was introduced. Thanks to the intranet, businesses were able to share their data in a secure and closed manner, accessible only to their employees. As in the first digitalization period, the efficiency and productivity of businesses continued to increase in the second period.

With the third digitalization period, mobile devices and web technology entered daily life and internet use spread rapidly. In this period, which is also called the social media phase, users of all ages started to actively use the internet in all areas of life, regardless of time and place, to produce content on the web and to share what they produce. Mobile devices have become widespread, and smartphones have become a part of life for reasons such as convenience, cheapness and access from anywhere (Townsend, 2002). Most people have started to upload and share documents, information, photos, audio and video recordings, and videos they have obtained through the features (camera, microphone, etc.) of their mobile phones to social networking sites, websites or virtual storages (Yoo et al., 2016). Mobilization has provided the advantage of sending, receiving and processing data by accessing the internet with a device with any capacity at any place and time through a digital network (Aydın, 2018). Thus, it has become possible to access all the information needed through mobile applications, and people have started to follow and continue their work with their phones. Many people around the world now use cell phones. (ITU, 2017).

The Fourth Industrial Revolution (Industry 4.0) is simply the name of innovative technologies. In this period, digital technologies have started to develop rapidly. Industry 4.0, Internet of Things (IoT), Sensors, Cyber Physical Systems (CPS), Cloud computing (CC), Big Data (BD), Artificial Intelligence (AI), Augmented Virtual Reality and Augmented Applications (AVR), Concepts such as Global Positioning System (GPS), Wearable Technology (WT), Sound Technologies (STech), Wireless Fidelity (WI-FI), Mobile Applications (Mobile Apps) and applications based on them have spread and started to be used rapidly.

The concept of digitalization basically consists of the Internet of Things (IoT), big data and cloud computing. All activities are interconnected through “cloud computing” using the “Internet of Things” (IoT), sensors and seamless network structure, and the information obtained is collected, analyzed and processed in real time (Sigala, 2018). Artificial intelligence and virtual reality applications are also utilized in this process called “big data analysis”. In addition, GPS and geolocation systems are used to provide instant data,

wearable technologies are used in personalized services, mobile applications, voice technologies and WIFI systems are used to accelerate communication (Akyürek, 2021). Other technologies that have emerged as innovative or next generation information and communication technologies include Industrial Internet of Things (IIoT), Machine to Machine (M2M), Autonomous Robots, Additive Manufacturing (AM), Simulations, Web Technologies.

New technologies and mobile applications are becoming increasingly widespread in tourism businesses. Augmented reality applications to improve customer experience, artificial intelligence technologies to speed up and automate work, reduce costs, increase quality and performance, Internet of Things (IoT) to connect activities with each other, unlimited and fast Wifi systems to increase customer satisfaction, wearable technologies to provide personalized service have become frequently used (Globaldata Technology, 2018).

Industry 4.0 has revolutionized businesses. With Industry 4.0, not only the digitalization of data and resources was not enough, but also the digitalization of the entire process (Fichman, et al., 2014). New technologies have reshaped businesses, and businesses that have met with Industry 4.0 have had to change their strategies, approaches to technology, data recording, storage and utilization models. Businesses have started to transfer all existing knowledge and experience results to digital environments and have endeavored to benefit from all the blessings of the digital environment. Producing digital copies of products and services, creating digital models, rapidly producing and transmitting product and service information, and allowing transactions belonging to this new world have become very important in this context (Seker, 2013).

2.1. Evaluation of Digitalization and Mobilization in terms of Tourism Management

Especially after the 2000s, tourism businesses, like other businesses, have started to acquire and frequently use digital technologies. Tourism businesses that have started to digitalize have started to become businesses where horizontal and vertical integration is ensured with the Internet of Things, big data and cloud computing, customer analysis can be done easily, and large amounts of data can be produced and shared quickly (Blunck & Werthmann, 2017; Crnjac, Veža & Banduka, 2017).

While digitalization has caused major changes in the goals, objectives, strategies, competencies of employees, organizational culture, relations with suppliers and competitors, it has also changed the existing business models,

business processes, organizational structures, production and service processes, values system and relations with customers, and has created changes in the entire goods and service process from production and service flow to sales, marketing and service (Kofler, 2018; Blunck & Werhmann, 2017; Crnjac, et al. 2017; Karaçuha & Pado, 2018; Liere-Netheler, et al. 2018; Bakırtas & Ustaomer, 2019). With the spread of social networks, product and service marketing, marketing processes have changed and new business models have emerged, and business processes have been automated thanks to software systems (Klein, 2020). Classical organizational structures have been replaced by decentralized network-based organizational structures.

By focusing on changing customer demands, needs and new market conditions, tourism businesses have opened up to new markets with the advantages provided by digitalization, started to benefit from the blessings of social media by using mobile technologies, and added to their goals to gain a competitive advantage in the market and make digital transformation sustainable (Klein, 2019).

The main function of digitalization in tourism businesses is to collect, process and share tourist and tourism-oriented information (Gretzel et al., 2015). While the information obtained concerns service providers in terms of product and service promotion and users in terms of meeting their needs, the technologies used in storing, classifying and transmitting information (computer networks, tablets, mobile phones, software, etc.) also facilitate the realization of touristic activities (Ozen, 2018). With digitalization, tourist experiences in areas such as transportation, accommodation, entertainment, shopping, travel, recreation, etc. have changed and new applications have emerged.

Digital technologies integrate hardware, software and network technologies by using information processing technologies as an infrastructure, allowing users to choose the most rational one among alternatives (Washburn et al., 2010). Thanks to the data obtained from digital environments, tourism businesses have been able to reach customers easily by developing new business models in line with the wishes and needs of customers, and have found the opportunity to offer personalized services and products.

With digitalization, tourism businesses have started to use computers and the internet to recruit human resources, conduct job and recruitment interviews in digital environments and keep their records digitally (Akoğlan-Kozak, 2019).

With digital transformation, the methods of procurement of goods and services by tourism businesses and the roles of businesses that supply goods

and services have changed, and new model supply systems and alternative distribution channels have come into play with smart production systems (Prause, 2015).

Digitalization has led to a change in the payment and income demands of tourism businesses; mobile banking has eliminated the problem of time and space, and banks have started to support tourism businesses in various issues by including them in the mobile banking system (Chung & Known, 2009). Tourism businesses have met digital currencies (Bitcoin, Ethereum, etc.) and started to receive payments (Çarkacıoğlu, 2016).

The expectations and behaviors of tourism consumers have changed with digitalization (Kofler, 2018). In addition to quality, affordability and diversity, consumers now expect offers to be personalized and communication to be fast and accurate in the way they want. The proliferation of the internet, mobile applications and social media platforms has created a new market that makes it possible to offer personalized products and services to customers (Klein, 2020). Through mobile applications and digital connections, tourists have the opportunity to share their experiences instantly.

With digitalization and mobilization, communication technologies have the capacity to deliver information to large masses faster and less costly than other traditional methods, and a new understanding has emerged that has gained speed, agility and flexibility in communication and cooperation. Due to this feature, it has been widely used in the tourism sector to control and facilitate activities.

Managers in tourism businesses have also been affected by digitalization, and a new management and leadership structure has started to emerge (Schuh, et al. 2017). Artificial intelligence applications have helped managers make the right decisions with the advantages they provide, while increasing the speed of decision-making (Ceran, 2019).

Digital transformation has also changed the expectations of tourism businesses from governments, and it has become necessary to make more infrastructure investments and support these investments.

2.2. Benefits and Challenges of Digitalization and Mobilization for Tourism Enterprises

Digital transformation technologies provide advantages such as cost advantage, scalability, flexibility, agility, mobility, usability, security, analysis and synchronization, updating, increase in information sharing, efficiency,

improvement in business and market performance in tourism businesses as in all businesses in general (Zissis & Lekkas, 2012; Kumar & Kumar, 2012; Avram, 2014; Melián- González et al. 2016; Gangwar, 2015; Çark, 2019). Flexibility refers to the sector's efforts and practices to reduce resource utilization and cut costs in times of crisis, while mobility refers to the use of mobile applications by tourists when making decisions and planning their travels. Security refers to data confidentiality and security, analysis refers to the processing and interpretation of data and making it usable, and synchronization refers to the collection, coordination and delivery of data collected from various channels (social media, RFID systems, websites, etc.) with the help of various tools to a center (Aksoy, 2017). On the other hand, digital transformation also provides advantages such as less staffing, fast service, reduced waiting times, humidity, heat, light, odor management in rooms, music service, customer tracking and control, inventory control, food and beverage control, personalized services, increased satisfaction in customer relations, communication of satisfaction and complaints through digital media, digital security and control (Gökalp & Eren, 2016).

Thanks to mobilization, tourism businesses' relations with customers have been freed from time and space barriers and gained a new dimension and continuity. The similar market structure has started to be replaced by products and services designed according to personalized wishes and needs (Karaçuha & Pado, 2018). In addition, digitalization and mobilization have turned every person and object into a data producer, the flow of data in real time has increased the control and supervision over employees, and the control and control mechanisms in tourism businesses have started to move to digital environments (McAfee & Brynjolfsson, 2012, Nuroğlu & Nuroğlu, 2018).

Mobile tools and platforms are one of the cornerstones of digital transformation. Mobile communication applications provide tourists with uninterrupted access to the system. It is important to determine in advance in which areas mobilization will be provided. Having mobile devices is as important as where and how they will be used. Mobile phones are the main element of mobile communication (Townsend, 2002). Tourists frequently use their smartphones as a means of obtaining information during their travels because they are easy to carry, inexpensive and accessible anywhere. With their cell phones, users can both follow their daily work and maintain personal communication easily. It also serves as a portable guide during travel thanks to mobile map applications and cloud computing (Mitchell & Race, 2005). From another perspective, cell phones are also an important tool for sharing touristic

experiences. Positive and negative experiences can be shared instantly via social media and websites (Yoo et al., 2016). The increasing use of smartphones has brought the concept of mobilization in e-commerce to the agenda. Most of the e-commerce transactions have been made through mobile phones and mobile phones have become one of the main elements of e-commerce.

Thanks to digitalization, tourism businesses have become able to create their own data banks very easily. The data obtained and stored were used in different fields. Realizing this, tourism businesses discovered the importance of appearing on the first pages of search engines. Through social media, they both provided trust and maximized communication with consumers. While increasing customer satisfaction with customer loyalty programs, they managed to stay up-to-date without interrupting communication with consumers thanks to 24/7 access. They were able to instantly deliver their campaigns to consumers via digital platforms (Google, Facebook, Instagram, etc.). By developing mobile applications, they were able to increase the satisfaction of both customers and employees.

Mobile applications are constantly renewed according to changing needs and new products are added. Businesses that provide consultancy services on online sales and marketing ensure that tourism businesses are visible on the WEB, social media, mobile platforms and search engines, and help them get more reservations.

However, like all businesses, tourism businesses also face some problems in digital transformation. The most important of these are standardization, privacy and security issues (Salleh, et al., 2012; Kumar & Kumar, 2012; Peng & Gala, 2014; Abd Elmonem et al. 2016; Aksakallı, 2019; Çark, 2019). In this context, achieving success in digitalization and reaping the fruits of the efforts spent depends on the establishment of data and infrastructure standards, compliance with these standards and ensuring data security (Yıldırım, 2018). All activities carried out on the Internet are visible to others and face the risk of unauthorized interference. If data control and security cannot be ensured, risks such as data theft and service interruption may arise. On the other hand, increased digital dependency, information pollution, artificial intelligence pressure, counterfeiting, digital data theft are also digital risks. Tourism businesses should be aware that if they do not take precautions in these areas, they may be exposed to cyber-attacks and data loss due to illegal access. However, despite all these disadvantages, tourism businesses must digitalize and take their place on digital platforms in order to take part in the competition in the sector.

3. Applications in Tourism Enterprises on the Road to Digitalization and Mobilization

Accessibility lies at the heart of digitalization. Tourists want to find the digital comfort they are used to at home in tourism businesses. Tourism businesses have to bring this comfort to their own facilities. For this reason, all businesses in the tourism sector are making large investments and turning to digital transformation in various fields.

Technological innovations are at the heart of innovations in tourism businesses. With the widespread use of computers, tourism businesses first computerized their reservation systems (CRS) in the 1970s, established websites with the invention and widespread use of the internet in the 1990s, and tried to integrate technological innovations with the introduction of mobile technologies, especially after the 2000s (Werther et al., 2015). In the last decade, tourism businesses have had to make radical changes in their systems after being introduced to the concepts of mobile applications, social media and artificial intelligence (Buhalis & Amaranggana, 2014).

Tourism businesses need to make the most effective use of technology in order to increase both direct sales and agency sales, increase repeat visitor rates and achieve the desired occupancy rates. In this context, it is important to have a good website and real-time reservation module, to use social media well, to utilize digital effectively in customer relations, and to stand out in search engines. In this context, it is possible to categorize digital technologies used in the tourism sector under five groups (Gökalp & Eren, 2016). These are;

- Contactless systems
- Asset tracking systems
- Customer tracking systems
- Information systems
- Tour and agency systems

By using contactless systems in tourism businesses; online reservation and check-in, check-in and check-out (lobbies without reception), keyless room entry and door access, RFID-enabled access and membership cards, access to the hotel guide and menus with QR code, digital guide, viewing and touring the facility with augmented reality, getting information about the environment via smartphone, making payments from mobile applications, contactless payment system, smart card payment, check-out transactions can be done.

Operations such as warehouse and stock control, food and beverage management, goods tracking are controlled by asset tracking systems. Systems such as electronic tickets, performance tracking, monitoring and reporting systems are among the information systems. On the other hand, some tourism enterprises develop smart wristband applications by utilizing wearable technologies and use systems such as child and guest control, amusement park tracking system, passenger tracking system, room entry control. Tours and agencies make use of systems such as online booking and ticketing, sending personalized messages, automatic social network monitoring programs and posts.

Some tourism businesses have also developed their own mobile applications, providing access to information such as weather and traffic conditions, current currency information, environmental facilities, and shopping locations. They also facilitate booking, check-in and check-out processes by enabling customers to download the applications to their smartphones. Through mobile apps, customers can check in online via the website, pick up the key directly from the reception desk and check out to their rooms without any transaction, check out online at the end of their stay, and leave the property by paying by credit card, again without visiting the reception desk. The invoice can be sent later via e-mail in the form of e-invoice. Customers whose accommodation data is collected in a pool are directed to the appropriate accommodation facilities for their next accommodation needs according to their usage habits, regardless of where they are. Loyalty programs are created with cards given to customers individually, and the opportunity to benefit from the opportunities and advantages of not only a single facility but also other program partners is offered.

As a result of the users of tourism facilities downloading and using the mobile applications of the facility, customer information is automatically recorded in databases. This ensures continuous communication with customers and facilitates the planning of effective sales and marketing activities. Guests can make restaurant and SPA reservations, get information about the facility, fill out surveys, be informed about special applications and surprises, read reviews about the facility and make their own comments through the application.

With smart room systems, hotel rooms can be accessed with facial recognition systems, talking and fully touchscreen devices, digital displays of breakfast, meal and activity information, emergency assistants and systems, smart toilets that measure urine and blood sugar, voice-controlled showers with voice command systems, adjusting the temperature and pressure of bath water, turning on the television, adjusting the level and color of light, setting

alarms, and controlling air conditioning, heat, light, and odor according to the person (Balakrishnan, 2016; Skyscanner, 2017). With the smart curtain system, customers can even program the opening time of the curtain (Yalçıkaya et al. 2018). Opportunities such as 3D room tours with virtual reality glasses, smartphone application during room entry, nano-technological products, smart beds and pillows, wireless devices, hologram televisions, applications that offer relaxing solutions by sensing stress are also provided. Other in-house digital and mobile applications include systems such as 24/7 access via WhatsApp, private WIFI areas, 24/7 access to necessary information about the business, IP-based TV systems.

Digital smart applications are gradually developing with a focus on providing customized, interactive services to users according to their location, anticipating needs, making recommendations and directing them to attractions (Yoo et al., 2015). In the digitalization process, instruments such as artificial intelligence applications, augmented reality and robots raise the question of how these technologies will be used in tourism businesses. It is now possible to encounter robot assistants in new generation hotels. In the last decade, some businesses in particular have been talking about running their entire operations through robots and have been talking about artificial intelligence technologies. Some hotels have already started using robots as housekeeping staff (Solomon, 2014). These robots, which can move between floors, use elevators, find rooms by themselves through sensors, can carry and deliver various needs of customers such as water, drinks, towels. Some robots even make omelettes for guests (Lin, 2017). These self-moving robots can be programmed to answer questions in different languages and can be equipped with various capabilities according to visitors' other needs.

Reducing the damage caused by tourism enterprises to nature is one of the important issues in digitalization. Digitalization has also changed the way tourism businesses procure and use energy. Renewable energy sources that increase energy efficiency have started to be used more and managed with mobile applications. One of the main goals of digital and smart applications used in tourism enterprises is to take environmentally friendly steps by utilizing new technologies, to reduce energy consumption and to reduce expenses and energy costs of the enterprise. There are environmentally friendly applications in order to save energy (Jaremen, et al. 2016). One of these applications is smart building applications. Smart building technologies have started to be applied in all types of tourism businesses. It is aimed to create smart environments

with smart buildings designed by utilizing technology without compromising the comfort of guests and to develop applications to increase the quality of life of users by providing energy efficiency and savings with the applications developed (Yılmaz, 2010). In this context, there are applications such as self-dimming lamps, air conditioners that turn themselves off when no one is in the room, and water consumption monitoring systems.

In digital tourism businesses, customers can shop with a pre-loaded card, smart waiters can create menu recommendations according to the customer's previous data, mini-bar usage information from RFID readers is transferred to staff handheld devices in real time thanks to IoT, and deficiencies are completed in a short time, giving importance to the effective operation of the inventory system and increasing customer satisfaction. The digital staff performance system facilitates the transfer of orders received with the help of sensors and order handheld devices to the relevant and responsible persons in real time, reducing waiting time, identifying problematic places and developing solutions.

Thanks to digitalization, room inventories are easily managed, and thanks to channel management modules, price and occupancy information automatically received from the front office modules are shared in real time on internet sales portals (Booking, HotelsPro, Hotelbeds, etc.), while the information received from the portals is instantly recorded at the front office. With the Extranet system, special prices and payment methods can be defined for agencies, and they are given 24/7 access to occupancy information, allowing them to take reservations. In addition, customer information from online sales and reservation systems is recorded.

Thanks to digital management and control software, operations can be remotely monitored instantly by business managers, the correct and healthy operation of the devices, overcapacity and abnormal values can be checked, error, alarm, warning and fault messages can be instantly transmitted to mobile phones, tablets, computers as sms, e-mail or call, and problems that may occur can be prevented by instant intervention.

Like other activities, tourism enterprises can track their textiles in digital environment thanks to UHF and RFID (ultra high frequency and radio frequency identification) technology. Using UHF and RFID technologies, chips are placed on pillows, quilts and towels, and issues such as handover of textiles, instant location information, number of washes, inventory control, needs analysis are monitored 24/7 and communicated to the relevant responsible persons. The products are passed through dirty entry and clean exit routes through the chips,

and the dirty ones reaching the facility are separated, bagged for washing and transferred to the relevant units. All textiles, including ironing, are scanned with UHF and RFID systems and are affected and packaged so that the right products are delivered to the right places. The products loaded on the transportation vehicles are made ready for shipment by passing through RFID readers to be recorded on the system. All textile information is digitally accessible 24/7. Thus, tourism businesses can control their active textile inventories numerically and locationally.

Digitalization has also entered sports facilities. Tourism facilities are now using sports equipment, apps and wearable technologies that work in conjunction with ‘cloud’ based sports applications, changing the way people live. Guests using cloud-connected sports gadgets and equipment can access their personal training programs and data wherever they are in the world when they access the internet. They can download them to their smartphones, tablets or computers. They can have a completely personal experience by connecting to the applications via their sports equipment while in the gym, or via their mobile devices while out and about, and by organizing their exercise programs.

These applications are not the only ones. Some of them can be used or diversified according to the needs of each business. In this context, tourism businesses that want to be successful in digitalization should follow and acquire technologies in line with their own goals. They should prefer simple technologies that meet the expectations of visitors and are not complicated to use. It should be noted that while offering all these smart applications, people are the focal point, privacy of personal data, transparency, participation and other ethical rules should not be violated.

4. Conclusion And Discussion

In parallel with the developments emerging with Industry 4.0, digitalization and mobilization create new opportunities in the tourism sector, provide competitive advantage and support economic growth. From the perspective of tourism businesses, adaptation to digital transformation and mobilization and the ability to use these technologies correctly increase the presence and competitiveness of businesses in the market. If tourism businesses can use digital technologies effectively in decision-making, production and design processes, they will be able to gain certain advantages over their competitors (Karaçuha & Pado, 2018).

Tourism businesses that do not take advantage of the opportunities of digitalization risk losing their place in the sector. Everything is now bought

online and most of the experiences are shared from there. Classic tourism businesses that make their own reservations will have to close their physical offices and sales points, while businesses that use the internet effectively will continue to increase their sales.

In order for tourism businesses to continue their activities and survive, they need to closely follow technological change, which is one of the environmental variables that they cannot control, keep up with it and take the necessary positions. Digitalization requires a serious effort. This transformation process is a long and challenging process. Tourism businesses should make short, medium and long term plans and determine strategies in order to design and implement the digitalization process correctly. Each business can undergo a different digitalization process. For this reason, tourism businesses that will take steps towards digitalization must determine the right strategies.

Tourism businesses follow two different strategies in the digitalization process. The first one is to increase revenues by acquiring digital tools used to provide online access, and the second one is to make things easier by acquiring different digital tools for the administrative and operational work of the business. Since the first one is directly related to the revenues of tourism businesses, large investments are made primarily in tools for these areas. For this reason, tourism businesses that will take a step towards digitalization must not only determine the right strategies, but also set aside a budget sufficient to manage the process. Digitalization and technology increase the pressure on tourism businesses every day. Therefore, if tourism businesses want to grow and differentiate themselves from their competitors, they must realize digital transformation, make the right technology investments, learn how to use technology correctly, and become digitally visible. In the second stage, unlike the first stage, businesses should follow new technologies, acquire the digital tools they need and integrate them into their business processes. However, tourism businesses should not only follow new technologies, but also strive to find the most suitable technologies for themselves without ignoring privacy and security factors, organize trainings within the scope of integration into digital transformation and raising awareness, and managers should support all these activities.

Tourism businesses that can produce the right strategies in the digitalization process will survive in the sector, while those that cannot will either imitate or disappear. If tourism businesses cannot develop new business processes suitable for digitalization and are late in adapting to the process, their traditional business processes will not be sufficient for competition (Burmeister, Lüttgens,

& Piller, 2016) and they will face the risk of falling behind their competitors and withdrawing from the race.

Digitalization has caused and will continue to cause changes in tourism businesses in many areas, including business models, management and organizational structures, customer relations, and competition. Therefore, tourism businesses have to develop new business and relationship models in parallel with digitalization. Today and in the future, employees who know and can use computer technologies will be needed in digitalized tourism businesses, and research and development activities will gain importance. Industry 4.0 is the empowerment of people, not machines (Keywell, 2017). Therefore, trainings on this subject are important and key.

The age we live in is now a digital age. It is necessary to accept this. Digital technologies offer customers a unique experience. However, digital transformation must be understood correctly. Digitalization is a process that requires patience and cannot be created immediately. Most facilities have little knowledge about digitalization. The implementation and use of technological developments and innovations in tourism businesses is slower than in other sectors. Initially, it is seen that digital transformation in tourism businesses is mainly marketing-oriented. Later, digital systems were started to be used in various areas in hotel businesses. However, in the last decade, awareness has increased and the use of technology has accelerated. Online sales and increased earnings have been effective in this.

Tourism businesses should be aware of what digitalization will bring to them, what they expect from the digital transformation process and what they want at the end of the process. Research shows that digitalization and mobilization have become widespread in tourism, and that digital investments of tourism businesses are generally aimed at establishing websites, efforts to be visible on social media, and integration of existing systems into online sales channels. Moreover, it is seen that the primary purpose of using digital applications for tourism enterprises is to increase customer satisfaction, gain competitive advantage, increase profit margin and reduce costs. At the same time, it is concluded that digitalization has increased environmental awareness in world tourism.

Tourism enterprises should invest in technology and digitalization in this challenging process. Tourism businesses should make the necessary investments in digitalization without delay. Digitalization is not just about more technology. It means changing all processes from production to finance, marketing to

management. With the transition to new technologies, the corporate structure and business models of the business will change and everything will be subject to automation. Misguidance can lead to wasted budget and heavy bills. One of the issues to be considered is to get consultancy from relevant businesses in this process when necessary.

Digital transformation has started and continues. Tourism businesses have expanded their boundaries with digitalization and started to operate in an environment that is a combination of the real and virtual world. In this process, tourism businesses are trying to realize digital transformation in line with their own needs. In the digital transformation process, which is referred to as Industry 4.0, tourism businesses have to keep up with this transformation by following the developments in order to survive and thrive. In addition, tourism businesses need to draw a strategic road map for digitalization and address digitalization from a strategic perspective.

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CHAPTER XV

MANAGEMENT OF TRANS-BOUNDARY WATERS: PRINCIPLES, DISPUTES, SEEKING SOLUTIONS AND WORLD WATER FORUM

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1. Introduction

Considering the needs and demands of humanity today, it is seen that the water element stands at an important point in every aspect. The earth's dependence on water and the reality that humanity cannot exist in a waterless world allow the problem of transboundary waters to be evaluated on a global scale. In this regard, all kinds of factors, from achieving sustainable development goals to ensuring ecological balance, from population growth due to various reasons to the geopolitical/geostrategic position of countries, cause the problem of transboundary waters to deepen.

Another reason that deepens the problem of transboundary waters is the inadequacy in the context of universal legal norms. Although it is known that there are various treaties and agreements that focus on the issue of transboundary waters that connect the past and the future, there is no agreement or treaty that addresses each country or factor holistically.

On the other hand, institutions and organizations such as the Institute of International Law, the International Law Association and the World Water Council have taken various initiatives to manage the world's water, strengthen the infrastructure, ensure solidarity and create "water culture". Although the

steps taken in this direction have global aims, they cannot provide a definitive result because the necessary binding and inclusiveness cannot be achieved.

In the past, international waters were used only for feeding and transportation purposes. Since World War II, it has begun to be used in every field and phenomenon related to our daily lives. In addition, increasing population, regions experiencing water scarcity/poverty and “more than 40% of the population gathered around international rivers” (United Nations 2008: 1) place water at a priority place in international politics. Therefore, this research will approach the management of international waters from a historical, conceptual and legal perspective. As a natural resource, the importance of groundwater in terms of water management and climate change is known, and only surface water will be included in the scope of the study.

2. Conceptual and Historical Framework

In terms of our subject, as a river, the waters present a complete appearance with their branches and beds along the line they flow. This integrity has been fragmented by the artificial division of the world into states and sovereign areas. In this respect, rivers that start from the territory of one country and travel through the territory of another state are called transboundary waters (Kırkıcı 2014: 24) and have led to the emergence of different interpretations in the context of the right to sovereignty. However, it is also necessary to mention the concept of “international water”, which has the same meaning as the concept of transboundary waters. While there is no difference between the two concepts in terms of meaning and narrative; The concept of “international water” is equated with including countries other than riparian countries into the equation in order to obtain the rights to benefit and use a river flowing under the sovereignty of more than one country (TOB 2021)¹.

It is possible to say that this dispute between countries in the water phenomenon arises from political disagreement rather than its legal nature. Legal disputes in the international arena arise at the point of “which accepted rule of international law will be applied or in what way the parties’ claims will be applied”. On the other hand, in political disputes, the disagreement arises “in the context of the countries’ own interests”. If the dispute on the issue “concerns the sovereignty and sovereign rights of the state, is contrary to its

¹ For example; The Republic of Turkey uses the term “transboundary watercourse”, which is accepted in conventions in terms of international law, but does not accept the term “international watercourse” (Ertaş 2010: 16).

vital interests, or falls within the national jurisdiction of the state”, this is not the law; It falls within the field of the political (İnan 1994: 244). In this regard, it is known that the conflict that took place between Syria and Israel in the past years was related to the region with rich water resources called the Golan Heights (Yılmaz 2010: 321).

On the other hand, it is possible to say that the distinction between “upstream country” and “downstream country” creates the motivation for countries to expand their sovereignty over water. Source country; While it is called “the country that lies above the flow direction of transboundary water”; Downstream country is defined as “the country located below the flow direction of transboundary water” (Akça 2014: 13). In this respect, the upstream country and the downstream countries disagree on the boundaries and extent of the right, rather than whether they have the right to benefit from the river in question. While the source countries prefer to use the dispute in question in line with their interests since the resource originates in their own territory; Downstream countries deal with the damages resulting from the use of the resource until it reaches them.

In addition, the military or geographical superiority of the countries in question also affects the conflict/reconciliation situation. In this respect, Miriam Lowi was the person who discussed the difficulty of lack of cooperation on transboundary waters within the scope of “hegemon balance theory”. Lowi developed his theory centered on cooperation and emphasized the importance of the hegemonic state’s tendency towards cooperation. According to that; If the hegemonic state is located in the downstream country, the right to benefit from water emerges as cooperation-centered and hydropolitics is shaped in this direction. On the other hand, when the hegemonic state is in the position of a source country, it does not seem possible to establish cooperation since the one with the advantage is in a strong position (Lowi 1995: 2). When the multi-actor structure of transboundary waters is evaluated in this context; It is possible to predict that conflicts and wars similar to those experienced today over oil and natural gas will intensify over water in the future (Amery 2002: 322).

3. Legal Practices Based on The Principle of Utilization

Rivers and wetlands, which exist within the borders of a state and are called “national rivers”, belong entirely to the legal and political disposal of the state in question. On the other hand, rivers and wetlands, which are called transboundary waters and fall within the scope of more than one state, comply

with international law due to their nature. In this context, the element that turns into a conflict between states is the “right to benefit”. The “right to benefit”, due to its nature and content, corresponds to the sovereignty of the countries and opens the door to the understanding of “*qui in terri-torio meo est, etiam meus subditus est* (What is in my country, it is subject to me)” (Meray 1975: 325). Therefore, the ability of states to use the rivers that exist within their sovereignty for various purposes stems from the right of utilization based on the sovereignty of the country.

On the other hand, the right to benefit has different meanings depending on whether the relevant state is an “upstream country” or a “downstream country”. The organic interdependence relationship established between countries through a river result in countries not being able to reach an agreement on transboundary waters. In this respect, interfering with the right to benefit is open to interpretation as restricting the right in question for the upper riparian country; The right of exploitation of the lower riparian country appears to be directly related to the extent or the amount to which its transboundary waters are protected.

The right to benefit from transboundary waters acquires a legal basis in two ways. The first of these; It constitutes “the sharing of waters in quantity among the relevant states”. According to this; Countries that have relevant transboundary water create legal precedent by signing an agreement among themselves. As an example; Turkey’s “Kars Agreement”, signed with the Union of Soviet Socialist Republics (USSR) in 1927 to benefit from transboundary waters, and agreements signed with Iran in 1955, guaranteeing that Turkey will supply 1.8 cubic meters of water per second to Iran from the Sarısu and Karasu rivers. The second method that guarantees the right to benefit is; It is achieved by “dividing the waters according to geographical regions and granting the relevant states the right to exclusively benefit from the waters in their own regions” (Kapan 2006: 43). In the absence of any agreement or contract regarding how and in what manner the flowing water will be shared between countries, the principle of “fair”, “equitable” and “reasonable” sharing of the resource is applied. The basis of the principle in question is the Helsinki Rules of the International Law Society in 1966 and recommends “the principle of not causing significant harm to others” (Aytemiz and Kodaman 2006: 528).

Apart from the above-mentioned principles expressed by international law, it is also necessary to mention the theories of sovereignty. The first theory that examines the approach of states to transboundary waters in the context of sovereignty is the theory of “absolute sovereignty”. The “absolute sovereignty

theory” states that a state has full discretion over the waters flowing within its borders. In this respect, every state is free to exercise whatever rights it has over all rivers and lakes flowing within its borders (Shiva 2003: 95).

The other theory that the “absolute sovereignty theory” has had to give way to, due to its structure that does not take the lower riparian states into consideration, is the “theory of the integrity of the natural state”. This theory has been put forward in order to ensure that the upper riparian state undertakes obligations such as not to change the flow of transboundary rivers flowing in its country, not to deteriorate their quality, and not to artificially increase the flow, and to ensure that the lower riparian state is not harmed (İnan 1993: 249).

The theory that focuses on the use of transboundary waters in the context of “acquired right” is the “priority of prior use doctrine”. According to theory; Whichever state holds the right to intervene in the flow of water, that state has an acquired right over the resource and this right must be absolutely respected. In addition, the requirement that the state with prior use superiority should not harm the relevant resource is also valid in this doctrine (Rahaman 2009).

Among the theories of sovereignty, the theory that has gained a serious place in international law is the “equitable use doctrine”. The theory in question envisages the reasonable, optimal, equitable and fair use of each country from the lands through which the transboundary river passes. In this context, the distribution of the water in question between states should be carried out in accordance with international law and humanity. It is envisaged that the principles of “maximum benefit” and “minimum harm” should be observed in the application of the theory (Sar 1970: 229-230). According to Utton (1996: 638), the principle of equitable use “promotes the equitable and fair use of the river by preventing the priority gained by the upper riparian country due to its location and the veto right of the lower riparian country over the right of use of the upper riparian country.”

Another theory that finds application in international law is the “limited territorial sovereignty theory”. This theory states that the state that owns a part of the transboundary waters cannot act haphazardly and to the detriment of other states in the use of the resource. In this context, the obligation of states is not to interfere with the flow of rivers (Uluatam 1998: 164).

4. International Law Studies on Dispute Resolution

The fact that solution proposals based on the use of transboundary waters are insufficient to solve international conflicts and that there are legal gaps

in this sense have required institutions and organizations such as the United Nations (UN) to address the issue urgently and professionally. In this respect, the International Law Association, which is authorized to “compose its studies on the issues proposed by UN bodies or states into a draft agreement and submit it to the UN General Assembly” (Pazarcı 2009: 113), stands in an important place. On the other hand, the International Law Institute, the UN International Law Commission and the UN Economic Commission for Europe also play an active role in legal studies on the management of international waters. Among the institutions in question, the Institute of International Law’s “1911 Madrid Declaration and 1961 Salzburg Decision”; The “1956, 1958, 1960 and 1966 reports” of the International Law Association and the “1978, 1989 and 1991 reports” of the UN International Law Commission are among the leading publications on transboundary waters (Akmandor, Pazarcı and Köni 1994: 17).

The “Madrid Declaration on non-navigational uses of international waters” (Olçay 1997: 50), published by the Institute of International Law in 1911, prohibited the damages that riparian states could cause while exercising their right to benefit. The Salzburg Decision, published in 1961, stipulated that riparian states should benefit equally from a river and prohibited the use of states that had interest in the river that interfered with the flow of the river (Sar 1970: 243-244).

The International Law Association (ILA) has regulated the following principles based on the definition of “international water” in the 1956 Dubrovnik Conclusions Final Declaration:

- a. *While each state benefits from the part of international water flowing through its territory, it will also take into account its effects on the lower riparian country.*
- b. *Each state will be held responsible for its public and private actions to the extent of the damage it causes to the lower riparian country.*
- c. *In accordance with the principle of equitable use, the right to benefit from the river will be taken into account within the scope of each state’s dependence on water, its social/economic benefits, agreements signed between the relevant states (if any) and current uses (ILA 1956: 241-243).*

On the other hand, the studies carried out by the International Law Association on transboundary waters are also considered a cornerstone in the field. The first of these is the Helsinki Decisions published in 1966. In the Helsinki

Decisions (article II); The geographical area determined by the basin boundaries, involving two or more countries, including surface and groundwater, is called the international drainage basin. According to the decisions; The widespread use of rivers for many different purposes has brought the problem of transboundary waters to the agenda. In this context, the necessity of comprehensive and rational studies and the reconciliation of existing studies are important in order to ensure maximum use and development of rivers (ILA 1966).

According to the fourth article of the same text; It is guaranteed that “each basin state can benefit beneficially, reasonably and equitably from the streams moving within its territory”. The article in question grants all states in a basin the right to benefit from water in an equitable manner, based on the “right to benefit” custom of international law. The criteria to be considered in determining the right to benefit in the second paragraph of the fifth article of the rules are; They are listed as “geography where the basin is located, climate, current usage status, economic/social needs, demography, availability of other resources and (in case of possibility) feasibility of compensation payment” (ILA 1966). These principles, put forward in line with the principle of “fair sharing”, are generally accepted and include “geographical, hydrological, ecological conditions of the water area, contribution of riparian states to transboundary waters, economic and social needs, possible conditions of cooperation between riparian states, current use, projects and It began to take place in universal law in the context of “considering consistency, population and the existence of other basins” (Ministry of Foreign Affairs 1996: 77).

Another text from which we can get clues about the management of transboundary waters is the study titled “Charter on the Economic Rights and Duties of States”, adopted by the UN General Assembly in 1974. The text emphasizes “the need to establish a just and equitable economic and social order among nations” (UN 1974: 2) and states that “every state; It is guaranteed that “it has full and permanent sovereignty over all its wealth, natural resources and economic activities (...) and can freely exercise this right”. In this regard, in natural resources that are in common use by two or more states, it has been recommended that each state seek “cooperation based on an exchange of information and preliminary consultation in order to use the resources optimally without harming the legitimate interests of others” (UN 1974: 4).

Another treaty prepared within the UN is the “Convention on the Protection and Use of Transboundary Watercourses and International Lakes” dated 1992. The agreement, which has a regional nature, only binds the countries within

the Economic Commission for Europe.² On the other hand, in addition to the regional restriction, the contract is also limited in terms of including possible pollution on transboundary waters and the protection of waters. According to this agreement; It has been determined as a priority to prevent and control the pollution of waters caused and likely to be caused and to protect the transboundary effect by reducing pollution. The need to ensure that transboundary waters are used for an ecologically healthy purpose and to determine rational water management policies in this context is emphasized. Therefore, when it comes to activities that cause or are likely to cause transboundary impacts, it is important to ensure reasonable and equitable use of transboundary waters, taking into account their transboundary nature. In this context, it has been stated that it is important to review policies and methodological approaches for the protection and use of transboundary waters and to exchange information by benefiting from past experiences gained between countries. As a result, it is possible to say that the agreement, which makes countries liable for the damage they cause to transboundary waters, reveals the “polluter pays” approach (UN 1992).

The “Convention on the Law of the Non-navigational Uses of International Watercourses”, which was opened for signature in 1997, constitutes another agreement prepared on transboundary waters. In this convention, the term international waters is defined as “waterways whose parts are located in different countries”. The contract, which recommends “equitable” and “reasonable” use, rises on two pillars in terms of both benefiting from the waterway and protecting and developing it. In this regard, in order to benefit from the international waterway in the most efficient way and to ensure high protection, it is emphasized that the states that are parties to the water in question should cooperate on the basis of equal sovereignty, territorial integrity, mutual benefit and good faith.

Criteria for the use of the international waterway; The reference of the contract to the Helsinki Decisions, which expresses climate, geography, current and potential usage status, social and economic needs, consideration of the effects of transboundary water use on other waterways and population (UN 1997), is clearly visible. In addition, another point emphasized in the contract is that all criteria will be considered holistically and a result will be reached (Durmazuçar 2003: 23). While the contract prepared in 1997 did not stipulate any prohibition on causing damage resulting from use; It states that in use, care should be taken not to cause significant harm to other riparians (Kaya

2 With the amendment made in 2013, it was expanded to include countries that are not included in the European Economic Commission (Maden 2012).

2003: 167). However, in terms of international law, the fact that a state causes significant damage does not automatically mean that it acts against international law (McCaffrey 2007: 400).

5. Efforts To Achieve Holistic Policies

The Convention on Non-Navigational Uses of International Watercourses could only come into force in 2014, due to the lack of majority required for its entry into force and the reservations and rejections made to the convention. During this period, the increasing problems regarding the management of transboundary waters and the changing conjuncture necessitated the continuation of searches for the management of rivers. The absence of any agreed-upon legal norms in the process described so far shows that no consensus has been reached between the doctrines called “absolute territorial sovereignty doctrine” and “doctrine of the integrity of the natural state”. While the doctrine of “absolute territorial sovereignty” claims that every riparian country has the right to fully benefit from the streams flowing through its territory and that this right cannot be limited in any way; The doctrine of “integrity of natural state” also mentions the right of the lower riparian state to claim the natural flow of a waterway flowing into its territory - without being restricted by the upper riparian state. Since both of the aforementioned doctrines belong to separate poles, they have limited support in international law, state practices or international court decisions (Acer and Kaya 2017: 144). For this reason, it is possible to talk about the absence of comprehensive international rules that determine the rights of riparian countries regarding transboundary waters and can be applied to all disputes (Orhon 2015: 18-19).

The lack of legal infrastructure and the intertwined problems regarding the management of international waterways and water resources on a global scale have led to continued searches in this field. Another of the studies carried out in this regard is the study titled “Berlin Rules on Water Resources” conducted by UHD in 2004. This study covers not only transboundary waters; It has been prepared in line with the protection and use of all water resources. In this context, it is aimed for countries to address the water problem in a holistic manner, both nationally and internationally, taking into account elements such as international human rights, environmental law, war and armed conflict (Dellapenna 2006). In addition, this text “emphasized that bordering countries have equal rights over water, and changed the principle of equitable and reasonable ‘use’ to equitable and reasonable ‘management’ of water” (Salman 2007).

Establishing the principle of “equitable and reasonable management of water” is not only at the scale of utilizing transboundary waterways; It is also closely related to the observation of climatic changes regarding water and the environment. In this context, it can be said that the need to approach the problem with a scientific approach has been realized on a global scale. The International Water and Environment Conference (Dublin) and the UN Environment and Development Conference (Rio De Janeiro) held in 1992 are important in terms of showing this awareness. In these conferences, it was accepted, in the most general sense, that water is a “finite” economic and social resource. For this reason, it is emphasized that holistic policies that focus on social and economic development and the protection of ecosystems should be followed in the management of water resources. Therefore, in 2000, the European Union (EU) declared that it would shape its water policies and announced that holistic management mechanisms would be adopted in line with the “Water Framework Directive”.

The Water Framework Directive was created to ensure legal unity on water and to protect, sustain and defend water in Europe. Water is “not a commercial commodity; The directive, which defines the river basins as “a historical heritage that must be maintained and protected” (WFD 2000: 1), talks about a “river basin management” independent of political borders. The directive mentions the need for states that are parties to the directive to ensure coordination with non-party states in river beds that cross EU borders, and states that it will contribute to international agreements that include the protection and use of transboundary waterways and lakes (WFD 2000: 2; Aytüre 2016: 67). In particular, the Water Framework Directive, which is based on the “Convention on the Use and Protection of Transboundary Waters and International Lakes”, “stands out with its effort to make water law effective within and beyond the EU and to create the legal infrastructure on the protection and management of water” (Tuğaç 2013: 26).

When we look at the water resources included in the contract; It is seen that it includes all water resources, including “surface waters, transitional waters, coastal waters and groundwater” (WFD 2000: 6). It is important for the directive to consider other areas such as energy, agriculture, regional policy and tourism holistically in order to ensure sustainability by protecting water (WFD 2000: 3). The theme of “sustainability” emphasized in articles 18, 19 and 41 is the future of sufficient and reliable water resources. It functions as a prerequisite for guaranteeing generations (WFD 2000: 3-5). In this context, its purpose is;

The directive, “to sustain and improve the water environment” (WFD 2000: 3), emphasizes the need to establish a transparent, effective and consistent framework. The idea of “river basin management plans” put forward for this purpose continues by stating that “without prejudice to the relevant international conventions, member states will implement the necessary measures to prevent the deterioration of the status of all surface waters” (WFD 2000: 10).

On the other hand, articles emphasizing the transboundary nature of waterways are respectively; “21, 23, 35 (Introduction)”, “5, 11, 13, 15 and 16” (WFD 2000: 3-22). The prominent emphasis in the directive’s approach to transboundary waters is “ensuring cooperation and coordination between countries”. In this regard, article 23 states that “common principles are necessary to coordinate the efforts of Member States to improve the protection of Community waters in terms of quality and quantity, to promote sustainable water use, to contribute to the control of transboundary water problems (...) and to protect and develop potential users of Community waters.” and points out that the key to resolving disputes over transboundary waters is “cooperation” and “coordination” (WFD 2000: 3).

In this regard, the streams flowing through the territory of more than one country should be “included in the international river basin region and regulated in line with the directive” (article 3), “in cases where it is not possible to declare a single river basin, the basin within the national borders should be prepared to ensure compliance with the directive.” (Article 13), “reporting the prepared river basin management plans to the commission” (Article 15), “reviewing the environmental impact of human activities by taking into consideration the characteristics of the river basin” (Article 5) and “taking necessary measures” (Article 11). obligations show that WFD also contributes to the issue of transboundary waters.

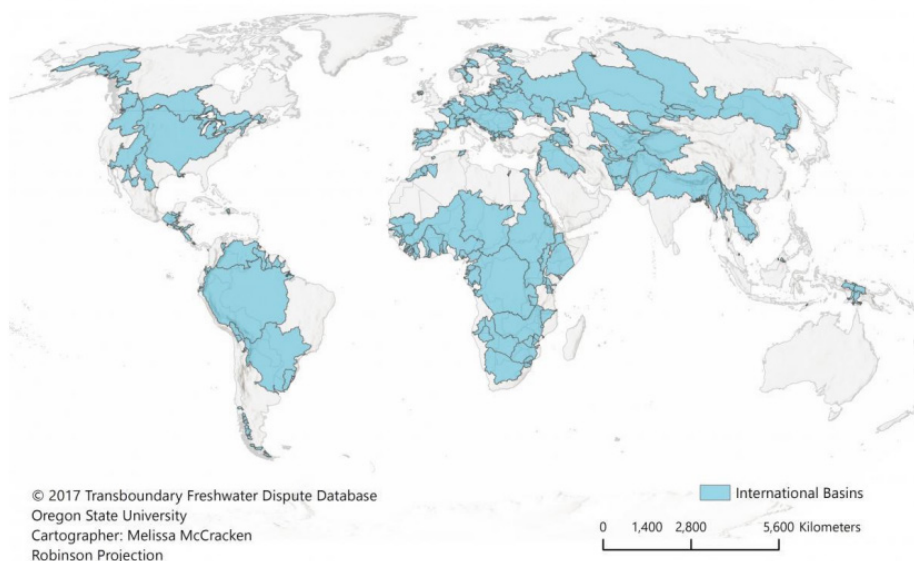


Figure 1: Transboundary River Basins of the World (Yıldız 2018)

6. An Organization about ‘The World’s Water’: World Water Council

“Coordinated work” and “cooperation” actions have come to the fore as a result of efforts to legally establish the necessity of effectively and sustainably protecting, managing and developing water resources in all their dimensions, for the benefit of all humanity. The “World Water Council” was established to undertake this task thematically and systematically. Founded in 1996, the organization is international and has a non-governmental/political, non-profit and non-discriminatory structure. The World Water Council is responsible for ensuring coordination between institutions and countries and carrying out water-related studies.

It can be seen that among the objectives of WWC, which gathers all issues related to water politics in the world under a single roof, are items related to the problem of transboundary waters. In this context, Article II of the council’s articles of association, titled “Purposes”. In paragraph (d) of the article, the phrases “(...) to support programs and initiatives that contribute to the resolution of issues related to transboundary waters” and in paragraph (e) “to contribute to the solution of issues related to transboundary waters, including river and lake basins and aquifers” are included. In addition, it is seen that the scope of the organization’s work includes “making regular and continuous recommendations

to relevant institutions and organizations regarding the planning, development and management of water resources, including transboundary waters and aquifers” (WWC 1996).

WWC carries out different studies to help solve problems related to water flowing on earth, to emphasize the political importance of water and to produce political decisions on this issue. The most important of these activities is the World Water Forum (WWF), which is held every three years. WWF aims to increase the interaction between various countries, share experiences and ensure exchange in information technologies by being held in a different country of the world every semester. In this regard, it can be said that the forum serves four main purposes: “(a) *To increase the importance of water on the political agenda, (b) To formulate concrete suggestions and bring them to the attention of the public, (c) To create political commitments and (d) To ensure the effective and efficient use of water resources.*” (TBB 2023).

6.1. World Water Forum I (Marrakesh/Morocco – 1997)

At the first World Water Forum held in Marrakesh, Morocco, it was emphasized that all political, economic, legal, theoretical and environmental factors should be taken into account in monitoring water policies. The urgent need to implement the Dublin Principles and the decisions taken at the Rio Summit in order to make a “Blue Revolution” to sustain the world’s water resources has been expressed. The vision of the forum, which determines a vision every time it is held, is “*water, life and the environment*” in its first session.

The most basic output of the forum in terms of transboundary waters is “to ensure partnership between governments, society and non-governmental organizations for the management of common water resources”. In this regard, the forum talks about a “water vision” accepted by the world states and underlines that it will benefit from the wisdom and knowledge of all the studies, treaties and contracts that have been worked on and accepted in the past. In this regard, the forum held on March 22, “World Water Day”, called for the principles and missions adopted by the Marrakesh Declaration to be adopted in the official water policies of the world states (WWC 1997).

6.2. World Water Forum II (Hague/Netherlands 2000)

The 2nd water forum, organized with the theme “*from vision to action*”, generally serves to meet the water needs and ensure water security around

the world. The forum, which reconciles the provision of water security in transboundary waters with the aims of “protecting water ecosystems” and “ensuring sustainable development and political stability”, addresses the issue at the point of “managing water wisely” and “sharing water resources”. In this context, it aims to end conflicts over transboundary water resources through “sustainable river basin management”. In this regard, he expresses the necessity of developing synergies between different uses of water and taking peaceful cooperation steps. In addition, there is confidence that the common participation and interest of all water-related stakeholders will be represented through “sustainable river basin management”.

On the other hand, a collaborative approach with integrated water resources management comes to the fore in the management and planning of water resources. It is underlined that surface water, groundwater and all ecosystems included in them must be integrated together, taking into account social, environmental and economic factors. Integrated water resources management is emphasized on the basis of ensuring water security and sustainable management of resources. In this context, it is stated that we are committed to cooperation and partnerships at all levels, from citizens to international organizations, based on political commitments and social awareness.

The way to overcome the existing fragmentation, especially regarding transboundary waters, seems to be closely related to consistent national and regional policies. It has been decided that investments of projects that have a positive impact on international waters will be facilitated and encouraged on the basis of national water management. In this regard, it is stated that in order to create a global water culture based on high awareness and commitment, priority will be given to coordination at regional and other levels in sharing water-related experiences, encouraging regulations and increasing knowledge production capacities (WWC 2000).

6.3. World Water Forum III (Kyoto/Japan 2003)

At the 3rd World Water Forum, where water was accepted as an important part of the world’s political issues, it was stated that the council had an important mission to raise awareness about water and place it at the top of the political agenda. In this context, it has been emphasized that the greatest success of the World Water Forum since its inception has been that it has increased awareness of global water problems and that it includes everyone and everything related

to the international community. Solving water-related issues on a global platform depends on the unification of political decision-makers ranging from local to international relations in a culture of cooperation and compromise. It has also been stated that importance should be given to inclusiveness and multidisciplinary approaches in solving local, national, regional or international problems (WWC 2003: 34).

In the forum, where it was emphasized that water is based on cooperation rather than conflict in the international arena, the following needs regarding transboundary waters were emphasized: “(a) *Transforming the focus from “water sharing” to “redistribution of common benefits at the national level”*, (b) *Respecting the integrity of ecosystems in transboundary regions*, (c) *Increasing capacity building among stakeholders, including the training of mediators*, (d) *Increasing financing, adapting and coordinating activities on shared water resources in the international arena*”. In this regard, the forum finds the way to manage transboundary waters for socio-economic development and protection of ecosystems by increasing financing (WWC 2003: 33).

Another suggestion of you may use by the Forum on transboundary waters is to launch an initiative based on helping water management, establishing resources and connections to solve problems, providing political and professional support and operating judicial mechanisms. The initiative in question constitutes a way to achieve consensus on the use of common water resources and transboundary waters (WWC 2003: 33).

On the other hand, it was stated that the guidance of the World Water Forum should be taken into account on the issue of transboundary waters. In this context, it is seen that points such as strengthening the bond between the Forum and international water policy instruments and taking the suggestions of the forum into account in the steps to be taken are emphasized. In addition, it is underlined that the Global Water Partnership (GWP)³, a regional network, can undertake a mission to develop international networks, conduct research and elaborate programs. It was stated that when bringing regional problems to the forum agenda, criteria such as “being related to a global problem” or “being

3 Global Water Partnership; It is an international network established to improve water management on local, national, regional and international platforms and to mediate the integrated maintenance of water resources. Ensuring coordination among actors involved in the field of water management and sustainability mediates the development of capacity, sharing of information technologies and the best implementation of water management in countries (GWP 2023).

able to exchange information” should be taken into consideration. In this regard, in addition to continuing and intensifying the interaction between all actors involved in water policy processes, it is prioritized to shape the sessions on the basis of new experiences, ideas and shares (WWC 2003: 35-37).

6.4. World Water Forum IV (Mexico City/Mexico 2006)

The forum begins by determining that many of the water resources are transboundary, causing conflicts between nation states and subnational governments. The proposed method to solve the problem is the “integrated water resources management (IWRM)” system. In this regard, the forum states that “finding ways to preserve national unity and peace by creating means to participate in cooperative multi-level governance, intergovernmental and international cooperation” is at the heart of IWRM. In addition, it states that addressing water management in transboundary basins based on IWRM will be an important step in achieving goals such as environmental protection, socio-economic development and sustainable development. In this sense, the application of IWRM to the issue of transboundary waters falls into a “dialectical process” in which theory interacts with context (WWC 2006: 15-17).

It would not be wrong to mark the key concept of the dialectical process as “water governance”. According to the forum; What should be understood from water governance is not only a socio-political activity that is the responsibility of the state. In the management practice of both national and international basins; It is an important threshold to distribute the interaction to local, national, regional and international geography by combining the “state” as empowering, guiding and regulating, and the “civil society” with its participatory, jointly responsible and strengthened structure. In this context, it was emphasized that water governance and a common vision based on the recognition of interdependence between water users and riparian communities are needed. Accordingly, establishing cooperative partnership relations between states, civil society and non-state actors has been marked as the most important factor regarding transboundary waters (WWC 2006: 17-19).

In the forum, where water was generally discussed on a social and economic basis, it was stated that it had a politically complex appearance. It has been underlined that water, which has all the characteristics of “human right”, “economic good” and “common benefit”, is a political issue, especially regarding the use of water resources. In this respect, “water”; The fact that it includes all actors and decisions regarding its management and usage places water in a priority position at the global level (WWC 2006: 108).

6.5. World Water Forum V (Istanbul/Türkiye 2009)

When we look at the final declaration of the 5th World Water Forum, we see that the issue of transboundary waters is examined under the title “*Beyond Water Wars: Promise of Cooperation*”. In this regard, your main objectives are; It is seen that “determining applicable strategies compatible with global changes, strengthening existing cooperation and basin managements and developing their capacities, encouraging legal and institutional flexibility in both global and regional frameworks, and increasing awareness on cross-border cooperation and basin management”. In addition, during the forum, it was observed that the participants identified priority areas that urgently need to be improved in cross-border management mechanisms. Some of them include the Nile River Basin, the Jordan River, the Aral Sea Basin and the Senegal River etc. (WWC 2009a: 51).

On the other hand, content about transboundary waters on topics such as coastal management, sustainable development and energy also attracts attention. In this context, the points that should be mentioned first are; It contains articles mentioning international cooperation and river basin management. Considering that the theme of the forum was “*bridging divides for water*”, it can be argued that the development of a culture of cooperation and consensus is the main goal of the forum.

The importance of cooperation through regional regulations and agreements on coasts that are neighbours of more than one country and therefore have a transboundary character has been emphasized. In this regard, it was stated that emphasis should be given to the works designed with the contracts and agreements signed so far in the field in question. Therefore, adherence and compliance with IWRM criteria are important in the management of resources located on the borders of more than one country. It has been stated that paying attention to these criteria will protect ecological, political and social balance by encouraging cross-border cooperation (WWC 2009b: 43).

In addition, it is important to produce policies and take action with the awareness that water resources have multiple uses such as energy, ecosystem and hydroelectricity. While intersectoral cooperation is prioritized at the national level; Regional/global collaborations are needed at the international level. In this context, it has been stated that intergovernmental and cross-border cooperation should be encouraged to maximize the benefits of water and energy connectivity. In the forum, where it was emphasized that transboundary waters could serve as a means of peace, it was stated that “water professionals” were important. In this regard, “water professionals” have been made responsible for transforming transboundary water zones into “peace zones”. It is recommended

that tools such as developing regional basin information and monitoring systems, awareness-raising activities and providing supporting functions be used in line with this mission (WWC 2009a: 51).

Another important threshold in the management and development of transboundary waters; It has been stated that it constitutes water security. In this regard, it is important to benefit from surface water and observe balance in its use. The issue of transboundary waters is a tool of regional development and is seen as effective in creating a “water culture” based on cooperation and consensus. Therefore, the necessity of ensuring sustainable development by developing cooperation opportunities is frequently emphasized (WWC 2009b: 45). In other words, preventing possible conflicts by establishing rules and guidelines for the sustainable use of water resources has been expressed as an urgent need in the issue of transboundary waters (WWC 2009b: 48).

On the other hand, it is seen that a text titled “Istanbul Water Consensus” was published at the forum held in Istanbul in order to encourage global cooperation and emphasize the importance of the water issue. In the text, which generally invites governments to take action and cooperate on water issues, it is emphasized that changes in climate change, population and energy should be taken into account in the plans of local/regional authorities (WWC 2009b: 51-54).

Another output of the forum is that legal regulations established between states and supported by international law will encourage transboundary cooperation and basin management. In this context, it has been suggested that the regulations guaranteed by international law should be harmonized with national legal regulations. It has also been stated that alternative scenarios should be developed in order to prevent conflicts between partnerships established in transboundary water basins, conflicting interests and sustainable uses. These scenarios should promote agreed priorities and collaborative “benefit trading” between actors. Accordingly, mechanisms for ensuring hydro solidarity should facilitate political interests and identify practitioners (WWC 2009b: 63).

6.6. World Water Forum VI (Marseille/France 2012)

The 6th World Water Forum, held with the theme “*time for a solution*”, provided an environment where participants discussed different issues such as urbanization, water, solidarity and regional management. Efforts have been made to determine whether the decisions and practices taken within the framework of the Istanbul Water Consensus have been realized or to what extent progress

has been made. Decisions were taken to strengthen the consensus, realize collaborative projects, increase water solidarity, carry out innovative studies and ensure universal access to water and health services (WWC 2012).

In the management of transboundary waters, it is seen that the themes of “cooperation” and “contribution to peace” are emphasized. In this context, improving the legal and institutional framework and realizing multi-level water governance has been considered a necessity. It seems that many commitments have been made to solve the problem. A few of them are: “(a) Establishment of inter-ministerial committees and regional consultations, (b) More effective involvement of the Global Environment Facility in the management of transboundary basins and aquifers, (c) Global Environment Facility, which provides financial support for the management of transboundary waters.” Increasing at least twofold.” In addition, France has guaranteed to allocate 1% of its budget to support international projects on water and sanitation and to encourage the solution of water problems worldwide (WWC 2012: 21).

6.7. World Water Forum VII (Daegu & Gyeongbuk/Korea 2015)

The 7th World Water Forum, organized around the theme of “*water for our future*”, was held to draw attention to the vital importance of water in a new paradigm that will include the new needs of the global society. Providing impressive outcomes in many respects, the forum focused mainly on: “(a) *Increasing support for collective action on the water issue, (b) Creating greater political commitment in terms of political dialogues, (c) The importance of science and technology in solving problems, (d) Between different regions promoting dialogues and exchanges of ideas*” (WWC 2015: 4).

Regarding transboundary waters, the importance of cooperation between countries based on win-win solutions was emphasized. In this regard, it has been stated that sustainable development, strong management approach, international peace and global stability among bordering countries are possible (WWC 2015: 12). In addition, in addressing the water management problem in a global context, paying attention to the representation of all regions is important in order to reach a solution. According to this; The main body of the World Water Forum is “regional framing”. The system in question makes it possible to provide input from any point in the world. In other forums, the world was framed based on geographical boundaries by dividing it into four large continents. On the other hand, 7th The World Water Forum is talking about a new plan that will facilitate interregional dialogue, ensure that solutions to water problems

spread across geographical borders and improve the field of application. What is at stake in the new system is that water problems are not only objective and within geographical boundaries; It is based on the need to consider each region according to its political and socio-cultural characteristics. In this regard, it is seen that concepts such as “water security”, “geographical boundaries”, “water governance”, “regional management” and “socio-cultural characteristics” are tried to be interpreted holistically. Therefore, in the last case, what is at stake are human, institutional and economic factors that center on resource distribution rather than the existence of water resources. It has been stated that the solution to the paradoxical confusion of terms such as “water stress”, “water abundance” and “water scarcity” can be possible with a water management plan prepared according to the new system (WWC 2015: 21).

In the forum, which was held with the awareness that different regions face different problems, importance was given to countries experiencing similar problems being able to share their know-how or experiences. In this regard, in addition to regional sessions, interregional sessions were held. In the interregional sessions, interregional themes were determined and the theme of “transboundary waters” was associated with “Africa, Arab and European Regions” (WWC 2015: 23).

6.8. World Water Forum VIII (Brasilia/Brazil 2018)

At the 8th World Water Forum, held with the theme “*water sharing*”, the issue of transboundary waters was not specifically included. In the forum, where transboundary waters were only indirectly included in the narratives of “capacity development” and “regional cooperation”, six special themes were determined: “people, climate, development, urban, finance and ecosystem”. Activating these themes is associated with “sharing, capacity and governance” (WWC 2018: 19).

As expressed in previous forums, the need for policies and collaborations for the efficient and effective use of surface waters was reiterated. In this context, the need to create the infrastructure necessary for sustainable water resources management is emphasized. In creating sustainable management policies, it is important to organize trainings to raise awareness, develop capacity and disseminate technological know-how exchange (WWC 2018: 20-21).

On the other hand, stakeholder participation is another tool for ensuring sustainability. In this direction; It can be said that it is important to include all actors related to the issue of transboundary waters in the equation and to share solution suggestions in a multi-media platform. In addition, it can be

stated that approaches based on justice and equality, with the awareness of the cultural heritage carried by water, gain value in this context. Ensuring regional cooperation has been discussed as being directly related to sharing experiences and good practices. In this regard, “regional and international cooperation” constitutes the key to developing global capacity and creating “water culture”. Establishing cooperation to reduce conflicts and improve transboundary water management seems directly related to “water governance” and “integrated water resources management” (WWC 2018: 22).

6.9. World Water Forum IX (Dakar/Senegal 2022)

The theme of the 9th World Water Forum has been determined as “*Water Security for Peace and Development*”. In the forum held around topics such as “water security and sanitation priority” and “urban development priority”, it is seen that the transboundary water problem is included under the “consensus priority” heading. In the session with 65 participants, the participants were asked “Which three problems are prioritized?” among various problems related to the “consensus” problem. Considering the answers given, the issue of transboundary cooperation, shared waters and common infrastructures came first with 42 votes (22%); Establishing dialogue and cooperation at the institutional level ranked second with 36 votes (19%), and prioritizing the use of waters for peace ranked third with 28 votes (15%). Other answers received in the voting were as follows: “The necessity of developing legal and institutional instruments 18 votes (10%), establishing strategic partnerships for project financing 16 votes (9%), alignment and synergy with IWRM 14 votes (7%), private sector water supply” “Promoting the management and improvement of water resources 10 votes (5%) and ensuring cooperation for a global vision at technical, operational and financial levels 9 votes (5%)” (WWC 2022: 23). Apart from these priorities, the participants also mentioned “integrated water resources management (8)”, “transboundary conflicts and cooperation, water and peace (8)” “capacity development and community-oriented programs (3)”, “governance (2)”, “protection of river basins (It should also be noted that it added priorities such as “1)” and “respect for existing commitments (1)”⁴ (WWC 2022: 40).

Another question asked to the participants during the forum was; “What concrete steps can provide solutions to the above three urgent problems?” In this regard, the answers given on the issue of transboundary waters are as follows:

⁴ The numbers written in parentheses without a percentage sign indicate the number of times the problems were mentioned by the participants.

“Participation in water agreements signed in 1992 and 1997, adoption of IWRM in large basins, implementation by comparing good examples of transboundary cooperation, creation of multi-sectoral and multi-country consultations and collaborations, creation of multi-sectoral and multi-country consultations and collaborations at the basin level.” sharing the experiences of organizations, establishing early warning mechanisms for relevant risks in water conflicts, identifying transboundary resources and stakeholders, establishing dialogue and cooperation bodies at local/national level at the transboundary basin scale, encouraging the ratification of international agreements on cross-border cooperation, sharing the benefits obtained from transboundary water management. “promoting transboundary waters to cooperation led by a governing body, developing conflict prevention mechanisms, strengthening diplomacy for good management of water resources, and considering benefit sharing approaches among states with riparian/transboundary waters” (WWC 2022: 24).

7. Conclusion

“Transboundary waters” has been accepted in the literature as a problem that concerns many countries of the world and spreads over a wide area. The very comprehensive and multi-actor nature of the issue results in the inability to reach a solution that binds all countries and applies to everything. Efforts are being made to take holistic, comprehensive, objective and legal steps to solve the problem. In this regard, the doctrine of equitable use is seen as the most reasonable solution in terms of international law. The principles produced by institutions and organizations such as the UN International Law Commission and the International Law Institute, with the necessity of observing “maximum benefit” and “minimum harm”, are important in terms of international law norms. In this regard, international law must act by taking into account both upstream and downstream countries. The effort in combining the “sovereignty right” of the upstream country and the “right to benefit” of the downstream country under a single roof causes the issue to become paradoxical in itself and suggests an uncertain future in which “non-solution” may (or may not) lead to a solution.

Despite the solution proposals that cannot be offered globally, the requirement that all countries act on the condition of “doing no harm” or “respecting existing rights” is seen as an important step in the field of transboundary waters. The belief that the countries are based on “cooperation”, “solidarity” and “water culture” in the steps to be taken with the acceptance that

water is a “finite” resource for both the upstream and downstream countries seems to be confirmed by the existing water forums.

World Water Forums, held under the leadership of the World Water Council, is an activity organized with the mission of addressing all issues related to water. The final declarations produced in each forum also provide important outputs on transboundary waters. In this regard, it is noteworthy that the forums supervise the projects and policies put forward in the previous forum and the solution suggestions that accumulate one after the other. Setting out with the motivation of creating a “global water vision”, the council prioritized the transition from “vision to action” in its next step. Accordingly, it has been expressed that awareness about water should increase and the states of the world should organize their actions in an organic way. It can be seen that the motivation for “developing international networks” was carried over after this forum, where organic commitment was underlined. In this context, it is seen that the states of the world cannot act separately from each other regarding transboundary waters and therefore it is emphasized that they must take steps by taking care of each other and showing commitment to each other.

The forum held in 2006 was the session where the culture of “cooperation” and “solidarity” were brought together at the theoretical and practical level and IWRM was discussed in detail as a method. In this context, it is seen that water is discussed in the triangle of economy, rights and benefits and is considered to be a political arena. The acceptance that water is a political issue necessitated that the solution to political disputes be sought by making a “promise of cooperation” in another forum. In this context, water has begun to be perceived as the sole representative of peace rather than an object of conflict. Therefore, and as underlined in the next forum, it is “time for a solution” to contribute to cooperation and peace.

Taking action with the theme of “water is our future”, considering the human, legal and political aspects of water resources rather than the existence of water resources, prioritizes the establishment of an equation in which all humanity wins. In this regard, sharing past experiences and know-how is important for solving the problem. Capacity development, the spread of a culture of consensus and the construction of water security place “global sharing” in an important place at all levels. Ultimately, ensuring water security for development and fulfilling the promise of consensus/cooperation are the key to peace and development at the global level. Therefore, solving the transboundary waters problem seems possible by maintaining organic ties within the framework of “good faith” and applying international agreements and principles “consistently”.

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CHAPTER XVI

CRISIS MANAGEMENT AND DISASTERS: KAHRAMANMARAŞ EARTHQUAKES

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1. Introduction

The structure of public administrations changes due to the differentiation of human needs. Public administrations, like other organizations, have to adapt to changing people's demands. However, there are many crises at both national and international levels, and public administrations are expected to be able to manage these crises. Crisis management is now one of the areas in which public administrations are expected to specialize. The fact that expectations from the state change day by day is also evident in the field of crisis management. The state is expected to be prepared for crisis moments in advance, to be able to manage this process well when a crisis occurs, and to be able to properly repair the consequences of the crisis after the crisis. Crises can be political, economic, social, cultural, or they can arise from natural disasters. Unfortunately, Turkey is one of the countries that intensely experiences crises resulting from natural disasters. There have been many crises resulting from natural disasters from past to present. One of these crises occurred with the Kahramanmaraş and Hatay Earthquakes on February 6, 2023.

Since it is not known in advance when disasters will occur, it is expected to be constantly prepared. It is expected from the state to be prepared for a disaster before it occurs, to manage the disaster well when it occurs, and to evaluate the situation successfully after the disaster. The aim is to try to save as many people as possible after the disaster occurs. However, in order to manage the disaster successfully, good preparation and planning must be done before the disaster. When it comes to disaster in Turkey, the first thing that comes to mind is an

earthquake. However, earthquakes occur in some places, floods in some places, and landslides in some places. For this reason, different preventive measures should be taken according to different disasters.

In this study, after crisis management was examined theoretically, crises and disaster management in public administrations in Turkey were discussed. Legal and administrative regulations regarding disaster management in Turkey and the 06 February 2023 Kahramanmaraş Earthquakes were examined in detail.

2. Conceptual Framework

2.1. Crisis as a Concept

Unexpected, extraordinary events occur; Typhoons, earthquakes, floods, nuclear hazards, widespread threat of chemical substances to human health, plane crashes, railway accidents, ship sinkings, terrorist attacks, war danger, volcanic eruptions and other natural disasters, as well as events occurring in the stock market and financial markets. Extraordinary developments are considered among the causes of crisis (Aykaç,2001: 125).

In the most general terms, the characteristics of the crisis are as follows (Aykaç,2001: 125-126):

Negative effects on organizational structures, values and norms, unexpected developments occurring, failure to predict the crisis to be experienced, inadequacy of measures, crisis threatening the purpose and existence of the organization, lack of sufficient information and time for the measures to be taken to prevent the crisis, rapid implementation of the measures taken. It requires some form of implementation and creates uncertainty.

Crisis is a situation that is unexpected, develops suddenly, moves quickly, is encountered without any preparation, and can mean collapse for the organization if it is not evaluated well, or an opportunity if it is evaluated well (Akdağ, 2005: 3). In this respect, a crisis is mentioned when the institution encounters an undesirable and urgent situation at an unexpected time.

When examined from the perspective of organizations, it is seen that the formation of the crisis is sometimes caused by internal-organizational elements directly related to the institution, and sometimes by external-environmental elements that the organization cannot be very effective in. Whether they arise due to internal factors of the organization or environmental factors, all crises cause uncertainty, and the ripple effects of crises occur in different sizes and structures in many organizations. The priority for organizations is not to look for ways to overcome or bypass the crisis when crisis conditions are reached.

Before the crisis occurs, it is important to prepare a management structure that can sense that the crisis is coming, use the crisis conditions for success and give new impetus to the organization's processes. It is necessary to predict crises and take steps to prevent them from occurring or to restrict their consequences when they cannot be stopped (Küslü, 2000:703, Mackenzie, 1995:73-75).

Organizations operating in society are affected by each other because they are in a system. When there is an incompatibility and conflict between various systems and subsystems, various extraordinary conditions and situations arise (Okay and Okay, 2002: 420).

Identifying crises as a priority, developing action plans for them and updating these plans over time will be effective in resolving the crisis of the organization and normalizing its relations with the public in case of a crisis (Okay and Okay, 2002: 421).

The development of a crisis can occur in two different ways: a sudden crisis that develops suddenly and a crisis that develops and settles.

It is possible to examine the causes of crises under two headings: internal and external factors:

External Factors: Natural disasters such as earthquakes and floods, different customer demands and expectations arising from the cultural and social values of the society, technological innovations, the problems the country is experiencing, defamation, robbery.

Internal Factors: Management problems, competition, the company's lack of a well-established corporate identity and culture, the existing identity and culture not being known and adopted by the employees, management, lack of motivation.

2.2. Crisis Management

Crisis management is the activities that include perceiving and evaluating the crisis signs in case of a crisis that may arise and taking and implementing the necessary measures so that the organization can escape the crisis situation with the least damage (Pearson and Clair, 1998: 61).

Crisis management is the work carried out to analyze a crisis process that is likely to occur or has occurred in organizations, to solve the problems that cause the crisis to occur and to overcome the crisis process with the least loss (Tekin and Zerenler, 2008: 108).

Crisis management is a management model developed to best overcome extraordinary situations that develop suddenly and routine functioning is

disrupted, risk, depression, stress, tension and conflict increase, time is limited, and therefore managers have difficulty in making decisions. Effective crisis management requires being prepared for a crisis and planning in advance. Crisis management is the work that involves identifying potential crisis situations in advance and deciding how to deal with them. Organizations need to allocate the necessary resources, create infrastructure systems and be equipped against possible crises. One of the most important factors in coping with a crisis is that the organization's management is knowledgeable and skilled in crisis readiness and crisis management (Sezgin, 2003:181).

It is a fact that in some cases it is not possible to determine the beginning of the crisis. Crisis refers to a negative event and requires urgent action. Being able to make urgent decisions and take action is important in crises. The intensity of time pressure in a crisis depends mainly on the following three components (Glaesser, 2006:5);

- Limited time to make decisions,
- The sensitivity of the organization to external pressures,
- The magnitude of the crisis.

Crisis management can be considered in three general frameworks:

1. Pre-crisis period

Crisis preparedness: The organization should focus on various tasks that will help it cope with an eventual crisis. The important point at this stage is to prepare the way to communicate correctly with the personnel to be trained. Other points require the development of a detailed auxiliary resource on how to respond to different types of crises and how to reduce vulnerability by examining and rating different potential crisis types that may affect the public and the organization.

Crisis recognition: Helping the organization recognize and understand the crisis. This situation is very important for taking the necessary precautions when making agreements and similar important decisions, as various difficulties and problems are experienced in the internal and external environment of the organization.

2. Crisis period

Crisis intervention: It involves planning the strategic phase by dealing with the actual events of the crisis. At this stage, two key points need to be

emphasized. The first is the scope and control of the crisis. The second is to limit the time period of the crisis.

3. Post-crisis period

Crisis assessment: After the crisis is under control, the organization evaluates its actions during the crisis and draws lessons for future potential crises. Experiences need to be reviewed and analyzed to ensure further improvement of applied crisis management.

2.3. Crisis Management in Public Administration

Public institutions and organizations that perform certain public duties and provide goods and services to the society are sometimes accused of acting slowly and making slow decisions. One of the reasons for this is due to the large size of the organization. The work of public administrations is limited to very detailed legislative provisions. The adherence of public managers and employees to the legislation also prevents a flexible management style and makes the structure cumbersome. However, crisis management envisages a flexible management approach. On the other hand, public institutions and organizations are slow to follow new developments. Managers cannot demonstrate their management skills in the face of unexpected problems. In addition, public administrators are not prepared to implement extraordinary management models required by crisis periods (Aykaç, 2001: 127).

One of the general characteristics of public administration is that it tends to maintain the status quo and is closed to change. This is the situation in many states. In addition, compared to other sectors, public administrations are less sensitive to developments, changes, demands of society, changing tendencies of target groups and market conditions, in short, their level of flexibility is lower. Adapting to changes in environmental conditions represents a much greater difficulty for public organizations (Aykaç, 2001: 123).

The crisis management model, developed to prevent sudden problems and to take and implement the necessary measures when a problem arises, is as important for public organizations as it is for organizations operating in the private sector. In order to be implemented in public administration in the face of unexpected problems and in crisis situations, giving more authority to the units, increasing the initiative and reducing the procedures in many applications such as resource use, overcoming bureaucracy, saving the structure from cumbersomeness and rigid hierarchy, popularizing the flexible management approach and delegation of authority, in extraordinary situations and crisis

periods. In order for quick decisions to be made and implemented, preventive arrangements must be made (Rosenthal and Kouzmin, 1997: 277-279).

Crisis management in public administration is the conscious, systematic and coordinated management of large-scale problems that may arise from the institutional structure or institutional environment before they occur or get out of control, in order to ensure that public services are carried out without interruption and to prevent the reputation of the institution and the public's trust and support from decreasing. Its main purpose is to define the crisis in public administration in a healthy way, to detect and prevent the crisis in advance, and to ensure that the public institution suffers the least damage by taking the necessary steps when the crisis occurs (Akdağ and Arklan, 2013: 39).

The crisis management process in public administration, as in other sectors, takes place in three important stages: before the crisis, during the crisis and after the crisis.

The first phase, which is described as the period of precautions before the crisis, is the phase where the necessary precautions are taken and the necessary preparations are made before the crisis arises.

At this stage, once the crisis signals are received, it is the most appropriate, easiest and cheapest method for the management to prevent the crisis by taking the necessary measures in time. Before the crisis, it is necessary to make necessary crisis plans and establish crisis management and crisis teams by foreseeing the crisis factors and calculating the crisis that may arise. Keeping these constantly updated and always being prepared for a crisis is the best way to manage a crisis in order to overcome the crisis easily and successfully. The values obtained at this stage and the strategy followed will also affect the success of the applications during the crisis period (Peker and Aytürk, 2000: 389, Peltekoğlu, 2007: 453).

The second stage, which can be called the crisis moment, is the crisis process that begins when the crisis occurs. The crisis process begins with the emergence of crisis-related signals and symptoms. As the crisis tends to occur, great fear and panic arises among managers and employees, and stress increases. Large-scale disruptions also occur in organizational activities and work. The dangers it brings generally affect the financial or general functioning of the institution. Crisis management is about limiting or reducing damage and preventing the crisis from spreading to unaffected parts of the organization. On the other hand, it is as important to implement these measures smoothly and successfully as the measures taken during crisis periods (Peker and Aytürk, 2000:389).

The third phase, which can be called the post-crisis evaluation period, is the period in which the work in the resolution phase of the crisis and the

measures that will prevent the organization from entering the crisis environment again are discussed and a solution is sought. Post-crisis management is the development and implementation of short and long-term programs designed to carry out the organization's usual activities. The beginning of this stage is to review the aftermath of the crisis and conduct a situation analysis. As a result, the post-crisis period is the period of learning from the situations and mistakes experienced during the crisis, restructuring, getting things together, in other words, taking advantage of opportunities (Filiz, 2007: 51).

2.4. Disaster Management

Disaster is a natural, technological and anthropogenic event that requires the coordinated work of many institutions and organizations, causes physical, economic and social losses for people, and affects societies or human communities by stopping or interrupting normal life and human activities. Among these events, those that occur as a normal function of nature, such as earthquakes, floods, volcanic eruptions, are considered natural hazards, and in order to qualify as a disaster, they must cause loss of human life and property (Şahin and Sipahioğlu, 2002: 15).

Disasters are situations in which loss of life and property occurs due to events that occur in the natural and artificial/physical environment, within nature's own cycle, or that are caused by humans (Özden, 2016: 110).

Disaster management is all the work that enables people to be aware of the natural events that occur in the environment they live in, to know them in detail down to their causes, and to avoid being affected at all or to a minimum extent in case these events recur. In the concept of modern disaster management, studies aimed at pre-disaster protection such as reducing losses and damages, preparation, prediction and early warning, understanding disasters, risk management; Post-disaster studies such as impact analysis, intervention, recovery and reconstruction are considered crisis management. In this context, an effective disaster management study covers all the work needed before, during and after the disaster (Kadıoğlu, 2008, Demirci and Karakuyu, 2004).

Disaster management is also defined as the profession and discipline of managing and applying technology and science against sudden and extreme events that affect social life, cause extensive property damage, and cause the death or injury of many people. Disaster management is the process of developing and implementing plans and programs to combat and avoid situations that pose a danger to life and property resulting from human-made or natural disasters (Sylves, 1996: 42).

In order to prevent disasters and reduce their damage, the measures to be taken before, during and after the disaster and the work to be done are planned, directed, coordinated, supported and implemented effectively, which requires the use of all institutions and organizations of the society, its opportunities and resources in line with the determined strategic goals and priorities. It is a multi-faceted, multi-disciplinary and multi-actor, dynamic and complex management process. (Annotated Dictionary of Disaster Management Terms, November 2014).

Disaster management is the management of a disaster event, including risk analysis and mitigation, preparation, first aid and response, and reconstruction phases in order to prevent or reduce disaster damages. In order to prevent or minimize the loss of life and property that may occur as a result of a disaster, all disaster management phases must be carried out in an integrated manner. Planning, supporting and organizing the disaster management plan to include all segments of society, making necessary legislative arrangements and creating or revising institutional structures are necessary for effective and efficient practices. In summary, activities such as minimizing the risk of disaster, reducing its damages, preventing or reducing the negative consequences, estimating the possible damage and determining the need, creating an emergency response plan, and carrying out training and practices related to this are all within the scope of disaster management. In addition, the establishment of early warning systems, improvement of existing ones, if any, foresight, effective and rapid post-disaster needs analysis, reconstruction and recovery activities should also be included in the scope of disaster management (Ergünay, 2005).

The aim of disaster management is to minimize the risk of loss of life and property caused by a disaster and to save those most exposed to the disaster. In addition, it is aimed to protect the natural environment, cultural and natural assets, to ensure that social life returns to normal as soon as possible and to take it further than before, and to ensure the continuation and sustainability of public and private sector services needed by the society. Therefore, disaster management is not limited to activities during and after the disaster. It is a fact that pre-disaster planning is at least as important as immediate and post-intervention, and even has a much greater impact on reducing disaster damages (Kadioğlu, 2017).

3. Crisis Management and Disasters in Public Administration in Turkey

3.1. Disaster Management in Turkey

Türkiye, especially earthquake; It is among the riskiest regions in the world in terms of loss of life and where many natural and human-made disasters such as floods, landslides, avalanches and fires occur. According to the Global Risk Index, Turkey is one of the countries in the high-risk group, ranking 45th out of 191 countries (AFAD Disaster Management and Natural Disaster Statistics in Turkey, 2018: 8-10). Again, according to this Index (2018: 36), the most natural risks for Turkey are; earthquake, tsunami, flood and drought are highlighted.

Disaster, in the Presidential Decree No. 4 on the Organization of Related, Associated Institutions and Organizations and Other Institutions and Organizations Affiliated to the Ministries (Article 31); It is explained as “natural, technological or human-induced events that cause physical, economic and social losses for the whole or certain segments of society, and stop or interrupt normal life and human activities”.

The 17 August 1999 Marmara Earthquake caused a great transformation in terms of disaster management in Turkey (Genç, 2013: 498-519, AFAD Disaster Management in Turkey and Natural Disaster Statistics. 2018: 28-29).

Disaster and Emergency Management Presidency (AFAD) was established with the Law No. 5902 on the Organization and Duties of the Disaster and Emergency Management Presidency, which came into force in 2009 in Turkey. The Disaster and Emergency Management Presidency was affiliated with the Ministry of Internal Affairs with the Presidential Decree No. 4 published in 2018. Within the scope of the Presidency, there are four general directorates in the central organization. These; general directorate of earthquake and risk reduction, general directorate of housing and construction works, general directorate of disaster response, general directorate of management services (<https://www.afad.gov.tr>).

There is a Disaster and Emergency Advisory Board within the Presidency, which allows the participation of different parties. This board is chaired by the Minister of Internal Affairs, with the relevant deputy ministers of the Ministry of Family, Labor and Social Services, the Ministry of Environment and Urbanization, the Ministry of Energy and Natural Resources, the Ministry of Treasury and Finance, the Ministry of Health, the Ministry of Agriculture and Forestry, the Ministry of Transport and Infrastructure, and the Turkish Red

Crescent Society. It consists of representatives of Boğaziçi University Kandilli Observatory and Earthquake Research Institute (<https://www.afad.gov.tr>).

On the other hand, the Presidency has units outside the center called the Provincial Disaster and Emergency Directorate. In addition, it is understood that cooperation activities are being carried out at different scales through the Volunteer and Donor Department established within the central organization of the Presidency. On the other hand, under the leadership of the Presidency, a Turkey Disaster Response Plan (TAMP) covering central and local organization was prepared and put into effect in 2014. The purpose of Turkey Disaster Response Plan is expressed as defining actors, roles and responsibilities and determining the basic principles of response planning in the disaster process (Özmen, 2017: 152).

Provincial disaster and emergency directorates reporting to the governor have been established in the provinces as the provincial organization of the Presidency, to include all elements of integrated disaster and emergency management. The governor is responsible for the management and management of the directorate and the management of disaster and emergency activities in the province. Temporary assignment of directorate personnel outside the province is made by the Presidency and/or the governor (<https://www.afad.gov.tr>).

When the Municipality Law No. 5393 is examined, municipalities are given the following in the context of disaster management (Article 53); It is seen that the role is given as follows: “Makes the necessary disaster and emergency plans, taking into account the characteristics of the town, and prepares the team and equipment in order to protect against fire, industrial accidents, earthquakes and other natural disasters or to reduce their damage.” Again, in the Metropolitan Municipality Law No. 5216, Metropolitan and Metropolitan district municipalities are given the task of making plans and other preparations for natural disasters (Article 7).

The National Earthquake Strategy and Action Plan (UDSEP-2023), which came into force in 2011, was prepared to prevent or reduce the physical, economic, social, environmental and political damages and losses that may be caused by earthquakes and to create new earthquake-resistant, safe, prepared and sustainable new living environments. Important steps have been taken to implement the actions included in the National Earthquake Strategy and Action Plan (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

The Ministry of Environment, Urbanization and Climate Change (ÇŞİDB) also has powers, duties and responsibilities regarding pre-disaster

and post-disaster. Ministry; Preparing legislation on settlement, environment and construction, urban transformation, works and procedures related to building inspection, ensuring the development of professional services, spatial planning, earth scientific survey studies and activities related to geographical information systems, damage assessment studies, debris removal, infrastructure works, repair of damaged buildings It carries out activities related to destruction, prevention of environmental pollution, protection of nature and combating climate change. Metropolitan municipalities, on the other hand, are responsible for making environmental plans that determine general land use decisions regarding sectors such as urban and rural settlement, development areas, industry, agriculture, tourism, transportation and energy, according to the zoning legislation (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

In provinces without metropolitan municipalities, municipalities are responsible for making master and implementation zoning plans, while the Ministry of Environment, Urbanization and Climate Change is responsible for the preparation of the environmental plan (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

3.2. 2023 Kahramanmaraş and Hatay Earthquakes

On February 6, 2023, at 04:17 and 13:24 Turkey time, the epicenter was in the Pazarcık and Elbistan districts of Kahramanmaraş, with magnitudes of Mw7.7 (focal depth = 8.6km) and Mw7.6 (focal depth = 7km). Two earthquakes occurred. On February 20, 2023, at 20:04 Turkey time, an earthquake of Mw6.4 magnitude occurred with the epicenter in Hatay Yayladağı. The earthquakes in question caused great destruction in 11 provinces in total (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

3.2.1. General Information

269 earthquakes that caused loss of life or damage occurred in Turkey between 1900 and 2023. The biggest earthquakes in terms of loss of life and heavy damage are the 2023 Kahramanmaraş, 1939 Erzincan and 1999 Gölcük-centered Marmara Earthquakes, respectively (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

As a result of the earthquakes, more than 48 thousand people lost their lives in 11 provinces along the Eastern Anatolian Fault Line, more than half a million buildings were destroyed or severely damaged, and significant financial losses occurred. According to analyzes made by many universities, the collapse of buildings into rubble; It has been determined that factors such as the severity of ground movement, low bearing capacity of the ground on which the foundations sit, deficiencies in the design and construction quality of the buildings, the age of the buildings, not being built in accordance with the legislation, and the different floor levels of adjacent buildings are the prominent determining factors in terms of demolition (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

As of March 6, 2023, damage assessment studies were carried out in 1,712,182 buildings in 11 provinces affected by the earthquake. According to this; It was determined that 35,355 buildings were destroyed, 17,491 buildings needed to be demolished urgently, and 179,786 buildings were heavily damaged, 40,228 buildings were moderately damaged and 431,421 buildings were slightly damaged (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

In order to carry out search and rescue activities and subsequent work quickly, a State of Emergency (OHAL) was declared in the provinces in the earthquake zone for 3 months on February 8, 2023, based on Article 119 of the Constitution. It is aimed to urgently carry out works such as meeting urgent and vital need materials, demolishing buildings at risk of danger, and restricting access to areas where buildings at risk of collapse are located (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

3.2.2. Disaster Preparedness Process

There are two main tasks to be done in the pre-crisis period: the first is to make intervention plans for possible crises and the other is to detect an upcoming crisis in advance. Being unprepared for a disaster is the most common problem during the disaster planning phase. The existence of old, outdated and inconsistent plans is another problem (Özcan, 2021:121).

The ultimate goal of crisis management is to prevent a crisis or - at least - reduce its negative consequences; Therefore, sensing crises before they occur may enable organizations to deal with crises more effectively. Unlike other types of crises, natural disasters are unexpected and often unpredictable events

that occur within seconds. On the other hand, it is also known that some regions may be exposed to some natural disasters more frequently. For this reason, it is easier to prepare applicable disaster plans for places where such disasters are expected, even if they are not completely effective (Özcan, 2021:121-126).

Before earthquakes or any disaster; To take all necessary technical, administrative and legal precautions before the events occur, to prevent the events where possible, and to ensure that rescue, first aid and recovery works are carried out in a timely, fast, efficient and effective manner in order to ensure that the society can survive the events that may occur with the least damage and physical losses. To ensure that disaster mitigation is done properly and to include disaster mitigation efforts at every stage of development; Thus, it is of vital importance to prevent the existing risk from increasing and to ensure sustainable development, to implement training programs that will equip every segment of the society with the necessary information to survive the effects of the events with the least damage, and to create a culture of harm reduction in the society (Erkal and Değerliyurt, 2009:152).

Completing geophysical studies before the earthquake is of great importance in minimizing the damage caused by the earthquake. Hazard analyzes should be made before the earthquake. The reasons for the high level of destruction in the 6 February 2023 Kahramanmaraş Earthquakes are primarily the fact that the earthquake-soil-structure interaction was not established by engineers, the unqualified building stock, that is, the insufficient quality of concrete and iron reinforcement, mistakes made in the application, the structures not being built in accordance with the project, the subsequent changes in the structures. For example, non-conformities such as cutting columns and deficiencies in project supervision can be listed (TMMOB, 6 February 2023 Kahramanmaraş Earthquakes Report, <https://www.tmmob.org.tr>).

Determining the existing building stock should be a disaster prevention work. It is stated in the reports that another important work that needs to be done within the scope of earthquake risk and damage reduction studies is the inventory of the existing building stock in all our cities. It is stated that almost all of the deaths and injuries in earthquakes occur in buildings that either completely or partially collapsed (TMMOB, 6 February 2023 Kahramanmaraş Earthquakes Report, <https://www.tmmob.org.tr>).

Another issue that should be taken into consideration in pre-earthquake planning is the production of earthquake-resistant buildings. In order to minimize the risk of structural damage to the buildings in which we live or work, the load-

bearing system of the building must be designed and constructed in a way that minimizes the possibility of damage in an earthquake, taking into account the earthquake hazard in the location of the building (TMMOB, 6 February 2023 Kahramanmaraş Earthquakes Report, <https://www.tmmob.org.tr>).

Periodic control of buildings is also important in pre-earthquake planning. The implementation of the Building Identity Certificate project has been started by the Ministry of Environment, Urbanization and Climate Change with the provision in the 2nd paragraph of the 31st article titled “Issuing certificates for buildings” of the Building Inspection Implementation Regulation published in the Official Gazette No. 31520 on 23.06.2021, with the provision of determining the cost of the Building Identity Certificate. This is an important regulation. In addition, making an arrangement to check issues such as whether manufacturing is done against the zoning and licensed projects at regular intervals, whether damage or deformation has occurred for any reason, is important and important both in terms of preventing illegal and non-zoning manufacturing and in extending the life of the building by eliminating any defects. It is a necessary study (TMMOB, 6 February 2023 Kahramanmaraş Earthquakes Report, <https://www.tmmob.org.tr>).

3.2.3. Disaster Management Phase

The second phase in the disaster management process, the management phase, includes a number of main tasks such as managing, leading and decision-making, communicating with the public and media, emotional management and managing the agenda.

3.2.3.1. Coordination of Disaster Response

When a disaster occurs, a crisis desk should first be established to ensure that all transactions are carried out from a single center. People from public institutions, local governments, private sector and international aid organizations should be included at this crisis management table. Cooperation between these units is very important in terms of coordination.

There are various coordination deficiencies encountered during the crisis management phase. These can be listed as: lack of experience, personnel involved in disaster management having experienced this disaster themselves, reluctance to share information between individuals and institutions, lack of a common database, and misinformation (Özcan, 2021:130).

Following the earthquake, a total of 271,060 personnel, including 35,250 search and rescue personnel, public officials, non-governmental organizations, international search and rescue personnel and volunteers, worked in the region until the beginning of March 2023 to carry out the services needed in the disaster. 18,048 construction machines worked in the region. 75 aircraft and 108 helicopters were used in the work. Shelter services were provided to 1,440,668 people with 332 tent cities and 360,167 tents established in the disaster area. In the region, the creation of 189 container cities and the infrastructure and installation works of 90,914 containers are continuing. Accommodation services are provided to 34,120 people in containers. An additional 2,284 mobile showers and 5,058 toilet containers were put into use in the shelter areas. A total of 1,593,808 people are provided with shelter services in the region affected by the earthquake. In other provinces, shelter services are provided to 329,960 people affected by the disaster. In order to meet the temporary shelter and nutrition needs of citizens affected by the disaster, facilities such as hostels, teachers' houses, hotels, summer houses and vineyard houses were also used throughout Turkey (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

In order to meet the nutritional needs in the earthquake region, 369 mobile kitchens sent by the Turkish Red Crescent, Disaster and Emergency Management Presidency, Ministry of National Defense, Gendarmerie General Command and Non-Governmental Organizations were established. After the earthquake, emergency aid funds were used to cover the emergency expenses of public institutions, especially the Disaster and Emergency Management Presidency, the Ministry of Environment, Urbanization and Climate Change and the Ministry of Agriculture and Forestry (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

In order to ensure timely delivery of materials needed in case of disaster throughout the country, the Disaster and Emergency Management Presidency has 27 regional disaster logistics warehouses and 54 logistics support warehouses in central provinces; Turkish Red Crescent has 35 logistics warehouses. In addition, local governments, especially large city municipalities, also have warehouses of emergency supplies such as tents and blankets. It was stated that the materials in these warehouses were made available to citizens during the Kahramanmaraş earthquakes (2023 Kahramanmaraş and Hatay Earthquakes Report, Republic of Turkey Presidency Strategy and Budget Directorate, <https://www.sbb.gov.tr>).

3.2.3.2. Disaster Leadership, Communication and Management of New Crises

The main authorities responsible for crisis management in Turkish public administration are the governors and district governors in that province. District governors, who serve under the governor and his hierarchy, have leadership roles during disaster periods.

Leaders may need to have many different competencies to cope with the unexpected consequences and complex structure of crises. Empathy is one of the most important elements required to be successful in managing crises, that is, events that emerge with a small warning, force people to make decisions under great pressure, activate their feelings of fear, panic, anxiety and stress, and suddenly change the agenda of people and institutions with the new agenda they create. is the ability to build. Another important skill is for the leader to be visible, that is, to be involved in the society, to be in them and to remain in them. It is a fact that leadership in crisis situations is very important in Turkish public administration. Success in crisis management in Turkish public administration depends entirely on leadership skills, because there is no specified model or system for crisis management in Turkey. Therefore, it would not be wrong to say that superior abilities are expected from leaders in crises (Özcan,2021: 132).

One of the most important problems that may be experienced in times of crisis is the inability to make decisions. Management refers to the decision-making process. For this reason, not being able to make decisions during crises, that is, indecision, may result in not being able to manage the crisis. Likewise, in this process, internal conflicts within the organization cause dilemmas and sometimes indecision or inability to make decisions (Özcan, 2021: 135).

Another issue that comes to the fore in times of crisis is the issue of delegation of authority. It is an important principle for the success of the top management that the top management decides on strategic issues and the implementing units decide on technical issues. Top management should determine the basic strategies and leave decisions about more technical issues to middle managers. In cases where this is not the case, the decision-making process may be prolonged and, accordingly, the effectiveness of the management may decrease (Özcan, 2021: 137).

Another issue that comes to the fore during crisis periods is information pollution. In these periods, especially when there is a lot of uncertainty, there is intense information pollution. Both citizens affected by the crisis, other citizens, that is, the public, and public officials who take an active role in the crisis management process are exposed to this information pollution.

Public officials working in times of crisis also worry about whether they will have problems with the work they do or the decisions they make. Concern about being held accountable in the future for the decisions they make and actions they take may cause public officials to act more hesitantly. They avoid taking responsibility.

The media has a great responsibility in communicating during times of crisis. It is possible for public officials and decision makers to convey the decisions they make, their practices and the messages they want to give during the crisis management process to their citizens and all other relevant actors through the media.

In crisis communication, high-level visits can have both positive and negative contributions to the crisis management process. For those affected by the crisis, seeing high-ranking public officials, government representatives and members of parliament in the disaster area can have a positive effect. People have the opportunity to convey the negativities they experience directly to the highest-level official. However, in disaster areas, every minute counts. It is also possible that public officials responsible at the provincial level may have their current duties disrupted when dealing with high-level visitors to their cities.

The place of social media in crisis communication has become increasingly stronger, especially in recent years. Social media has the power to shape public opinion. The power of social media sometimes has a disadvantage in terms of spreading false news. Very fast and uncontrolled information can circulate on this platform.

The Directorate of Communications continues to work in coordination and harmony with relevant institutions to accurately inform the public and establish unity of discourse against disinformation and manipulation activities that may arise in disaster situations. It actively continued these works during the 6 February 2023 Kahramanmaraş Earthquakes. Negotiations were held from time to time with social media officials and false news was quickly removed from these platforms. Accurate information on the subject was also quickly announced on these platforms (06 February 2023 Kahramanmaraş Earthquakes Disaster of the Century, Presidential Directorate of Communications Publications, <https://www.iletisim.gov.tr>).

The e-government-supported “Disinformation Reporting Service” (DBS), where suspicious or false news shared about the earthquake can be reported, has been put into use. With the “Disinformation Bulletin” published by the Directorate of Communications, where the truth is told against disinformation and manipulative content, the claims observed to be spread about the earthquake

were investigated and the correct information was shared with the public. From the first moment of the earthquake, Anadolu Agency has worked to accurately inform the public from 11 provinces and 15 different crisis points (06 February 2023 Kahramanmaraş Earthquakes Disaster of the Century, Presidency of Communications Directorate Publications, <https://www.iletisim.gov.tr>).

Management of emotions is another important issue in crisis management. It is seen that crises and disasters put people under great pressure, causing them to react emotionally. It can be said that the unexpected, uncontrollable and destructive nature of crises, especially natural disasters, causes people to lose their sense of security, become afraid, stressed, and experience high levels of anxiety and panic. In this process, public officials living in this region are trying to manage the crisis and are actually among those affected by the crisis. This situation can also create difficulties.

New crises can arise quite frequently within a crisis. Solving these new problems is important for the crisis management process. It has a unique and intense agenda that is difficult to cope with, especially in natural disasters, such as search and rescue, shelter, drinking water supply, supply and distribution of relief materials, and sometimes the need for medical intervention for thousands of people. Therefore, managing a crisis requires dealing with all these issues. At the same time, managing the agenda in crisis situations is a great challenge for public administrations because crises, especially crises resulting from natural disasters, carry a special and difficult agenda.

With the Presidential Decree No. 14, the Directorate of Communications has been given the task of carrying out strategic communication and crisis management activities in order to achieve the goals and objectives determined by the state in times of crisis, disaster, state of emergency, imminent threat of war, mobilization and war. Since the earthquake occurred, the Directorate of Communications has been preparing information notes and social media posts by constantly updating the information received from the relevant Ministries and the Disaster and Emergency Management Presidency in order to inform the public and public institutions and organizations correctly and to ensure effective communication and coordination between stakeholders (06 February 2023 Kahramanmaraş Earthquakes Disaster of the Century, Presidency of Communications Directorate Publications, <https://www.iletisim.gov.tr>).

As of February 6, 2023, 07:00, the Directorate of Communications has made the CİMER Call Center operational 24/7 for our citizens calling from the earthquake area. On the same day, at 08:30, the Earthquake emergency topic was

opened to the use of citizens on the CİMER platform, thus providing disaster communication. Applications of citizens who reached the Call Center and needed to be answered in line with their requests were recorded through the CİMER Gate and the citizens were called and returned. Frequently Asked Questions have been prepared to shed light on issues on which citizens lack information; It has been updated by creating new topic headings. Information is shared with citizens through CİMER Call Center (06 February 2023 Kahramanmaraş Earthquakes Disaster of the Century, Presidency of Communications Directorate Publications, <https://www.iletisim.gov.tr>).

3.2.4. Post-Disaster Assessment Phase

In the evaluation phase after the disaster occurs; To save the largest number of people possible and ensure their recovery, to protect human life and property from the additional dangers and risks that disasters may cause, to meet the vital needs of the communities affected by the disaster in the shortest possible time and with the most streamlined methods and to ensure that life is normalized as soon as possible, Efforts are made to ensure that the economic and social losses that may arise are kept at a minimum level or that the wounds are healed as soon as possible, and to create a safe and developed new living environment for the communities affected by the disaster (Erkal and Değerliyurt, 2009:153).

This post-disaster phase can also be considered as the recovery phase. At this stage, financial aid should be provided to citizens affected by the disaster to meet their basic needs in the first stage and to continue their business lives. The state's assistance in this regard continues.

The state mobilized after the earthquake with all its means and institutions, and rescue teams tried to reach the debris. At the same time, many citizens from all provinces of Turkey who had the means to help and rescue people affected by the earthquake from the rubble went to the region to support them. Türkiye came together as one to support the disaster victims with the spirit of solidarity.

It is of great importance to improve communication and transportation facilities after the disaster. Work should be completed quickly to improve electronic communication, which is one of the means of communication. The state immediately took action in this field.

A joint live broadcast was made under the name of "Turkey One Heart Campaign" to collect donations for the citizens affected by the earthquakes, with 213 national and international television channels and 562 radio stations at home and abroad (06 February 2023 Kahramanmaraş Earthquakes Disaster

of the Century, Presidency of Communications Directorate Publications, <https://www.iletisim.gov.tr>).

Another area expected to be improved after the disaster is meeting shelter needs. Citizens affected by the disaster expect the state to meet their housing needs. Until the earthquake victims are placed in permanent residences, they are hosted in tent cities, container cities, student dormitories belonging to the Credit and Dormitories Institution, public guesthouses, hotels and all over the country within the scope of the “Let my home be your home” campaign (06 February 2023 Kahramanmaraş Earthquakes Disaster of the Century, Presidency of Communications Directorate Publications, <https://www.iletisim.gov.tr>).

It is also among those expected from the state to create a secure settlement area after the disaster. Citizens want to be prepared for another disaster similar to the one they experienced.

After the 06 February 2023 Kahramanmaraş and Hatay Earthquakes, the state continues its revival and construction works. Studies to identify all disaster risks in areas that will be opened for settlement are continuing. Surveys that reveal the earthquake resistance of the ground are continuing. The situation of old settlements is examined and efforts are made to implement zoning restrictions and measures to reduce building density for those areas. A ground survey is carried out to determine areas where liquefaction will not occur. Calculations are made for fault lines. Efforts are made to create a settlement map suitable for the historical, economic and social structures of the cities. A floor limitation is planned for new buildings to be constructed by the Mass Housing Administration. With a participatory approach, efforts are being made to create a management structure in which universities, engineers, architects and city planners can share their knowledge and experiences in their fields (06 February 2023 Kahramanmaraş Earthquakes Disaster of the Century, Presidency of Communications Directorate Publications, <https://www.iletisim.gov.tr>).

After the disaster, citizens expect social rehabilitation efforts to continue. This issue is also very important in terms of maintaining a healthy social structure. Rehabilitating people whose relatives died and suffered material and moral damage during the disaster is important in this process. It is not possible to expect everything to get better immediately after disasters, but it is vital that recovery efforts begin without delay.

The state has also been carrying out its psychosocial activities in earthquake zones since the first day. Psychosocial support teams, especially for children, are located in the field. These teams include psychologists, social workers and child development personnel.

4. Conclusion and Evaluation

The February 6, 2023 Kahramanmaraş and Hatay Earthquakes, which was also a major disaster along with the political and economic crises we have frequently experienced in our country in recent years, has once again strongly revealed the importance of crisis management for the state, public administration and public administrators.

When disaster management system in Turkey is mentioned, it is understood what is done after the disaster occurs and the success of disaster management is measured through these actions. The disaster management process needs to be started before a disaster occurs. First of all, risk management should be carried out. Before the disaster, the disaster preparation process must be completed and risk management must be carried out. After a disaster occurs, a type of crisis management is actually carried out. Disaster management is a type of crisis management. Crises can be economic, political, social crises or crises resulting from natural disasters. The disaster management process is expected to cover three periods: disaster preparation period, disaster period and post-disaster evaluation period. It is necessary to take preventive measures by planning, to manage the process well during the crisis, and to self-evaluate after the crisis.

Türkiye constantly encounters disasters, albeit of different types. Earthquakes, floods and landslides occur frequently in this geography. In order to effectively combat these disasters, which Turkey experiences frequently, it needs to organize its disaster management process successfully. First of all, necessary planning should be made and risk management should be carried out before disasters occur. After disasters occur, the process should be managed by taking into account crisis management principles. Legal and administrative regulations for the disaster management process should not be constantly changed. There should be institutionalization in this field. Disaster management is possible from a holistic perspective. It is necessary to identify possible regions that may experience disasters, to control the construction in those regions, to ensure the rationality of urbanization policies, and to direct every detail from site selection to control of the construction process. If there is uncontrolled population accumulation within the country and unhealthy urbanization, healthy disaster management will not be possible there. Disaster management is a management style with different dimensions. In Turkey, the understanding of disaster response within the framework of crisis management has been developing in recent years.

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CHAPTER XVII

FOUNDATIONS OF RISK MANAGEMENT IN BUSINESSES

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1. Introduction

In today's dynamics, businesses are under the influence of many variables independent of their sector and business field. Many factors such as limited resources, increasing competition in successful businesses, constantly increasing customer expectations, standards and laws to be followed regarding the sector, country and trade, and the variability of the economy bring risks. The threats and opportunities brought by uncertainty serve as issues that need to be emphasized for businesses. Moreover, investors are looking for businesses that will maximize their profits by minimizing risks. Therefore, identifying and reducing the risks they will face in their activities has become an important agenda. According to Maxmudova (2020), risk management means making decisions about issues regarding risk situations in the presence of some amount of alternatives taking into account limited resources.

The advances made in risk management have fallen far behind the increase in risks (or risk perception) faced by all segments of society today. In this respect, it can be easily stated that the risks we face exceed our capacity to combat these risks (Kıral, 2018). Businesses need to manage their risks successfully, develop actions against sudden events, and reduce possible losses to minimum levels in terms of making their assets sustainable (Koç & Sevim, 2021). Risk management is a function designed to identify, analyze and manage the risks of an organization or business.

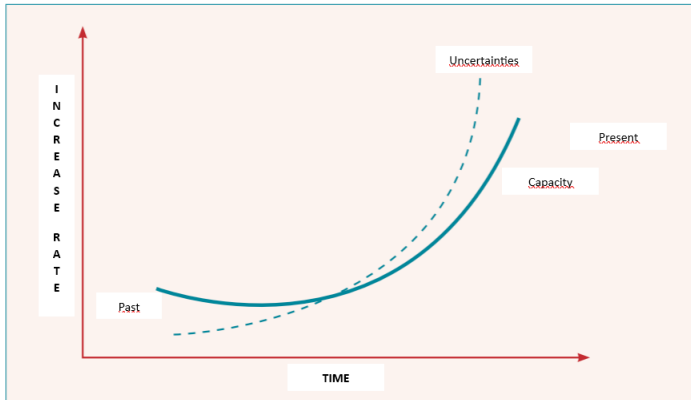


Figure 1: Uncertainties and Capacity

Source: (Kıral, 2018)

This chapter focuses on risk management definition, types of risks, enterprise risk management and risk management process steps in business organizations. Therefore, the following sections are placed. The chapter starts with an introduction part. The second part is titled as introduction to risk management. This section provides an overview of the subject, explaining key concepts of risk management, and emphasizing the importance of risk management in businesses. This section includes two subsections named as types of business risks and enterprise risk management. Another section explains the risk management process in detail. Process steps are arranged in 5 subsections risk identification, risk assessment, action taking and mitigation strategies, implementation of alternatives, evaluation and control. The chapter ends with the conclusion part.

2. Introduction to Risk Management

The concept of risk, which is often used synonymously with the concept of uncertainty, is the possibility of deviation from the situation we expect to occur due to a business/transaction (Özsoy, 2012). The concept of risk can have different meanings depending on perspective, sectors, attitudes and experience. For example, while engineers, designers and contractors view risk as a negative technological situation, lending institutions and banks tend to see it as the possibility of failure in realizing or fulfilling a commitment in economic and financial terms (Mengeş, 2023). Many risk factors make it difficult, and in some cases impossible, to provide the product and additional services related

to the product to the customer (Demirci Orel & Akkan, 2018). Based on this, it is possible to define risk from a management perspective as a positive or negative deviation arising from internal or external environmental factors in the achievement of a business's goals.

In literature risk definitions are split into two perspectives. One group mentions the negative side of risk such as "risks are commonly associated with negative outcomes" (March & Shapira, 1987), and "risk is the probability of unwanted consequences of an event and decision" (Charette, 2002). The other group takes into account also positive outcomes of risk such as "the probability of occurrence of loss/gain multiplied by its respective magnitude" (Jaafari, 2001), "an uncertain event or condition that, if it occurs, has a positive or negative effect on a project objective" (PMI, 2000). As risk includes uncertainty and results are not known beforehand, when a definition is made about risk both positive and negative outcomes should be mentioned.

According to Hillson (2009), uncertainties are divided into two groups depending on whether their consequences are important or not. In this regard, attaching importance to results becomes meaningful as it affects whether the goals are achieved or not. Therefore, risk is defined as uncertainty that affects the objectives if it occurs. Traditionally, risk issue is thought to have negative outcomes and unpreferred events. This acceptance of risk from a negative point of view is restrictive and misleading from two sides. Firstly, uncertainty means an issue could be realized in either a positive or negative way or result which creates either opportunity or threat, or sometimes both. Secondly, perspective on a risk situation defines the attitude and way of handling and reasons for missing possible opportunities (Fadun, 2013). Therefore, in order not to limit the available opportunities or returns of a risk issue, business management should think about also positive side of risk when analyzing the situation.

With the change in perspective on risk, the controllable and manageable understanding of risk has become dominant instead of the understanding of staying away from and avoiding risk (Pritchard, 2005). Risk management is the comprehensive identification and classification of risks that may affect the business results of an enterprise. On the other hand, risk management includes the probability of occurrence of risks that may affect the value of the business, the measurement of the magnitude of possible losses and the formulation of actions required to keep business risks within acceptable limits (Bansal, Kauffman, Mark and Peters, 1993). According to a study by Grima and Bezzina (2018), risk management practices play a vital role in helping organizations achieve their

goals, add value and create competitive advantage. Risk management practices provide a transparent roadmap to successfully achieve goals, appropriate identification of risks, growth, profitability, improvement, flexibility of change and rapid response to uncertainties.

Growth and sustainability are among the main objectives of businesses. At this point, according to Walker, Shenkir and Barton (2002), identifying, evaluating and managing the risks that businesses will face in achieving sustainable growth is a very important issue. For this reason, businesses see their risks as a strategic element and aim to gain a competitive advantage by managing them systematically. Risk management in today's modern paradigm looks into the formation of the organizational culture and infrastructure of the business to catch below goals (Maxmudova, 2020):

- To identify basic factors and causes of risks
 - To define, analyze and assess organizational risks
 - To make decisions based on risk evaluation
 - To develop control actions against risks
 - To minimize risks to an acceptable level
 - To organize the implementation of a risk minimization program for the business
- To control planned measures for risk reduction
 - To analyze and evaluate the results of decisions about risks

Risk management was initially considered together with insurance and insurance and risk management were used interchangeably (Emhan, 2009). As all companies are faced with risky situations during their activities and need to manage these risks with a risk management system (Maxmudova, 2020). Also, risk management in businesses is a process closely related to bpm, innovation, reengineering and continuous development processes. Therefore, in order to be successful in the mentioned processes, businesses must establish a good risk management system (Muehlen & Ho, 2006). Fadun (2013), also mentions that successful companies are able and desire to effectively integrate risk management at all sections of the management process.

Risk management includes determining prospects and opportunities to get advantageous situations across competitors. On the other hand, it helps to prevent undesirable results of activities (Maxmudova, 2020). Small accidents or failures can be a sign of a major accident or risky situation (Emhan, 2009).

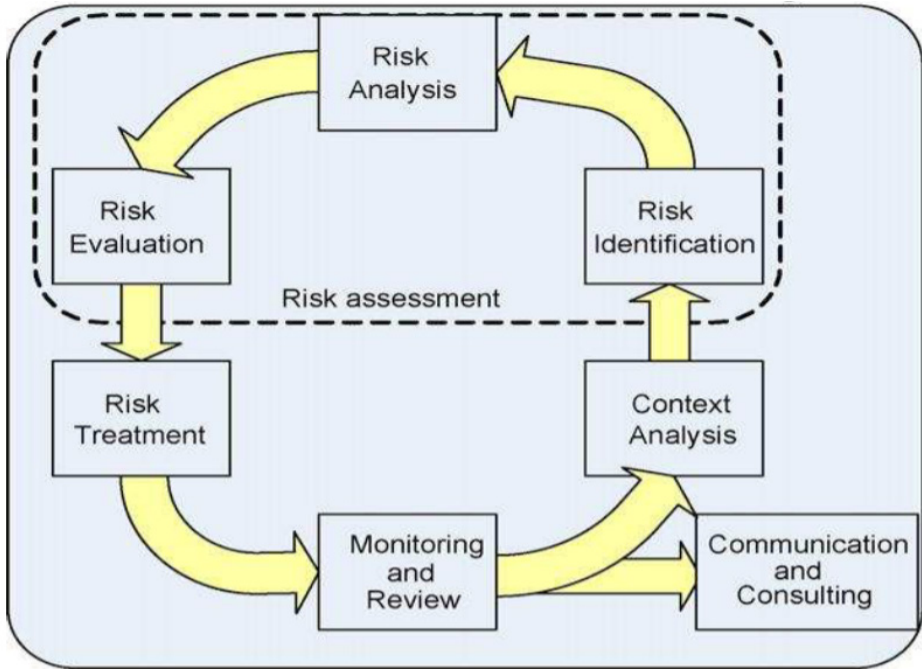


Figure 2: Risk Management Stages

Source: (Fadun, 2013)

Risk management is not considered as a tool to avoid risks. Risk management system does not take away risks, however manages risks related to the business' facilities. Therefore, it increases opportunities and reduces threats (Fadun, 2013). An effective risk management in companies ensures competitive advantages in the sector and adds value for shareholders (Nocco & Stulz, 2006).

Risk management is an ongoing process. Businesses can sometimes think of it as a process consisting of steps that are implemented once. However, it is a cycle that must be repeated because the characteristics of the risks are changing and the companies have a dynamic structure with all internal and external environmental factors. Variables such as existence, probability and impact of risks do not remain the same. Therefore, risk management team should repeat and overview the stages regularly.

2.1. Types of Business Risks

Regarding types of risk, researchers make different groups. The below table contains different risk classifications.

Table 1: Types of Risk

<i>Risk Classification</i>	<i>Explanation</i>
Internal risk External risk	Internal risk factors are risk factors that can be considered to be under the control of the business. External or environmental factors are factors that occur beyond the control of the business and will ultimately affect the overall risk level of the business.
Manageable risk Unmanageable risk	Some external risk elements can be managed through insurance systems Debt level can be reduced to minimize internal financial risks On the other hand, it may not be possible to manage employee-related errors
Financial risk (market risk, credit risk, liquidity risk, operational risk) Non-financial risk	Financial risks are the risks that companies face due to their financial activities, fluctuations in financial markets or economic changes. Non-financial risks are the risks that businesses face as a natural consequence of the production of goods and services in their field of activity, arising from factors such as production technology and workforce.
Traditional security risks Cyber security risks	Traditional security risks are risks arising from environmental impacts and based on physical defense. Cyber security risks are risks arising from electronic environments and processes such as the internet, e-mail, e-commerce, e-banking, e-government etc.
Reputation risk	It is defined as the risk of significant adverse public opinion leading to critical loss of financial resources and customers.

Source: (Bolak, 2016; Yazıcı, 2018)

Muehlen and Ho (2006), developed a taxonomy of risk from various perspectives. In terms of the causes of risks are split into internal and external risks, according to likelihood; certain, highly probable, moderately probable and improbable risks. Regarding severity types are listed as loss of capability, asset or process, major delay of process or loss of data, minor process disruption and delayed detection of misconduct. According to the affected area, risks are named as financial, technical, functional and organizational risks. When the cause of error is taken into account risks are separated as skill-based, knowledge-based

and rule-based risks. Detectability is also sorted risks as before effect, at the time of effect and after the effect.

2.2. Enterprise Risk Management (ERM)

In the past, risks were managed from a perspective where only financial risks were perceived as being predominantly within insurance activities. This approach followed in the past forms the basis of the traditional risk management approach. Within this understanding, risks are perceived as threats, losses and damages that must be avoided. Over time, this understanding has been replaced by a modern risk management approach in which risks are monitored throughout the organization as a whole. This understanding, also referred to as “integrated or corporate risk management approach” in the literature, evaluates risks as an opportunity-based value rather than seeing them as threats (Koç & Sevim, 2021). In recent years, several business leaders have recognized the shortcomings of potential risk management and have begun to embrace the concept of ERM as a way to strengthen their organizations’ risk oversight. Realizing that waiting until a risk event occurred was too late to effectively address significant risks, they proactively adopted ERM as a business process to improve the way they managed enterprise risks (Mengeş, 2023).

Table 2. Enterprise Risk Management versus Traditional Risk Management

<i>Enterprise risk management</i>	<i>Traditional risk management</i>
Risk is opportunity	Risk is a factor that needs to be controlled
Managed throughout the organization as a whole, everyone is responsible	It is managed in organizational departments. Responsibility is delegated to lower levels
Risk measurement is objective	Risk measurement is subjective
It is strategically focused	Financial control is predominant
It is essential to add and protect value to the institution	It is essential to protect corporate value

Source: (Duran, 2013)

The COSO Enterprise Risk Management framework was published in 2004 by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). It defines Enterprise Risk Management as “ a process, effected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events

that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives” (COSO, 2004).

Based on the definition of COSO, Reeding and colleagues (2013) state that the following issues are important regarding the ERM system. These:

- Use it when creating the strategic goals of the institution
- It is a fluid process in which employees in every unit of the organization contribute
 - Determining the events that may affect the institution in case of a risk occurring
 - Establishing a reasonable assurance from the upper-level management in the institution to the lower-level management
 - Evaluating risks within the framework of the institution’s risk appetite and taking precautions accordingly

ERM refers to the integrated and coordinated implementation of risk management processes throughout the organization (Kıral, 2018). While risks are handled in traditional risk management, there is no coordination between business units, whereas, in ERM, importance is given to ensuring coordination among all business units. In this way, it is possible to talk about common risks that concern all units of the business (Gacar, 2017).

Common features of the definitions for ERM can be interpreted as follows (Mengeş, 2023):

- It includes the identification and evaluation of uncertainties that are important to the business
 - Managing uncertainties addresses the processes of implementing and monitoring actions
 - It gives a formal character to the organization’s risk management
 - Produces information that will help management improve business decisions, reduce uncertainty and provide reasonable assurance that the entity’s objectives will be achieved
 - It improves the efficiency and delivery of services, improves business, improves resource (capital) allocation, creates shareholder value and improves risk reporting for stakeholders

3. Risk Management Process

As the aspect of uncertainty increases, individuals and institutions are forced to take different approaches to mitigate the consequences of the risk resulting from uncertainty; because if the opposite happens, they may face irreversible negative consequences. If the risk is not taken seriously, the probability of negative consequences is quite high (Mengeş, 2023).

Risk management is to ensure the necessary regulations for businesses to continue their activities in profitability, to protect the property and people in the organization and to protect the earning power of the business; It covers the planning of resources and activities necessary to minimize unexpected losses that may occur in the organization at the lowest cost, and the management and control processes of the organization (Emhan, 2009). Risk management is a planned action process to reduce the risk of an event occurring or to control it by minimizing the effects that occur when the event occurs. Risk management does not aim to eliminate risks, but to make risks manageable (Mitra, 2013). The establishment of a risk management system in the business allows for the prevention of problems, crises and chaotic situations. Also, it helps a fair distribution of responsibilities and decision-making authorities (Maxmudova, 2020).

Advantages of the risk management system (Maxmudova, 2020):

- To reduce the uncertainty of activity results
- To get improvement opportunities
- To get better planning and managing performance

Hopkin (2018) listed the importance of risk management for businesses as follows:

- Recognition or identification of risks, determination of their nature and the conditions under which they may occur
 - Ranking or evaluating risks in terms of likelihood and magnitude, forming a “risk profile” recorded in a risk register
 - Respond to significant risks, including decisions on appropriate action regarding:
 - o to tolerate
 - o to treat

- o to transfer
- o to terminate
- Providing resources for controls to ensure that adequate arrangements are made to initiate and maintain the necessary control activities
 - Reaction planning and incident management
 - Reporting and monitoring risk performance, actions and events
 - Review of the risk management system, including internal audit procedures and arrangements, to review and update the risk strategy

Businesses can choose to take a proactive or passive stance in risk management. If they choose a passive attitude, they take action to eliminate the effects after an event or risk factor occurs. However, such a situation will increase the risk cost of the business since it does not reduce the probability of the risk occurring and its effects from the beginning. On the other hand, proactive behavior occurs by addressing the risk factor before it occurs, reducing its possible impact or reducing the probability of its occurrence. This approach requires addressing and managing risk management systematically. According to Hopkin (2010), organizations that take a proactive approach then risk management has more efficient operations and more effective processes.

Over the past decades, there have been dramatic changes in risk management approaches in organizations. For example, the job of risk responsible or manager's position was low-level in the management pyramid and mainly dealt with the purchase of insurance (Nocco & Stulz, 2006). Today's organizational structure puts risk managers at upper levels on the pyramid and chief risk officers are responsible for monitoring risk measures, and establishing and maintaining an effective risk management system.

Risk management can be seen as a tool to be used to reduce downside risk, but it is also a tool that helps businesses identify and exploit opportunities (Wilson, 1999). The risk management process consists of five interdependent process steps. These steps include; Identification of the risk, evaluation and calculation of the risk, choosing among alternative risk correction tools, implementation of the selected alternatives and evaluation and control processes (Daft, 1991).

1. step: Identification of the risk

Businesses can minimize the impact of risks on the business by doing due diligence on their financial, operational, strategic and environmental risks and

determining the risks they can control and their risk appetite. At this point, the first stage is risk awareness. A business that is unaware of its risks will cause a risk that has a high probability and can be controlled with simple measures to quickly turn into a crisis and reach a point that will disrupt the business from achieving its goals (Tepe Küçükoğlu, 2020).

In the risk identification phase, which is the first step of the risk management process, risks that have the potential to prevent the business from achieving its goals and objectives must be identified. It is recommended to use several helpful techniques to identify these risks. SWOT analysis is one of these techniques. With SWOT analysis, the internal analysis of the business is made to determine its strengths and weaknesses, and the opportunities and threats are determined by external environmental analysis. Job descriptions and flow charts are also among the tools used to identify risks. Risks are identified and grouped.

Taking all important or unimportant processes into account at every stage of corporate risk management and continuously makes risk management studies inefficient, turns these studies into a workload that must be done only in certain periods, and eliminates the effects of risk management studies (Kıral, 2018). It is recommended to use Pareto analysis in risk management studies to avoid wasting time on unnecessary risks in identifying and prioritizing risks. Thus, it would be appropriate to consider the processes that are considered critical, accepting that 80% of the risks in achieving the goals of a business occur in 20% of all processes.

2. step: Risk evaluation /Assessment

It is the stage of evaluating, measuring and prioritizing the importance of the identified risks in terms of impact and probability. It helps to decide whether to take action against risks and to choose the most appropriate action in terms of benefit/cost. Risks are prioritized by calculating the risk score, which takes into account the probability of the risk occurring and its impact. A risk matrix is a commonly used tool to determine the severity of each risk to prioritize risks.

3. step: Action-taking and mitigation strategies

In this step, actions are taken to minimize or bring the identified risks to acceptable levels. The actions are listed as, risk acceptance, risk reduction, risk transfer, and risk avoidance techniques under the name of risk mitigation strategies.

Risk acceptance (to tolerate): At this stage, the process that creates the risk is accepted as it is and no precautions are taken. For example, this is valid if the risk situation is within the risk appetite, if the cost of the precaution to be taken is

higher than the impact of the risk, or if it is beyond the control of risk management, that is, if it is not possible to terminate the activity that creates the risk.

Risk reduction: Action is taken to keep the risk at an acceptable level. Preventive control, corrective control, directional control and detective control techniques are applied. For example, the use of fire-resistant materials in building exterior cladding, interior parts, and office furniture will reduce the risk of fire, which may be caused by a combination of possible fire factors, and the risk of growth and spread in case of fire.

Risk transfer/risk sharing: The risk is directed to another institution through instruments such as insurance. For example, businesses may prefer fleet rental companies instead of purchasing cars for customer visits in their sales and marketing departments. In this way, they are exempt from many risks and transactions with car ownership. These risks are transferred to the fleet rental company. However, some risks are non-transferable. For example, when it comes to reputation, customers recognize your business even if a third-party business does the work.

Risk avoidance (to terminate): The activity that creates the risk is terminated. If the activity in question involves risks with high impact value, for example, if the impact value is high such as injury or death that will affect human life, or if the probability of the process with this impact value occurring at the same time is high, the business may give up carrying out this activity.

4. step: Implementation of the selected alternatives

There are four scales for choosing the best possible alternative; degree of risk, economic aspect, timing and limitation of resources (Drucker, 1996).

Degree of risk: People in the decision-making process must also calculate expected losses according to expected gains. Therefore, the risk assessment of the alternative to be chosen must be made.

Economic aspect: The chosen alternative must be implemented with the least possible effort and labor.

Timing: Depending on the urgency and importance of the issue to be decided, the time period is regulated. If the issue to be decided has no time constraint, a slow start may be preferred.

Limitation of resources: The most important resource available in the organization is people, management should make the decision that needs to be done with the least number of people.

5. step: Evaluation and control:

Assessment and control are important in the risk management process for two main reasons. First: the risk management process does not occur in a flow,

events vary. New situations can create new risks and eliminate old identified risks. Second: various errors may occur during this evaluation process. The evaluation and control process allows managers to re-examine and discover their mistakes without causing serious consequences (Emhan, 2009). All in all, the risk management process is a continuous process. This step involves monitoring and assessing the risk situation and its impacts. Necessary precautions can be taken if new risks emerge or existing risks change.

In order to implement risk management effectively, appropriate stakeholders must be communicated about the risks. Risk reports can be prepared by the organization's top management and relevant stakeholders to understand the risk situation and guide decision-making processes.

4. Conclusion

The concept of risk is a phenomenon that emerges with the formation of a business idea in an entrepreneur's mind and exists in all processes until the closing of the business. It is not possible to avoid risk or imagine a risk-free environment in business life. It should not be forgotten that there is always the possibility of businesses' plans and strategies failing and the danger of managers making wrong decisions. However, while the phenomenon we call certainty is possible in theory, it is not actually possible in practice. However, despite the risks, it is always possible to live with them and manage the risks. At the same time, risk should not only be a negative concept for businesses. The business must be able to see the opportunity behind the risk. For example, although the pandemic process has brought many sectors to a halt and many businesses to the point of closure, it has brought growth opportunities for the pharmaceutical industry, businesses producing hygienic products, technology companies, entertainment and gaming industry, and e-commerce businesses.

Thanks to risk management, businesses become aware of the risks involved in the activities they carry out, take precautions to reduce the probability and/or impact, and turn the threat or danger posed by the risks into an advantage. In this way, they can reach their goals with more confident steps, on time and with minimal deviations (Tepe Küçükoğlu, 2020). The main principle of risk management is to minimize volatility or uncertainty and add value to the organization by implementing planned actions to achieve the best possible outcome (Mengeş, 2023). Learning risk management processes well and applying these processes in the best way will make it easier for businesses to reach a level where they see the opportunities behind the risks rather than fearing them.

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CHAPTER XVIII

CURRENT BUREAUPATHOLOGIES IN TURKEY: THE CASE OF THE MINISTRY OF TREASURY AND FINANCE¹

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1. Introduction

State administration is a two-winged structure consisting of politics and administration. The state takes decisions to govern the state with the political wing and these decisions are implemented as policies by the administration. Public administration constitutes the administration wing of the state. Public administration is the form of government that expresses the state's relationship with the public. The state has many public institutions to fulfil different tasks in various subjects.

The form of organisation of public institutions is bureaucratic organisation. Bureaucracy is a form of organisation developed by Max Weber. The bureaucratic form of organisation, also known as Weberian bureaucracy, is a structure based on legal-rational authority, governed by written rules, and dominated by the principle of impersonality. Weberian bureaucracy has features such as vertical hierarchical organisation structure, archive and record keeping, civil service as a profession, starting work through appointments, merit and specialisation (Weber, 1952: 24; Weber, 2014: 94; Weber, 2016: 55-62). Although Weberian bureaucracy is an organisational model with problems, it is still valid. Since the proposals developed to overcome its problems are not alternatives to

1. This book chapter was created by summarizing the doctoral thesis titled "Bureaupathologies in Turkish Public Administration: The Example of the Ministry of Treasury and Finance" dated March, 2022.

replace bureaucracy, this well-established model maintains its current position (Farazmand, 2009: 1).

Bureaupathology is a concept used to express the diseased structure of bureaucracy, first mentioned in the book “Modern Organisation” by Victor A. Thompson (1968). In the chapter titled Bureaupathology, he basically evaluates the behavioural patterns presented by the bureaucracy to civil servants as pathological because they hinder the progress of the organisation. The ten items Thompson lists as behavioural patterns, in fact, cover many aspects of bureaucratic organisations. These items are the distrust of superiors towards subordinates, exaggerated impersonality, resistance to innovation, excessive prescriptivism and bureaucratic routinisation.

Bureaucratic bureaupathologies are classified as transactional and organisational by Eryılmaz (2014). Organisational bureopathologies are centralisation, organisational growth, secrecy, closedness and transparency in management, and conservatism in management. On the other hand, procedural bureaucratic bureopathologies are prescriptivism and evasion of responsibility, politicisation and favouritism in management, corruption and bribery, and conducting transactions through intermediaries. Armağan (2019) analysed bureaucracies in a binary classification as the deteriorating characteristics of bureaucracy and the problems caused by the deteriorating characteristics of bureaucracy. In the first part, the problems of hierarchical structure, centralisation, growth of the organisation and rule-making are discussed; in the second part, the problems of stationarism, secrecy and closedness in management, formalism and resistance to innovations, inefficiency and ineffectiveness, incompetence, corruption, bribery and nepotism, and politicisation are discussed.²

In this study, as a result of the field research, the current bureopathologies in Turkey are described. The method is a case study from qualitative research types. In the field research, a specific topic (bureaupathologies) was analysed through interviews with a certain number of people in a single institution. The ability of these problems that arise in bureaucratic organisations to explain the phenomenon of bureopathology varies from organisation to organisation. For this reason, the scope was narrowed and a specific institution of a single organisation was examined with the case study method. Face-to-face interviews and written interviews were conducted with a randomly selected sample from the Ministry of Treasury and Finance, Tax Audit Board Presidency (VDK).

² This classification was used in a slightly expanded manner in the doctoral thesis on which this study was created. In this book chapter, only the field research part of the relevant doctoral thesis has been used in order to avoid repetition and narrow the scope.

2. Meanings of Bureaupathology

The problems of bureaucratic organisation and management are called “bureaupathology”, referring to the allegedly diseased structure of bureaucracy. Bureaucracy is defined as “a set of structural arrangements that express circuitous procedures”. Bureaucracy is also defined as a form of organisation that provides certain behavioural patterns to its members and endangers the freedoms of citizens with these behavioural patterns (Acar, Pourdehrad, Sachdeva, & Sharan, 1981: 2).

The main problem of bureaucratic organisations is that they deviate from serving the purpose of the organisation. The rule of treating all citizens equally and in the same way, based on clear rules known beforehand, has also started not to be applied in time. Another problem is the problem of late response and reaction to the service to be provided. Adopting an attitude without any time problem in responding, and behaving indifferently in reacting without considering the situation of the people are among the problems (Wilson, 1996: 345).

According to Mises (2000: 5), the words bureaucracy and bureaucrat are used in the sense of “insult”. For this reason, no one wants to admit that he is a bureaucrat and that he acts with a red tape mentality in his work. Those who want to make an insulting criticism about people, situations and institutions use the words bureaucrat and bureaucracy. Everyone is of the opinion that bureaucracy is a bad thing and should be abolished from the face of the earth. According to Dreyfus (2014: 25), bureaucracy is not used as the bearer of a meaning, but to meet the psychologically negative situation in the face of the situation with which the term is associated. In this respect, bureaucracy in a negative sense refers to excessive centralisation, excessive interventionism and ineffectiveness of the state, and overcrowded number of officials.

Mumford (2013: 646) stated that the word bureaucracy was used in the middle of the 19th century as the equivalent of prolonging a job and doing nothing. Accordingly, at that time, everyone in the world of commerce and politics had learnt how difficult it was to do things directly. Even the simplest official business required a lot of legal approvals, documents and enquiries. From the search for a land registry to the legalisation of a marriage bond, many tasks had to be carried out by civil servants. These officials who knew the predetermined techniques and procedures of a job were very valuable.

Accordingly, the bureaucratic structure exerts constant pressure on the civil servant to be systematic, careful and disciplined. For the successful functioning of the bureaucracy, all officials must behave according to predetermined norms

and laws. Accordingly, the effectiveness of the social structure depends entirely on filling the minds of the group members with appropriate behaviour and sensitivity. In bureaucracy, there are strict regulations for the inculcation and imposition of this sensitivity (Merton, 2016: 131). Just like Merton, Thompson (1968) frequently emphasised that modern bureaucratic organisations produce bureaucratic behaviour. Differently, he grouped these behaviours and defined their causes in a metaphorical way. Accordingly, bureaucratic behaviour is a type of behaviour learned in bureaucratic organisations. These behaviours are grouped into three groups: bureaucratic, bureopathological and bureaucratic behaviours.

Accordingly, bureaucratic behaviour is the first behaviour that people learn after they enter a bureaucracy. This behaviour describes how they should behave in bureaucracies. If insecurity and uneasiness prevail in an organisation, bureopathological behaviour emerges. When people feel insecure and under risk, bureaucratic rules start to show an extreme attitude. In some cases, the problem of incompatibility between the members of the bureaucracy and the service recipients arises. In this field, which is very ambiguous and depends on many variables, bureaucratic behaviours emerge (Thompson, 1968: 170-177).

3. Method

3.1. Tax Inspection Board (VDK)

On 28.03.2011, in the General Justification of the Draft Law on Authorisation on the Organisation, Duties and Powers of Public Institutions and Organisations and on Matters Relating to Public Officials, in order to Ensure the Orderly, Effective and Efficient Execution of Public Services, it is stated that “in order to ensure the orderly, fast and efficient execution of public services, the distribution of public services among the ministries should be redefined...” and all public institutions are authorised to make organisational changes in order to ensure bureaucratic improvement. Paragraph 7 of Article 2 of the same Draft Law states the purpose of “ensuring division of labour and coordination in public services, ensuring that similar services are carried out by a single institution or unit and preventing waste in the use of resources”. The Decree Law No. 646 on the Amendment of Certain Laws and Decree Laws for the Establishment of the Presidency of the Tax Audit Board, which led to the establishment of the Presidency of the Tax Audit Board, was also formed as a result of this Draft Law.

The IMF's 2007 Report on Turkey had a significant impact on Turkey's drafting of laws for improvement through organisational change in public institutions, at least in the part related to the Finance Organisation (Bakır, 2012: 97). In the report, it was stated that there should be organisational improvements in public financial management, the Public Financial Management and Control Law No. 5018 should be fully implemented, and the organisational structure should be simpler and more transparent (<https://www.imf.org>).

As a result of these legal developments, with the Decree Law No. 646 published in the Official Gazette No. 27990 dated 10/07/2011, those who were in the positions of Chief Finance Inspector, Chief Accountant and Chief Controller of Revenues were appointed to the positions of Chief Tax Inspector. Those who were in the Finance Inspector, Tax Inspector, Revenue Controller and Tax Auditor positions were appointed to the Tax Inspector positions. The positions of Deputy Finance Inspector, Assistant Tax Inspector, Trainee Revenue Controller and Assistant Tax Auditor have been appointed to the positions of Assistant Tax Inspector.

To reiterate, VDK was established under the Decree Law No. 646 dated 10/07/2011, reporting to the Minister. It is an advisory and audit unit in the hierarchy of the Ministry of Treasury and Finance. VDK is a public institution where tax auditing is carried out from a single source by gathering all audit staff who are authorised to conduct tax audits. The Board consists of a Chairman, Vice Chairmen, Group Heads and Tax Inspectors (Chief Tax Inspector, Tax Inspector and Assistant Tax Inspector) and is headquartered in Ankara (Presidency of Tax Audit Board [VDK], Annual Report, 2013).

3.2. Tax Audit Board Presidency Case Study Review

VDK is a new institution formed by the merger of four well-established institutions. It has both some of the bureaupathologies that can be seen in every bureaucratic institution and its own bureaupathologies. As such, it was thought that it would allow an in-depth study to be conducted in a limited area, with a limited number of participants, based on a phenomenon. For this reason, the method of the study was determined and applied as a case study type under the qualitative research framework.

While selecting the organisation to be researched and formulating the questions to be asked in the interview, the bureaucracy model and bureaucropathologies were taken as a starting point. The aim is to understand the perception of bureaucracy of the organisation and which bureaucracies they

see as problems. Accordingly, a deductive method was used. In the analysis of the data, 3 themes were determined in accordance with the interview questions (bureaucracy, bureopathologies, VDK's bureopathologies) and a classification was made according to descriptive analysis.

Here, codes were created for each theme while reading the audio recording transcripts and written interviews. The codes are explained with the help of a figure in the sections where the findings related to the themes are explained. Then, where necessary, the data were explained in more detail with tables and findings were obtained from the data. After that, the content analysis of the bureopathologies was conducted. With the data obtained from the study, a determination was made as to which of the bureopathologies were reached, which were not reached and whether other unforeseen pathologies were encountered, and the list of bureopathologies in public administration in Turkey was updated.

The sample of the study is VDK. VDK consists of 4 types of group presidencies (A, B, C and Ç) . There are 45 group presidencies in 29 provinces of Turkey. 7 of them are in Ankara. The sample of the study was determined as Ankara, Group Presidencies A and B.

4. Findings

4.1. Perception of Bureaucracy

According to the findings obtained from the questions on the perception of bureaucracy in the research, bureaucracy has both positive and negative meanings. The figure below shows the codes generated from all answers:

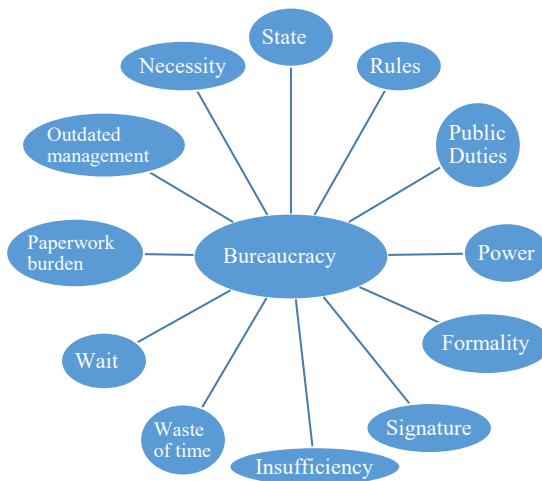


Figure 4.1. Perception of Bureaucracy (Created by the author)

Here, in the centre circle is the concept of bureaucracy and in the circles surrounding it are the concepts used by the participants to define bureaucracy. Although the prominent concepts related to bureaucracy express its negative meaning, answers associating it with the concept of “state” were also frequently given.

Here, the first word or sentence uttered by the participants was taken into consideration. Accordingly, the perception of bureaucracy was expressed with different discourses that diversified to mean state management, rule-making and protracted process. In the table below, the answers defining the perception of bureaucracy in positive, negative and both meanings are given.

Table 4.1. Perception of Bureaucracy (Created by the author)

	Positive	Negative	Both positive and negative
	A set of rules State management Bureaucrat (state affairs)	Sluggishness Paperwork burden Making things worse Lack of initiative Excessive prescriptivism Waste of time Formalism	State administration-vertical hierarchy State governance - cumbersomeness State administration - waste of time Necessary rules - Unnecessary rules State administration - red tape
Total	8 people	10 people	15 people

The institution’s definition of bureaucracy expresses both positive and negative meanings. When bureaucracy was mentioned, the participants expressed the state sector with concepts such as state administration, public service, state affairs, bureaucrat. Afterwards, listing the problems related to state administration expressed the negative connotations of bureaucracy.

The institution’s perception of bureaucracy is equivalent to the concept of state. None of the participants attempted to define bureaucracy in the context of the private sector. State presupposition is also evident in the negative answers. All of the participants who responded positively defined bureaucracy as the state itself. Those who gave negative answers defined it by explaining the problems of the state apparatus. To give an example:

“Bureaucracy now... Since I have wanted to enter the bureaucracy since I was very young, bureaucracy first evokes a positive meaning for me. I mean, generally in Turkey, the first thing that comes to mind is the negative meaning.

Because state affairs are heavy, there is bureaucracy, this and that. But when your goal is to work in the public sector, it is not like that. You look more at exemplary people and you are interested in their lives. You set goals for yourself, such as, I will do this, I will do that, so the first meaning of bureaucracy in my eyes is always positive. The state is an educational institution. If you enter Group A positions, you will receive a good education, there are very high quality people there. ... (Assistant Tax Inspector)."

As can be seen, the participant expressed getting a job in the state sector as "entering the bureaucracy". The characteristic of bureaucracy as a civil servant profession is one of the sub-meanings that come to the fore after the state presupposition in the institution. Because bureaucrats are frequently mentioned in the definitions of bureaucracy.

In summary, the perception of bureaucracy of the organisation is equivalent to state administration. The concepts of state and civil servant profession are the original meanings of bureaucracy, while the concepts of cumbersomeness, stationery, excessive rule, waste of time, paperwork burden, lack of initiative and excessive hierarchy are the negative meanings that have emerged over time. Participants see bureaucracy as the state itself and its problems.

4.2. Perception of Bureaupathology

The codes created from the most frequent concepts used by the participants to express the problems of bureaucracy are given below.

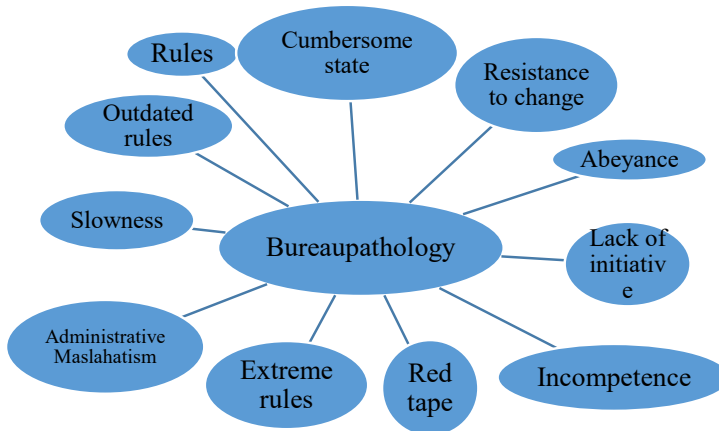


Figure 4.2. Bureaupathologies (Created by the author)

In this way, the answers given to the bureopathologies are seen as codes. In the table below, the categories of the bureopathologies formed according

to these codes and the frequency of responses are given. The answers given to the bureopathologies in the VDK are gathered in 7 categories. The sub-categories of each category express the different ways in which that type of bureopathology is seen.

Table 4.2. Categories of bureopathologies (Created by the author)

Categories	Subcategories	Frequency (number of people responding)
Administrative Maslahatism	-Prolongation of work and transactions -Paperwork cumbersomeness, unnecessary document request -Formalism -Correspondence traffic	21
Proceduralism	-Unawareness of the rules -Rules become the goal -Arbitrary application of rules -Loss of currency of the rules -Acting as if it is a rule even though it is not a rule	16
Initiative Problem	-Avoidance of responsibility -Lack of merit -Ineptitude	7
Renewal and Change Problem	-Inability to keep up with innovations -Lack of knowledge -Conservatism -Being closed to change	6
Hierarchy Spiral	-Vertical hierarchical structure	6
The Problem of Politics-Bureaucracy Balance	-Bureaucracy-politics conflict	3
Corruption	-Bribery -Disbursement -Nepotism -Agency	3

As can be seen in the table, the category of “administrative maslahatism” was the most frequently repeated answer by the participants. This category was followed by “proceduralism” and then “initiative problem”.

4.2.1. Administrative Maslahatism

Administrative management is precisely the meaning of “saving the day”. İdare-i maslahatçılık is defined by the Turkish Language Association as doing a job according to the conditions of the day rather than as it should be done (Türk Dil Kurumu [TDK], 2022). In daily life, it is used in the sense of “saving the day”, “passing the time”, “dodging the issue”.

VDK, which associates bureaucracy with state administration, has defined bureaucratology with meanings such as the slow pace of work in the public sector, the request for many unnecessary documents, the failure to finalise the work, the time-consuming nature of many trivial procedures and the traffic of correspondence. The most perceived bureaucracy problem, which is embedded in psychology, is the slow pace of work and the back and forth of documents and signatures from one unit to another.

The term “administrative maslahatism” is used to cover the bureaucratic bureaucracies in the literature, such as stationarism, formalism, inefficiency and ineffectiveness. The term idare-i maslahatçılık, which is used to meet these concepts, is a new concept derived from the participant statements. It is considered to be a more comprehensive expression than stationarism and formalism.

While defining bureaucracy, participants often made statements in terms of administration-i maslahatçılık:

“In political terms, I think of bureaucracy as the intensity of the state administration’s efficiency in administrative procedures. In the internal functioning of organisations, it is the suffocation of procedures with necessary or unnecessary duties and rules, the increase in controls, and the situation of “piles of writings and documents, stationery”, which we use a lot in everyday language. Wherever there is bureaucracy, there is a set of written rules. In order to ensure and increase their effectiveness, rule-makers have tied almost everything to rules (laws, communiqués, regulations, signboards, announcements, etc.) and advisory units, individuals, correspondence and sanctions (Participant who did not share a title).”

Another definition:

“Failure to carry out a work or transaction due to arbitrariness, laziness, abuse, etc. despite the legal conditions, slowing down, requesting unnecessary documents, etc. Performing a work or transaction longer than its time, making excuses for not doing it, requesting documents even though it is not necessary (Participant who did not share a title).”

One participant stated the following in his memory:

“Any process that prevents you from solving a job faster is a problem caused by bureaucracy. For example, it is bureaucracy to ask for a printout of a document even though it is sufficient to check it in the system without printing it out. It does not matter whether it is private or public. I would like to share an anecdote on this subject. I bought a ticket to go to a concert of an artist I like very much. I bought the ticket online and was told that it would be delivered at the entrance of the event. I went directly to the event. It was a standing concert with no seats. My name was on the list but they couldn’t find the printed ticket. They wouldn’t let me in without a printed ticket. Although my name was on the list, they searched for the ticket for half an hour, then they realised that they had given my ticket to someone else. They gave me his ticket and I entered the concert. But because I entered late, I had to listen to the concert in the back rows. However, if they had let me in after seeing my name on the list and checking my ID, neither I nor the officials would have had any problems. Transactions like this, which can be solved much more easily in daily life, create problems due to bureaucracy. You can take a knife from a kitchenware store in a shopping mall and kill someone, but you cannot enter without taking the key out of your pocket. Unnecessary procedures that prolong the processes, unnecessary security measures and the idea of self-protection are the most concrete indicators of bureaucracy (Tax Inspector).”

In the participant’s memory, taking a longer route when a task can be done in a shorter time is a waste of time. It does not matter whether the work takes 1 minute, 10 minutes or 30 minutes, it is important to be on time for the main purpose, which is to listen to the concert. After being given the impression that the printed ticket is very important, accepting someone else’s ticket to the concert is a contradiction.

Another example is as follows:

“For me, bureaucracy has a negative connotation. To say that there is ‘bureaucracy’ in an organisation (especially in the public sector), I expect things to be slow and formalistic. ... From time to time I deal with private and public organisations. In general, things that can be done in a short time are done in a long time, sometimes I get nervous because I have business in that institution, I try to find acquaintances to solve my business (Chief Tax Inspector).”

This statement clearly expresses the psychological state of the individuals when they encounter the administrative attitude of the bureaucracy. In a bureaucratic institution, it is so common that things will be slow that people feel

the tension of this bureaucratic attitude even before they go to the institution in question, that is, even before they experience any delay.

Another form of administrative management appeared in the form of correspondence traffic. Bureaucracies occur not only within the institutions themselves, during the workflow and when citizens receive services from any institution, but also in the communication between the institutions. In this case, the hierarchy of the two institutions and the correspondence traffic caused bureaupathology. Another institution, which needs to receive information and documents from one institution, may have to make long and fruitless correspondence. This problem, which can also be expressed as the lack of coordination between institutions, constitutes another reason for the administrative bureaucratism. Participant statements regarding this kind of bureaucracy are as follows

“Not receiving the information and solution support we want and expect from public institutions and organisations (including the institutions we are affiliated with) during the audit process, or not receiving it to the extent we expect (Chief Tax Inspector).”

“Due to the fact that the inspector cannot directly access the data belonging to other institutions on issues related to his/her work, information is requested from each institution separately in writing, which prolongs the examination or inspection period. For example, the system used by the Tax Inspector does not include bank information, title deed information, SSI information, which are generally needed in the examinations carried out. Even some of the data in the information pool of the Revenue Administration within the same ministry are not directly accessible. It is like a situation where an inspector cannot directly access the data directly accessed by the director of the tax office he/she is inspecting (Participant who did not share a title).”

According to the study conducted, administrative overbureaucracy is the most common pathological condition of bureaucracy. Regardless of whether it is public or private, the fact that a job takes so long that it feels as if it will never end, that dozens of documents are requested that are not clear what they are required for, and that the work is not finalised despite these, or that the work is dragged out, summarises the understanding of administrative expediency.

According to the statements of the participants, the administrative-maslahatism is caused by the unwillingness of the employees to do business, their lack of knowledge, their hesitation to take responsibility, the fact that the procedures are loaded with documents and signatures, and that the documents

are subject to endless formal requirements. As can be seen, some of the reasons are due to the bureaupathological attitude of the employees and some of them are due to the nature of the procedures to which the works are subject. Naturally, the second most frequently answered definition of cleropathology is centred on rules and procedures.

4.2.2. Proceduralism

The problems of bureaucracy arising from its rule-making characteristic are that rules are not known, rules become a goal, rules are applied arbitrarily, rules are outdated, and rules are treated as if they were rules when they are not (Bozeman, 1993, pp. 278- 289; Thompson, 1968, pp.163-164). In their answers to the question about the problems of bureaucracy, the participants who defined bureaucracy as “a set of rules” mentioned that bureaucratic problems arise when these rules lose their validity, are applied/not applied arbitrarily, are not known, and become a goal.

Some of the participant statements are as follows:

“Although it is not in the will of the legislator, the bureaucracy may put forward more conditions than necessary in the secondary legislative arrangements created by the bureaucracy in public service provision. The point that should not be overlooked here is the following. Generally, secondary regulations such as communiqués and regulations are put into practice with the approval of the Ministers or the Presidency. It is also bureaucracy for an institution to ask for the opinion of another institution on a matter that it can solve itself (Chief Tax Inspector).”

Here the participant is referring to the density of secondary law rules. Basically, secondary law rules are created to explain in more detail the rules that are specified in primary law rules as an umbrella. As these explanations increase, both the density increases and, as the participant stated, an additional process such as obtaining opinions from other institutions emerges. This is called “rule pressure” (Bozeman, 1993, p. 280).

Another participant, on the other hand, sees no harm in consulting other institutions for problems related to their own organisations. The participant who thinks that getting opinions from other institutions is not a bureaucratic problem, on the contrary, not getting any opinions is a bureaucratic problem, expressed this as “operational blindness”:

“On the other hand, it is clear that it would be important to receive counselling from another organisation (public or private) for the solution of

existing or potential problems in the organisation we work for. Because, as in many other organisations, “business blindness” exists in our organisation, albeit to a certain extent (Chief Tax Inspector).”

Another participant:

“Bureaucracies are shaped by laws; therefore, the laws that constitute the bureaucracy should be quickly adapted to today’s conditions. One of the duties and powers of the Ministry of Finance is to provide state revenues (taxes). In order for the state to collect tax revenues at the highest level, tax laws should be constantly updated. Studies in this direction are generally carried out on existing laws. Although the responsibility lies with the legislator, the main solution authority is the Ministry of Finance (Tax Inspectorate).”

Here, as in the previous example, the proceduralist bureaucracy is defined only in terms of legal rules. It is stated that the laws related to the organisations and/or businesses in question need to be updated. This bureaucratology is referred to in the literature as “changing the effect/function of rules” (Finamore, 2009, p. 10). The same bureaucratology was also stated by another participant:

“Since bureaucracy is a set of rules, if all or some of these rules are outdated, their functionality, adequacy and validity decrease and even disappear. In this context, institutions that do not update themselves and their rules may experience all kinds of problems at every stage. The most prominent of these problems is the inability of the organisation to meet the expectations of the audience it serves by citing outdated rules (Chief Tax Inspector).”

Statements explaining the bureaupathology of prescriptivism more broadly in terms of formality and procedure are as follows:

“Bureaucracy is the fact that services that can be obtained in a shorter period of time are obtained in a longer period of time and with more inconvenience due to the fact that the procedures in accessing the services carried out by the public sector are stipulated more than necessary (Chief Tax Inspector).”

“Exaggerated determination and application of rules within the bureaucratic structure (Tax Inspector).”

Again, in these two different statements, an example of bureaupathology of the “rule pressure” type is given.

In another statement, the rule has turned into a aim. In other words, while the ultimate goal is to finalise the work in question, the ultimate goal has become to fulfil the procedure, no matter what. This means that rules and/or procedures are institutionalised in a way that overshadows their real purpose (Merton, 2016, pp.131-132):

“Bureaucracy implies the existence of necessary rules such as permissions, approvals and signatures in organisations, often leading to waste of time by dragging the processes to a halt, thus making things go slower than necessary, in other words, excessive formalism. To say that there is bureaucracy;

✓ Although they are not included in the administrative procedure processes, works or transactions that will not affect the security and compliance of the final administrative procedure with the legislation are included in the process; or

Accordingly, the second most common bureaucracy problem in Turkey is proceduralism, which corresponds to the problem of excessive prescriptivism.

4.2.3. Initiative Problem

Initiative problem is a problem arising from the fact that bureaucracy does not give people the right of initiative. In the literature, the problem of not being able to take or use initiative means that the employee’s right to discretion and the opportunity to use initiative are restricted due to the type of bureaucratic organisation. It also means that the distrustful attitude of supervisors does not allow civil servants to exercise discretion and participate in management (Mouzelis, 2001, p. 56; Shafritz & Russell & Borick, 2017, p. 259).

In these definitions, an employee profile is drawn who wants to take initiative but is prevented from taking initiative, exercising discretion and participating in management due to bureaucratic and/or legal obstacles. Of course, all these are bureaucratic obstacles caused by the inability to take initiative. However, it has been observed in the research that bureopathology arises because some of the employees do not want to use initiative.

In other words, although there is no legal or organisational obstacle for employees to take initiative, bureopathology emerges from a different perspective as they do not take initiative and hesitate to take responsibility.

Participants mentioned that certain people in an organisation do the work and others do not want to take responsibility for anything outside their scope of authority and responsibility. Some of these statements are as follows:

“It is an important problem that public officials respond negatively and do not act in a solution-oriented manner when they are asked to do something other than their routine work but within the scope of their duties. The main reason for this is that the personnel do not want to take initiative. Because public bureaucracy tends to minimise the risk of responsibility as much as possible (Tax Inspector).”

“Waste of time due to unnecessary correspondence as responsibility is avoided (Tax Inspector).”

In these two statements, the participants referred to bureaucropathologies that arise because employees are reluctant to take responsibility in situations where it is procedurally possible to get things done faster, but without causing any procedural problems.

The memory of the participant describing the bureaucropathology experienced as a result of this attitude of an employee who does not want to take initiative and responsibility is as follows:

“Within the scope of the projects I have worked on, there have been many recurring problems that I have encountered many times while obtaining the data required for the project from the relevant Ministry. When the unit related to the data in question was contacted in the relevant Ministry, there were cases where they were rejected as they could not take any action related to this data, and when they went to the next higher supervisor, they reported that they could not take any action on this issue and went to the highest supervisor. When the highest supervisor was approached, he did not know whether there was such data or not, and therefore, this data could not be obtained for about six months after the answer that the procedures would be reviewed and returned to us in accordance with the letter. As you can appreciate, the fact that the data could not be obtained on the same day with the interviews made causes the State to be damaged in terms of income (Tax Inspector).”

Initiative problem bureaucracy is a bureaucratic problem that includes both organisational and legal obstacles and the employee’s hesitation to take responsibility. Reasons such as employees’ hesitation to take responsibility, fear of taking risks, arbitrariness, unwillingness to do more work constitute the initiative problem.

4.2.4. Hierarchy Spiral

Among the answers given, it was stated that the hierarchy spiral prolongs the process of the works and makes it almost impossible to get results. In bureaucratic vertical hierarchies, documents go on a journey from bottom to top and then return to where they started. People travelling through the hierarchy for documents and signatures return back to where they started, as if in a spiral. For this reason, the term “Hierarchy Spiral” is used in this research to express the vertical hierarchical structure of bureaucracy.

A few participant statements summarising the Hierarchy Spiral are as follows:

“When you call the customer service of any institution, for example a bank, you have long and meaningless conversations with people from many

units until you reach the relevant unit. Or in your transactions in places such as hospitals, notaries, land registry offices, tax offices, municipalities, you go from room to room, floor to floor, have documents signed, stop by the teller a few times in between, and then complete your transactions in the first room you visit, exhausted (Participant who did not share a title)."

"In order to say that there is bureaucracy, I think that there should be a hierarchical structure in which the civil servant cannot reach his/her superiors and cannot explain his/her situation and exposure. On the other hand, there must be a citizen whose work is not seen, a public who cannot get what they want on time, and a system that leads them to think that the civil servant is just a robot and cannot find a solution to any of their problems (Tax Inspector)."

"Some of the problems that I think stem from bureaucracy are as follows; the unnecessary hierarchical structure in the organisations of the institutions (not being able to make full use of the labour force, such as when there are positions such as chief, deputy director, director at the same time in an institution where 20 people work) (Participant who did not share a title)."

It was also stated that the Hierarchy Spiral bureaucracy leads to other bureaucracies such as slowing down the work, unnecessary personnel, lack of initiative and red tape. In addition to these statements, the interviewees also used the term "strict hierarchical structure" in their definition of bureaucracy. No memory of a bureaucratic pathology directly caused by the vertical hierarchy type was shared. There is a more horizontal hierarchy in VDK. Therefore, the opinions and feelings of the inspectors about the vertical hierarchy emerged as a result of their relations with different institutions.

4.2.5. Renewal and Change Problem

Another problem of bureaucracy listed in the literature is that bureaucracy is closed to innovations and resists change. Bureaucracy is status quo and closed to innovations (Shafritz & Russell & Borick, 2017, p. 259; Hughes, 2014, p. 131; Thompson, 1968, p. 15; GIBLIN, 1981, p. 24). The same problem was also identified in this study. A few participant statements are as follows:

"Problems related to bureaucracy are generally encountered in the execution of services. The inefficiency of bureaucratic administration is based on the inability of this system to keep pace with changing conditions and to renew itself. Its rigid hierarchical structure, unchanging rules, the fact that the rules used as a means to realise the objectives become the objective and the corruption effect arising from the bureaucracy-politics relationship constitute the source of the problems. This situation both prevents the provision of information about the

work and prevents the use of new working methods appropriate to the changing conditions of the day (Tax Inspector)."

"In the event that institutional changes are made in the light of scientific methods and by making use of contemporary approaches, they positively affect the examination and inspection process. However, the frequent repetition of institutional changes leads to a continuous expectation in the personnel and causes loss of motivation. This situation negatively affects the examination and inspection process (Tax Inspector)."

"In general, the main bureaucratic problems can be listed as closedness or conservatism to change and development, lack of bureaucratic control or resistance to control despite managerial concepts such as transparency and accountability, corruption and bribery, and favouritism (Tax Inspector)."

In the interviews, this type of bureaucracy was expressed in terms of being closed to innovation and change and/or not being able to keep up, conservatism and ignorance. The definition of bureaucracy and the problems of bureaucracy were listed in sentences in the answers to the questions. The necessity of adapting to changing conditions was emphasised.

4.2.6. Corruption

The problem of corruption, which refers to bureauopathologies such as embezzlement, nepotism, brokerage, bribery (Graeber, 2016, p. 30; Dreyfus, 2014, p. 46; Schröder, 2004, p. 344), has not received much attention.

A few participant statements defining bureaucracy and bureaucratic problems in the context of corruption are as follows:

"Appointment or appointment of unqualified persons who do not have the opportunity to implement bureaucratic processes effectively and efficiently, ... Offences of bribery, embezzlement, extortion and corruption in the bureaucracy (Chief Tax Inspector)."

"In general, the main bureaucratic problems can be listed as closedness or conservatism to change and development, lack of bureaucratic control or resistance to control despite managerial concepts such as transparency and accountability, corruption and bribery, favouritism (Chief Tax Inspector)."

Bureaucracies such as bribery, embezzlement and corruption are mentioned superficially in sentences. A little explanation has been made about nepotism, favouritism and agency bureaucracies. In addition, the appointment of people without merit was also mentioned. Participants did not share memories about this bureaucracy and did not go into much detail. However, it is recognised that it causes an undeniable problem in bureaucracies.

4.2.7. The Problem of Politics-Bureaucracy Balance

Conflict between bureaucracy and politics is always possible for many reasons. When politics increases pressure on the bureaucracy, the bureaucracy becomes defensive. In this case, politics labels the bureaucracy as narrow-minded, self-interested and incompetent slaves (Wilson, 1996, p. 174).

The problem of the balance between politics and bureaucracy is one of the problems of bureaucracy. In this research, very few statements were obtained about the balance between politics and bureaucracy. Inadequate statements were taken into consideration in this study due to the risk of making the finding subjective and the reactive behaviour of the non-respondents when they rejected the question.

One participant explained that they encountered political interference in tax inspections and audits during almost the entire interview. This interference is in the form of requests to delay or accelerate the inspection and examination procedures from time to time. Other interviewees refused to answer the question. The results of the written interviews did not provide a response on this issue.

4.2.8. Problem of Coordination and Co-operation between Public Institutions

Public institutions often have to work in cooperation and coordination with each other while implementing public policies. Sometimes this co-operation cannot be ensured and the public service to be provided may be slowed down and interrupted. In cases where the failure to provide the necessary cooperation is caused by bureaucratic reasons, the type of bureaucratic problem called “inter-agency cooperation problem” emerges according to this research.

In the problem of coordination and co-operation between public institutions, the interlocutors are both public institutions. In order to fulfil some of its tax inspection tasks correctly, the VDK needs information from other public institutions and other institutions under the same ministry on taxpayers, sectors, firms, policies decided on the subject, etc. In line with this information, it has the opportunity to evaluate the taxpayer’s declarations more clearly. In line with this information, it has the opportunity to evaluate the taxpayer’s declarations more clearly. In this case, it writes an official letter requesting the necessary information from the relevant public institution and sometimes waits for a long time for the response.

The issue of organisations sharing information with each other depends on multiple factors such as the type of information requested, the period in which it is requested and so on. In other words, it may not always be possible to obtain the

desired information at the desired speed and not all such situations are considered as bureaucratic. Apart from this, there are also statements (only 2 statements) stating that when they asked for information from another organisation, they received an answer immediately. However, there are more statements claiming the opposite. Based on the statements of the participants, the focus here is on the issue of not sharing information-documents due to mistrust, hierarchy spiral or delay without any reason.

A few participant statements are as follows:

“Inadequate co-ordination with the Revenue Administration, the unit implementing revenue policy (Tax Inspector).”

“The most important problem arising from bureaucracy is the “time” problem. There is one piece of information we need from the ongoing investigations. Even though the Presidency that will provide this information is an organization affiliated with the Ministry of Treasury and Finance, the methods used to reach us with this information are due to bureaucracy. “Collecting this information under a common roof, allowing the person who needs the information to access the system and accessing this information more quickly will be effective in minimizing the review period in terms of both time and paperwork (Participant who did not share a title).”

“Due to the fact that the inspector cannot directly access the data belonging to other institutions on issues related to his/her work, information is requested from each institution separately in writing, which prolongs the examination or inspection period. For example, the system used by the Tax Inspector does not include bank information, title deed information, SSI information, which are generally needed in the examinations carried out. Even some of the data in the information pool of the Revenue Administration within the same ministry are not directly accessible. It is like a situation where an inspector cannot directly access the data directly accessed by the director of the tax office he/she is inspecting (Participant who did not share a title).”

In these statements, the participants emphasised that the positive or negative response to the requested information-document was obtained late. As a reason for this, they stated that correspondence between institutions takes too much time. It is thought that the possibility of direct access to the information-document type needed by different institutions, especially under the same Ministry, in different periods, would eliminate the resulting bureaucratology. In certain types of tax inspections and examinations, the same type of information-documentation is required for each inspection, and each time the correspondence

sequence in question has to be fulfilled. As a result, these information-documents are shared without any problems. It has been declared that being subjected to the same correspondence traffic for each request that is repeated and whose result does not change is a bureaupathology.

5. Evaluation of Findings

A case study was conducted to measure bureopathologies in an important Ministry and an important institution of the administrative sector of the state in Turkey. Starting the sentence in this way while evaluating the findings of the field study is the most dominant impression left by the study on the researcher. In the Board, the concept of bureaucracy refers firstly to the state and then to the form of organisation of the state with its problems.

In this study conducted in a public institution, it is an expected result that bureaucracy is associated with state administration. In the VDK, when “bureaucracy” is mentioned, “state administration” is understood as “bureaucracy’s problems” and when “bureaucracy’s problems” are mentioned, “administration-maslahatism”, “proceduralism” and “initiative problem” are understood as priorities. In other words, it is possible to conclude that bureaucracy is necessary but its problems should be solved.

In this field study, the problems of bureaucracy in the literature were not asked to the participants separately, but a general question was asked asking them to describe the problems of bureaucracy. As a result, a list very similar to the problems of bureaucracy in the literature was obtained. Based on this, it can be said that although people work in different institutions, perform different jobs or provide different services and have different titles and personal rights, they can give the same pathological reactions to the same bureaucratic situations. Therefore, as V. Thompson (Thompson, 1968, p.170-171) states, bureaucratic pathology becomes a learned behavioural pattern after entering the bureaucracy.

This classification is explained below with the help of a table:

Table 5.1. Comparison of Bureopathologies (Created by the author)

	Bureopathologies Described in the Literature	Bureaucratic Practices Reached as a Result of Case Study
Principles of Bureaucracy with Pathological Tendencies	Hierarchical Structure	Hierarchy Spiral
	Over-centralisation	-
	Organisation Growth	-
	Prescriptivism	Proceduralism
	Inability to Take Initiative	Initiative Problem
Bureopathologies Caused by the Distorted Principles of Bureaucracy	Red Tape and Formalism	Administrative Maslahatism
	Secrecy and Closedness in Management	Secrecy and Closedness in Management
	Renewal and Change Problem	Renewal and Change Problem
	Inefficiency and Ineffectiveness	-
	Corruption	Corruption
	The Problem of Politics-Bureaucracy Balance	Politics-Bureaucracy Problem
-	-	Problem of Coordination and Co-operation between Public Institutions

As VDK is an important institution of the bureaucracy, the inspectors are also important bureaucrats. As a result of this identity and sense of belonging, they are extremely closed and act with the principle of confidentiality. This situation was felt most in the process of obtaining permission from the institution. Obtaining permission from the institution was a long and labourious process. So much so that 2 applications were made with a petition and these petitions were not even given a written rejection answer. If a written and justified rejection answer could have been received, the protectionist approach of the institution would have been reinforced with these documents.

It is believed that it is the protective feeling towards the bureaucratic areas in the state that leads the Board to act in a closed and secretive manner. More precisely, there is an extremely sensitive atmosphere against any intervention from “outside”. Although it has been repeatedly stated that the study has no

political purpose, the reserved attitude has not changed. Again, due to this closed attitude, no documents were shared with the researcher.

In VDK, bureaucracy is perceived as a form of organisation that should continue to exist despite its problems. The striking point in the answers to the question on the perception of bureaucracy is the emphasis on bureaucracy as a well-established form of organisation. However, what the participants really want to express is not the bureaucracy but the state itself. In this case, it is understood that the identity of the institution/organisation to which they belong is determinative in their perception of bureaucracy.

It has been used to express the bureaucracies of administration, stationery, formalism, waste of time, procrastination, paperwork burden and travelling from one place to another to collect signatures. Of course, it is very difficult to get standard answers to questions such as how long is a reasonable time for a job to be completed in public institutions, how many documents are required, how many signatures should be obtained from how many people at most for a job. The answers to these questions depend on multiple variables such as the type of work, the subject of the service provided by the institution, periodical intensity, knowledge and experience of the personnel. In this study, it is not aimed to make a determination according to the standards, but to measure the feeling of the situation of administrative management. In other words, the unit of measurement was the psychological limit of the participants. Psychological limits were obtained from the memories, examples and definitions of the participants.

Later on, they shared memories about the types of bureaucratology such as pretending to be a rule when there is no rule, over-prescriptive behaviour, and making the rule a goal. Here, this type of bureaucracy is expressed with a more comprehensive concept as “proceduralism”. In this way, the possibility of understanding only the rules of law when “rule” is mentioned will be prevented. Participants shared different memories from different organisations. The starting point of each type of bureaucratology here is the same proceduralist behaviour.

Since the source of authority and power in bureaucracies are laws and written rules, individuals are very insistent on protecting these written rules. Otherwise, they worry that they will lose authority and feel insecurity. Therefore, in this type of bureaucratic behaviour, strict adherence to procedures has become the main goal.

As stated in Table 5.1. the meaning of initiative problem bureaupathology has expanded. The novelty of the study here is that the problem of initiative is not

one-sided. While it is a bureaupathology that people encounter organizational or procedural obstacles even though they want to take initiative, it is also a bureaupathology that they hesitate or do not want to take initiative. People may not even do their standard jobs for reasons such as avoiding taking responsibility or not fulfilling their duties because the control mechanism is inadequate. Here we see people who have become clumsy in the bureaucratic organization and clumsy in the state mechanism.

The Hierarchy Spiral has been used to express the bureaucratic bureaucracy's hierarchical structure's bureopathological state. What is meant here is that the work and transactions take a long journey in the excessive vertical hierarchy and then return to the point where they started. Here, the negative psychology created by the picture of people wandering from one place to another with documents in their hands, as if in a spiral, is emphasised rather than whether the works are finalised or not.

When it comes to renewal and change in the VDK, two issues emerge. Firstly, the establishment of VDK as a new institution is the most important organisational change in the world of inspection and audit. The fact that this change and renewal was made in order to eliminate one or more bureaucracies is still a matter of debate in the Board. Interpreting the opposition to the establishment of the VDK and the abolition of the previous institutions with the bureaucratic "opposition to innovation" is not a conclusion that can be reached directly.

The second issue is the fulfilment of inspection and audit procedures through e-applications. The innovations supported by the participants are technological innovations called "secondary changes". Electronic applications are used in almost every institution and/or workplace. The Ministry of Treasury and Finance is one of the leading public institutions in this regard. None of the participants objected to the utilisation of electronic applications while performing inspection and audit activities at VDK; on the contrary, they supported it. Therefore, there is no bureaucratic resistance to technological changes and innovations in internal practices.

The VDK has experienced both the main changes and the secondary changes discussed in the section on the problem of innovation and change in theory. The main change was the establishment of the VDK. This change was supported by those who were in favour of it and made it easier to adapt. On the other hand, it was not supported by those who thought that it was not in their favour and encountered reactions. The secondary change was the introduction of electronic applications. This change was not met with resistance and reaction.

However, when people do not feel safe, they resort to formality, rule and old ways of doing business. They avoid taking initiative and adopting new procedures. VDK may be an organisation open to technological innovations and development, but an example given shows that people act with the motive of self-protection:

“Contradictions in some applications. A tour assignment was made for tax inspection purposes. We were reporting our monthly expenses at the tour site to our institution’s fiduciary service. At that time, taxpayers had switched to e-invoice. An e-invoice was issued to us for accommodation expenses. The fiduciary service did not accept the e-invoice in that way, and requested that it be printed out and stamped-signed. Although the Ministry of Finance introduced e-invoice application to taxpayers, the same invoice had to be stamped and signed again (Assistant Tax Inspector).”

The fiduciary does not react to the innovations, but continues to do business in the old way. A similar example was found in another field study. According to the research of Bektaş (2015, pp. 94-95), a transaction finalised with the EBYS system is printed out and archived by employees who do not find it safe to be stored electronically. Although there is no resistance to innovation, insecurity is experienced in the process of adaptation. Regarding the problem of lack of coordination and co-operation among public institutions, the participants mentioned that they need the same information-documents every time in tax inspection and audit works. It was pointed out that there is correspondence traffic and loss of time between institutions in order to obtain these information-documents. Participants also added that an automation system that can directly access such information-documents would be a solution. If there is a delay because organisations do not want to share information-documents and as a result, the requested information-document is not shared, there are two situations. Either the relevant institution does not deem it appropriate to share the requested information-document (e.g. bank information on some investments of the taxpayer). It is not considered that there is a bureopathological reflex here. In the other case, institutions do not want to share information-documents because they act with the reflex of confidentiality and mistrust. In this case, inter-institutional cooperation is damaged and a bureaucratic situation arises.

Another bureacropathology is corruption. The participants mostly emphasised the lack of merit. No finding has been obtained that meets the types of corruption such as favouritism, injustice, etc. Especially since the recruitment conditions are based on examinations, interviews and performance

measurement periods conducted in certain standards, it is an expected result that such bureaupathologies are not experienced at the Board. Participants who considered corruption as a moral problem evaluated the issue in terms of tax evasion and unregistered economy. In fact, the participants emphasised corruption less not because they think that corruption does not exist or is rarely experienced in institutions, but because they think that corruption is not a bureaucratic problem but a moral or ethical problem. Especially problems such as bribery, nepotism and embezzlement are considered to be moral problems. It was stated that people who are prone to crime cause these problems in every bureaucratic environment to a greater or lesser extent. These statements were mostly made by a few members of the Board in “off the record” conversations. Of course, there are also participants who stated that corruption is a bureaucratic problem.

The problem of political-administrative balance is also among the problems mentioned superficially. One participant mentioned that they encountered political interference in tax inspection and audit work. No other participant made a similar statement. The fieldwork organisation is an important institution of the public bureaucracy in Turkey. Accordingly, the participants define themselves as “bureaucrats”. In other words, they constitute the bureaucracy side of the bureaucracy-politics seesaw. When the establishment of the VDK and the abolition of the previous well-established institutions were added to this situation (the abolition of the institutions is thought to be a political intervention), even using the word “politics” in the institution caused a great reaction.

In this sense, it is thought that the institution does not look at and interpret the problem of the balance between politics and bureaucracy impartially. A few participants emphasised that “bureaucratic oligarchy” never exists here and that the institution only aims to provide public service. In other words, it was stated that VDK does not have negative situations where bureaucracy is dominant and that they are only the implementers of policies. On the other hand, all participants, except for 1 participant, rejected the situations where politics is dominant in their organisations, that is, where there is political interference. According to the participants, political interference is a bad situation that should not even enter the door of the organisation. Tax examination and inspection work must be carried out by impartial and independent persons.

According to this field research, the current bureaucratic pathologies in Turkey are the principles of bureaucracy with pathological tendencies, including the Hierarchy Spiral, Proceduralism, Initiative Problem, and the problems caused

by these principles, such as Administrative-Managerialism, Renewal and Change Problem, Secrecy and Closedness, Corruption, Politics-Bureaucracy Problem and Coordination and Cooperation Problem between Public Institutions.

6. Conclusion And Recommendations

According to the field study, bureaucracy is an integral part of the state and a form of organisation that is accepted to have problems. Whether in the public or private sector, the first negative meaning that comes to mind when bureaucracy is mentioned is red tape, paperwork burden, waste of time, cumbersome state. These concepts are expressed in more general terms as “administration-maslahatism”.

The other type of bureaupathology is expressed as proceduralism. Proceduralism is based on rule-goal incompatibility. Since the source of authority in bureaucracies is laws, this type of bureopathology has emerged in cases of overprotective approach to organisational laws or procedures. Especially when people feel insecure, adherence to procedures increases even more. Otherwise, it arouses anxiety because it will cause loss of authority and power. The fact that the source of authority in bureaucracies is written rules and procedures saves the administrations from patrimonial and traditional procedures; however, people’s adherence to these laws to the degree of anxiety has led to the bureopathology defined as “proceduralism”.

The problem of using initiative is an important problem in bureaucracies. In the course of life, there are not always planned situations as idealised by bureaucracies. It is necessary for members of bureaucracies to have the courage to take initiative for possible unexpected situations. However, in bureaucracies, people are subject to a hierarchy and decisions are taken unilaterally. Subordinates do not participate in decision-making, they fulfil orders and instructions from superiors. This is how bureaucracy is designed. Therefore, there is an organisational/structural barrier to people’s initiative.

On the other hand, it has been observed that people are reluctant to take initiative and finalise the work when there is no organisational or legal obstacle. Another problem related to initiative is the problem of “unit of measurement”. In bureaucracies, the use of initiative by civil servants varies according to whether the organisation is in the public or private sector, the task area, staff volume and cultural structure of the public institution, and the situation of the event that is likely to use initiative. In particular, the organisational culture of the institution in question and the internal dynamics of the officer determine

the limits of the officer's use of initiative. Therefore, it is extremely difficult to propose a standard solution to overcome the problem of lack of initiative.

Bureaucracies are status quo structures with the claim of being universal. They are closed to innovation and change. The problem of innovation and change stems from this structure of bureaucracy. However, while members of the bureaucracy adapt to secondary innovations more easily, they have difficulty in accepting primary innovations and show resistance. The most prominent example of secondary changes is technological developments. Technological developments are not met with resistance, but when people perceive a risk, they resort to bureaucracy, which is the way they know best. Self-assurance has been the typical reaction of the bureaucracy, which is designed as a guaranteed profession.

In recent years, the secondary change/innovation that has affected public administration the most is electronic developments. Public administration uses e-applications to a significant extent. VDK is among the successful institutions in this regard. At the same time, it is possible to say that it is the most accepted and traceable method in the methods of eliminating bureaucracy. Electronic applications save time, resources and labour and help to eliminate multiple bureaucratic sub-types such as administrative bureaucracy. VDK has made successful attempts to realise the participatory, customer-oriented, effective, efficient and open to development elements of new management practices. On the other hand, VDK, as an important institution of the state, is extremely closed and secretive to any outside intervention (even if it is a scientific study), yet it is not free from political interference and equates the institution of bureaucracy with the institution of the state. The fact that it has a more horizontal hierarchy allows the inspectors to work in a more participatory and independent manner, while the inspectors reacted in a bureaucratic manner when they encountered an unorthodox procedure.

In this field research, a single public institution was analysed. The same study can be conducted by other researchers in another public institution and/or private sector organisations. At the same time, in this study, the perception of bureaucracy and bureaucropathology was tried to be measured with general questions. Findings similar to the classification of bureaucracy and bureaucropathology described in the theory were obtained. However, separate studies can be conducted for each type of bureaucropathology. For example, only "proceduralism" bureopathology can be analysed in a public institution. Case analyses can be multiplied by classifying the situations in which this

bureopathology occurs. Again, the same type of bureopathology can be analysed in different institutions and the results obtained can be compared.

In Turkey, the issue of bureaucracy in the public sector carries more meanings than mere red tape or “administrative expediency”. Bureaucopathologies contain deep-rooted problems embedded in state administration. Therefore, each type of bureopathology is worth to be analysed in all public institutions. The studies are likely to take a long time but are important for finding realistic solutions.

The understanding of “bureaucracy=state” that dominates the public sector is the biggest obstacle in the fight against bureaucracies. Scientific studies on this subject should frequently reiterate that efforts to improve bureaucracy and bureopathologies are not an intervention in the existence of the state. The public sector is a “safe harbour” for all civil servants, whether they are senior or not. Therefore, people are firmly attached to their seats. Any change and/or intervention creates a sense of risk and insecurity and increases the severity of existing bureaucratic pathologies.

The tendency to behave bureaucratologically increases when individuals in institutions are in a situation of continuing their business and transactions under risk in an insecure and uncertain environment. Members of the bureaucracy who do not feel safe show behaviours that are more firmly attached to the procedures they know best and to the old ways they are used to. Situations such as organisational change, technological innovation, expansion of service type, frequent change of managers, frequent change of laws increase the feeling of insecurity and risk in business environments.

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CHAPTER XIX

DISASTER MANAGEMENT (WARNING AND ALARM SIGNS, EARLY WARNING SYSTEMS)

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1. Introduction

Disasters are events causing environmental, economic, physical and social damages and impacts on societies, leading to loss of life, illnesses, and both physical and mental injuries, interrupting ongoing life, and incapacitating local capacity (UNISDR, 2009). It is not the natural, human, and technological disasters that cause real damage to society but their effects (Kadioğlu, 2011). Globally, the destructive effects of disasters continue to maintain their threatening dominance over many societies. As stated in the Sendai Framework for Disaster Risk Reduction, thousands of people lost their lives, 1.4 million were injured, millions were displaced, and more than 20 million were affected by disasters in 2005-2015. It has been determined that the economic losses caused by disasters in countries are very serious. The disasters caused by global climate change, which add extra burdens to this negative trajectory, are also obstacles to sustainable development (UNISDR, 2015). However, these definitions are event-oriented, and result-oriented definitions have been made for the definition of disaster in recent years. Disaster results from events that cause environmental, economic, social, and physical damages

and impacts in societies, lead to loss of life, illnesses, and both physical and mental injuries, interrupt ongoing life, and that local capacity cannot cope with.

Historically and today, many societies globally have suffered great losses due to the effects of disasters. The consequences of disasters may continue to threaten individuals in settlements in the future. The main element that needs to be emphasized here is that disasters cannot be completely eliminated; only the consequences that may arise can be reduced to very low levels. It is an inevitable fact that community-based training activities should be organized in order to ensure this positive structure. In fact, the educational organizations created for the consequences of disasters should be started from the kindergarten level, and thus, a culture of education for disasters should be gained in society. Of course, during this process, a great responsibility gradually bears on all educational institutions and their personnel, especially kindergarten and primary school. As Kaya and Ayker (Kaya and Ayker, 2022) emphasize, the more adequate the disaster knowledge levels of teachers are, the less negative outcomes can be seen during and after the disaster.

There is a link between disasters and population. In other words, as the population increases in settlements, the number of disasters and their harmful effects also increase. In addition to the physical damage caused by disasters, the social, economic and geographical structure of the region is also important in terms of possible damages (De Ville de Goyet et al., 1976). The negative effects of disasters can be very fast or slow. In addition to this situation, the effects of the disaster may also pave the way for the formation of secondary disasters. The factor that should not be forgotten is that disaster does not cause similar effects on every society. If this concept is to be explained, while the event experienced in one society constitutes a disaster, the same event may not have this characteristic in another society (Noji, 1996). In other words, the negative effects of disasters may vary from region to region. One of the factors that cause this variability is the country's level of development, which is directly related to the economy. Disasters have effects on the development factor. Similar to this situation, the level of development of countries also has an important role in the effects of disasters. In countries with a certain level of development, insurance activities, supervised building standards, warning systems based on developing technology, and prepared and ready-to-intervene institutions can be found. Thus, due to these phenomena, the level of negative impacts of disasters in developed countries will be lower compared to less developed countries (Kellenberg and Mobarak, 2011).

Disaster management is the effective implementation of a holistic approach to all hazards. It is a phenomenon in which all sectors, from all public institutions

in the country to non-governmental organizations, from international platforms to each individual in the society, are affected and responsible. The following measures should be taken within the scope of disaster management:

- In settlements, there may be an increase in hazards that will cause changes in technological and ecological balance levels due to increasing population, urbanization, and advances in industrial areas. All hazards and vulnerability factors should be addressed, and risk management-based preparedness activities should be implemented.
- Strategies and targets should be determined nationally and locally to mitigate hazards. Response and improvement activities should also be included in these plans.
- The phenomenon of responsiveness should effectively reduce the negative impacts that may arise when hazards are experienced.
- As a result of the disaster and its effects, it should also be considered that multiple hazards can be seen and fought in the region simultaneously.
- The settlements, institutions, and society negatively affected by hazards should be made resilient and less exposed to the events experienced (Stenchion, 1997).

Early warning systems are one of the strategies considered important in risk reduction activities in combating disasters. These are technological systems for detecting and explaining hazards and conveying warnings about the situations experienced (Hall, 2007). Early warning systems are of great importance in minimizing the losses that may arise from global, regional, and local disasters by making explanations at the right time and in a way that does not cause information confusion. Through these systems, it is aimed to minimize the losses that may arise by taking event-specific measures by institutions and societies in the regions where the hazard is experienced (Kadioğlu, 2011).

This book chapter aims to introduce early warning and alert systems, their features, examples of systems used internationally, and suggestions on measures that can be considered.

2. Early Warning and Alert Systems

2.1. What is an Early Warning and Alert System?

Warning systems predict potential disasters and help to communicate these disasters to people living in hazardous areas. Thus, people living in hazardous

areas follow appropriate event-specific steps through these systems and proceed to evacuation. These systems are structures that establish a link between multidisciplinary institutions and society. When the steps to be followed within the scope of preparedness are examined, it is the creation of necessary plans, training, and drills and ensuring the continuity of these steps (Sorensen, 2000). In other words, emergency warning systems are useful in warning society and taking precautions for all situations, from natural meteorological events to terrorist attacks. Any precautions that the community can take when an incident occurs should be organized per many factors, such as the immediate location, the type of incident, and the distance to the area of the incident, which is referred to as the hot zone. In fact, the warning notified to individuals is not only important before the incident. It is also vital to provide information at the time of the incident and afterward. Because areas that do not pose a threat before the incident may turn into a dangerous location during or after the incident (Montanari et al., 2007).

It is of great importance for society and institutions to adopt early warning systems considering the disasters and the risks that may arise in the settlements. Carrying out preparation activities by considering early warning systems can effectively minimize the destructive effects of disasters in the regions. The design of infrastructure specific to these systems should be ensured. Preparedness activities should be instilled in the society under risk by considering the worst possible event. Within the scope of this process, making the necessary announcements to the community at risk according to disaster types, providing risk-reducing messages about the event, ensuring the continuity of the warnings made, and coordinating with institutions are important factors of the early warning system (Karaman, 2016).

As in Figure 1, the early warning process starts with the prediction step and continues until the dangerous event or events are experienced. The prediction step explains the proof of the realization of a possible event that may occur in the following processes. Preparatory activities should be carried out at this stage. In the observation phase, the second step of the warning process, the effects of the possible event are monitored based on the predictions. The third step informs the society to take action for the possible effects of the hazard event if it occurs (Kadioğlu, 2011).

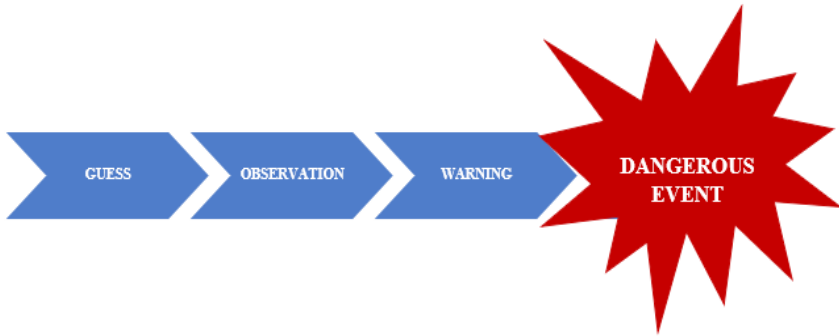


Figure 1. Early Warning Process

Source: Designed by the author inspired by Kadioğlu (Kadioğlu, 2011).

An early warning system consists of four main components that must be interconnected. In other words, a failure in one component will negatively affect the other components and cause the system to fail. The four main components can be explained as follows:

1. Risk assessment: Potential hazards and vulnerabilities and the factors that cause these negative situations should be identified. Data should be collected regularly, and studies should be carried out by drawing risk maps.

2. Monitoring and warning studies: Identifying, monitoring, analyzing, and predicting hazards and their possible effects and issuing warnings at the right and appropriate time.

3. Dissemination of warnings and communication: The dissemination of warnings to the at-risk population. The warning information communicated to people should be clear, and the risks that can be seen should be understandable.

4. Response capacity: Preparatory activities to equip the community, both at regional and national levels, with the skills to respond to the alerts provided to them. While addressing this process, response plans should be tested and up to date (ISDR, 2023).

For the warning system to start, many decisions need to be made. The first of these decisions is identifying the danger factor that threatens society. Secondly, once the hazard has been identified, an assessment of the threat to security is made. While making the assessments, it is determined whether the community and institutions will be informed about the danger, which institutions will accompany the warning process, and whether protection activities will be

carried out against possible damages. Finally, a decision is made on how to alert the public to the hazard and what types of protective actions will be effective (Sorensen and Mileti, 1989).

2.2. Required Features of Early Warnings and Alerts

There are some factors to be considered in early warning systems. Within the scope of these factors, it is of great importance that the warning contents created are accurate and understandable, the effective response of individuals in society to the warnings at the appropriate time, and the warning content should be at a level that each individual in the society, including vulnerable groups, can understand, limiting the use of multiple warning dissemination materials, using different early warning systems according to hazard types, organizing training within the scope of community-based preparedness activities, and knowing the sources of risk and threat that may be seen (Cvetković, 2021).

Five factors need to be considered when creating early warning and alert content. These are danger, time, place, guidance, and source.

- **Danger:** When creating the warning content, there should be information about the event that may occur and what kind of risk this event carries for the community. In other words, the effects specific to the possible hazard event should be conveyed to society at an understandable and detailed level. An example of this situation can be given as follows. The warning that radiation leakage from a nuclear power plant may occur in the near future would not be sufficient. Instead of this explanation, the effects that can be seen from the hazard source, such as the explosion that can spread radioactive particles with pressure, how the released radiation can spread towards the atmosphere, and with the wind factor, should be included. In addition, the necessary explanatory content should also be included within the scope of the protection activities of individuals at risk.

- **Place:** Within the scope of the warning contents, the places where the danger can be seen, i.e., the areas at risk, should be specified.

- **Time:** Another factor to be considered in the warning content is the duration of the community's response to the warning. In other words, individuals at risk should be evacuated from the area before the event that may occur and be informed about how much time they have within the scope of protection activities against negative effects.

- **Guidance:** It should include content on the responsiveness of individuals in society to potential threats and related negative impacts. The warning content to be prepared should include information about the steps to be followed to close the vulnerabilities of individuals. This information should guide individuals in the community on how to take protective actions.
- **Source:** The unit that ensures the transfer of the alert to the community. The source must be indicated in the warning content (Sorensen and Mileti, 1989).

Warning systems should be capable of communicating the warning to each person in the community. The information in the warning content must be clear and precise. It should not be of a nature to cause interpretation. There should also be no differences between the warnings to be transmitted by the sources. Sometimes, there may be multiple hazards. Therefore, the at-risk community can rely on a single warning system for all hazards and their effects. For this to be possible, there must be unity between institutions and the warning system. Inter-agency coordination and an effective communication network with the community are necessary to combat the hazard. Warning content should be similar in all institutions, and the messages provided should be done in a cooperative perspective. As a result of different warning content received from different institutions, a trust problem may arise. In addition, the warning content's detail should be neither too much nor insufficient (McGinley et al., 2006).

Another issue that should be emphasized in the warning system is the authority factor. When faced with a hazardous event, the management of the event should be realized as a result of the cooperation of the competent institution in the region with other stakeholder institutions. In this way, inter-institutional conflict can be prevented, and the obstacles encountered can be reduced. In addition to these explanations, uncertainties in the workloads of individuals involved in the warning process may also reduce communication. An effective emergency plan should be created by drawing lessons from past events. However, it should not be forgotten that not every event experienced in the past will cause similar effects (Sorensen and Mileti, 1987).

2.3. Types of Technology Used in the Delivery of Early Warning and Alert Content

Various warning systems need to be planned depending on where people in the region spend most of their time and the media they use. For example, a

person listening to the radio or watching television is likelier to notice a warning. Conversely, people are least likely to heed warnings while sleeping at home. If individuals do not receive any warning before they experience danger, they may be unable to protect themselves from the inevitable negativities. While providing the necessary warning to people, time should be given according to the time the danger starts. In addition, different meteorological factors that may accompany the hazard, such as wind and its direction, should also be included in the warning process (Rogers and Sorensen, 1991). Warning texts should be translated into multiple foreign languages (Sorensen, 2000). This is because not only the local community may be present in the region at the time of the hazard. Refugees and foreign tourists may also be in the region at that time. Considering all these factors, the texts, media visuals, and announcements to be created in English, which is accepted as the common language in the world, and in Arabic, considering the refugee factor globally, can be one of the steps to improve the evacuation process.

2.3.1. Siren and Alarm Systems

Siren and alarm systems are used to alert society at risk to the danger phenomenon quickly. These systems are intended to give an audible warning and do not contain any message content. When individuals in society hear the signals generated by these systems for warning purposes, they may be searching for information at the point where they have not received educational activities about what steps to take. This situation causes some negativities. The reactions of individuals to each warning may be the same. In other words, the types of audible signals heard can be confused (Mileti and Sorensen, 1990). Individuals in society should know the meaning of the siren sound they perceive and what kind of protection activities they should take (Rogers and Sorensen, 1991). In addition to this situation, there are also problems that the system can create. These include material failures, incorrect audible signals as a result of technical failures, unconscious response to the signal by the community, and difficulties in the transportation of the signal sound to the apartments in the area (Sorensen and Mileti, 1989).

2.3.2. Radio

Radio is important for delivering warning content to society in case of danger. However, it also has some disadvantages. Not everyone may use the radio. It is limited in the scope of its broadcasts. It is a material that only gives an audible warning and does not share visual elements (Mileti and Sorensen, 1990).

2.3.3. Television

Public authorities use television and radio to warn about hazardous content. When providing warnings to the public through television, the ongoing program flow is either stopped or the content is broadcast in the lower part of the image. This material is important in warning about the danger and includes audio and visual elements (Sorensen and Mileti, 1989).

2.3.4. Transmitter

Türkiye is a country where both natural and man-made disasters occur. The communication system is special in preparation activities before and after disasters. For the communication coordination between the institutions to be active, the infrastructure of the communication system must be in place. Communication is one of the most problematic systems due to any disaster. Because the internet and telephone networks used in the region are extremely dense, there are problems in communication. One of the methods used for the continuity of communication in this process is a transmitter. This type of communication system is used to transmit audio content from the channel to the receiver via electromagnetic waves (Kütükcü and Tamer, 2017).

2.3.5. Telephone and Text Message Notification (SMS)

Telephones are one of the effective warning systems. This is because individuals who use the phone respond when they hear the phone ringing. Especially if the warning received on the phones contains emergency information, individuals will examine these texts carefully. When individuals are provided with clear information flow through these systems, the uncertainties that may be seen may be reduced (Rogers and Sorensen, 1991). In order to transmit warnings in disasters, telephone types, internet, wireless communication devices, and other communication materials should be actively available (Zaboli et al., 2013). Another type that plays a role in communicating warning contents to individuals is warning services on smartphones, i.e., mobile applications. These applications quickly transmit alerts to individuals' phones and share information about the steps to be taken within the scope of protection activities (Fischer et al., 2019). When creating alert content, it should be designed by taking into account the individuals in the vulnerable group. As stated by Sorensen, using phones specific to people with hearing impairment and technological materials with flash features is important in transmitting alerts (Sorensen, 2000).

Short message service (SMS) is one of the types of technology used to deliver warnings to the community at risk (UNDRR, 2006). As a result of disasters such as floods, technological types such as televisions and radios may not work due to electrical power outages in the region. Therefore, some problems may be encountered in evacuation processes in the community. In the study conducted by Azid et al., a warning system was designed for floods and overflows via SMS. This system increases the pressure value with the rise in the water level and makes the necessary warnings to the GSM. Warnings are sent via SMS to the institutions registered in the GSM. Thus, it plays a role in ensuring that institutions are ready for the dangers that may be seen and in preparing evacuation routes in the community (Azid et al., 2015).

As noted in a study, coordination with mobile phone operator institutions can support the early warning system. These institutions can collect and analyze meteorological data in the region. They can send these data outputs to early warning systems to create alerts and transmit them to individuals. They can also facilitate crisis interventions by reaching the number of people living in risky areas (Hoedjes et al., 2014).

2.3.6. Posting Warnings on Websites

When individuals are provided with warnings about hazards, the websites of organizations can be searched to verify the accuracy of this warning information (McGinley et al., 2006). Due to the threatening dominance of the event to be experienced, a little chaos may be seen in the society. Although the warnings communicated to individuals have an effective content, they may sometimes be insufficient due to the anxiety experienced. In the face of this negative situation, individuals may start to search the websites and news websites of local institutions, especially local and ministerial institutions. The important factor at this point is to consider the proven accurate and real warnings.

2.3.7. Social Network Platforms

Social networking sites are limited web-based applications that allow users to share the media content they create in order to ensure that their profiles are accessible to everyone or a specific audience and to follow both the profiles and the content of other users within the same site (Boyd and Ellison, 2007). Communication in disasters is an important factor in risk and crisis management. Thanks to effective communication in both management processes, the negative effects that may result from disasters can be reduced. One of the important

communication types in disasters is social media. Social media is a technological type where people communicate and create media content (Houston et al., 2015).

Through social media, the devastating effects of a disaster in a region can be learned globally in a short time (Alexander, 2014). Reliable information has a special importance in a crisis. The rapid dissemination of the information created through social media in society has some harms as well as benefits. This is because, as a result of the chaotic environment that social media can create, the information provided by authorized institutions may fall into the background (Freberg, 2012).

Public institutions can also make use of social media when issuing warnings. The use of social media provided that it does not contain information pollution, can support the crisis process. This type of media is important for users to share the effects of the event, both to warn others and to share the psychological states they have experienced. In a study, the posts of the society on Twitter were analyzed as a result of the typhoon in Japan. As a result of the analysis, it was determined that there was an increase in the number of posts about the evacuation procedure and the devastating effects of the disaster in the regions that received the most emergency warnings (Kitazawa and Hale, 2021). While using social media such as Twitter in crisis situations, it is important to share accurate geolocation information. Geographical information includes the names of cities, regions, and countries and precise location information such as roads and schools. However, the factor to be considered here is that When using Twitter, tagged geographic information locations can sometimes be inaccurate. Therefore, information that clearly expresses the current location should be shared (Wu and Cui, 2018).

On 06.02.2023, Türkiye was hit by an earthquake measuring 7.7 on the Richter scale at 04:17 local time in Pazarcık district of Kahramanmaraş province, and a second earthquake measuring 7.6 on the Richter scale at 13:24 local time in Elbistan district of Kahramanmaraş province. After the first earthquake, structures in nine neighboring provinces were found to have collapsed. Through communication with the institutions in the region, it was learned that there were major casualties and injuries in Kahramanmaraş and the other nine provinces. The role of social media in the crisis management of this disaster, both in the search and rescue and logistical support processes, is of great importance. Some disaster victims trapped under the rubble notified both the authorized institutions and their relatives through social media to facilitate locating them. In addition, institutions have also communicated warnings to disaster victims in the region

about the need to stay away from damaged structures through social media and other forms of technology.

3. Examples of Early Warning and Alert Systems Used in the World

In this chapter, examples of early warning and alert systems used around the world are presented. The meteorological unit, which has great importance in early warning and alert systems, is also discussed.

The meteorological institution observes, analyzes, and objectively predicts meteorological events that may occur in a settlement at any given time. In the observation process, high atmosphere observations, ground observations, satellite images, radar materials, and automatic meteorological stations are realized with the data provided by the elements. The data collected based on observations are transferred to maps. These maps cover meteorological conditions such as cloud types, pressure, wind speed and direction, temperature, and precipitation. The observation data collected in line with the analyses carried out are controlled by authorized personnel. If there is a threatening situation in line with the reports created, warnings to society are communicated through technological materials such as television and radio, especially the website of the General Directorate of Meteorology (MGM Weather Forecast, 2023).

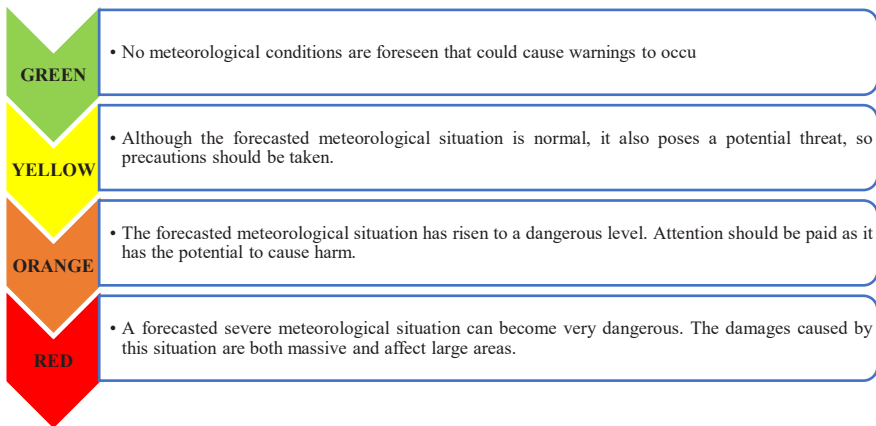


Figure 2. Indication of Meteorological Events by Color Code and Warning Level (Meteo-warning)

Source: (Mgm Meteouyarı, 2023).

As shown in Figure 2, meteorological warnings are issued in Türkiye to minimize the damages that may occur due to severe meteorological events

and enable society and institutions to take appropriate measures (MGM Meteouyari, 2023).

In Türkiye, the Disaster and Emergency Management Presidency under the Prime Ministry and its organization were established in 2009 by Law No. 5902. All authorities and responsibilities have come together under the roof of this Presidency. Disaster and Emergency Management Presidency (AFAD) is an institution that takes part in every phase of integrated disaster management, cooperates with other institutions, and develops strategies in disaster management (Law No. 5902, 2023). On July 15, 2018, with Presidential Decree No. 4, the Disaster and Emergency Management Presidency (AFAD) was affiliated with the Ministry of Interior (Mevzuat, 2023).

For regions where the General Directorate of Meteorology issues warnings, AFAD also sends notifications via SMS and e-AFAD application to warn the public. In addition, necessary notifications are provided to institutions, especially governorships in provinces, to take necessary measures (AFAD Early Warning Message, 2023).

Meteorological events such as floods, hurricanes, droughts, heat, and cold waves continue to increase their threatening dominance on a global scale. It should not be ignored that global climate change may contribute to these events and increase the negative effects. Strengthening the early warning systems specified in the Hyogo Framework for these adverse situations is crucial. National Meteorology and Hydrology Units have a risk management-based functioning in combating hydrometeorological events. These units monitor hydrometeorological indicators, generate real-time data, and analyze and map hazards. In this way, potential hazards are predicted, and risks are reduced. In Shanghai, a multi-hazard early warning system has been established to mitigate the effects of hazards such as dense fog and high temperatures. Within the scope of this system, many institutions, including the meteorological unit, take an integrated approach to events that may pose a threat to settlements (Rogers and Tsirkunov, 2011).

Floods are natural disasters that have a negative impact on many countries. Meteorological events that vary due to global climate change and man-made factors such as improper land use and unplanned urbanization cause floods and floods to increase. Based on the weather forecasting and research model, three-day precipitation forecast and settlement threshold values are compared and analyzed twice daily. Within the scope of the study, when the forecast rate exceeds the threshold value, a flood warning is issued for the region for up to three days (Ceylan et al., 2015).

In the past, authorized personnel used to walk around, observe, and inspect the systems created for floods. However, with the advancement of technology, this supervision has been replaced by applications such as satellite images, artificial intelligence, and sensors positioned on flood embankments. One of these applications was the early flood warning system project by Krzhizhanovskaya and colleagues. Within the scope of the project, sensors were placed on flood embankments. Factors such as abnormally high-water levels and heavy rainfall are analyzed. This system also predicts the failures that may occur in the dykes and analyzes the duration and spread of the flood (Krzhizhanovskaya et al., 2011).

GITEWS, the German-Indonesian Tsunami Early Warning System, generates near-field tsunami warnings with multiple sensors. This system obtains tsunami forecasts through simulation. In order to reduce uncertainties in the forecasting process, wave measurements with multiple sensors, information about the earthquake (magnitude, location, and depth), and real-time GPS are utilized (Behrens et al., 2010).

The Japan Meteorological Agency (JMA) uses the database to forecast the tsunami and calculate the height and arrival time. Information on tsunamis is provided by tide gauges and GPS buoy systems of many organizations, including local governments, in addition to the JMA. Tsunami warnings are issued according to the estimated height ratio. A major tsunami warning is issued for heights of 3 meters or more; for heights between 1-2 meters, a tsunami warning is issued; and for heights up to 0.5 meters, a normal tsunami warning is issued. During the 2011 Tohoku earthquake, JMA warned residential areas about the height and arrival time of the tsunami three minutes after the earthquake was detected. Sirens, radio, loudspeakers, and TV were used to disseminate the warnings (Hoshiba and Ozaki, 2014).

In Türkiye, warning and alarm signs are used to warn the public about air strikes and CBRN threats. These signs are divided into four types: yellow, red, black, and white:

- The yellow warning is a flat siren sound for three minutes and means the possibility of an air attack. In announcing this warning signal, it is necessary to go to the nearest shelter or shelter by following the appropriate steps according to the immediate location.
- The red warning is a siren sound that fluctuates, i.e., descends and ascends, for three minutes, meaning the threat of air attack has begun. All actions that cannot be taken at the yellow signal alarm must be completed at this

warning signal, and the nearest shelter or shelter must be reached. However, if there is fire, gas, and radiation in the shelter, transportation to another shelter should be provided in the presence of the shelter authority.

- The black warning is a type of siren intermittently for three minutes, meaning the incident is a CBRN threat. While communicating this warning signal to the public, information about the danger source is provided through mass communication materials and during the alarm. Because in the case of a chemical threat, the top floor of the buildings is used as a shelter or shelter. However, if the incident is radioactive, it is necessary to go to the shelter quickly.

- The white warning is a sign that uses technological materials such as television, radio, and megaphones to explain to the public that the source of danger has passed and that it is possible to leave the shelters (AFAD Warning and Alarm Signs, 2023).

Earthquake early warning systems are used to determine the characteristics of the earthquake before serious seismic tremors and transmit the warnings generated. The energy released as a result of the earthquake is determined, and the regions where tremors may occur are predicted. The transmission of the generated warnings can vary from seconds to more than a minute (Allen et al., 2009). Although academic studies on the prediction of earthquakes globally are ongoing, there is still no proven method for predicting earthquakes' magnitude, location, and timing before they occur (Pampal and Özmen, 2009). The early warning system for earthquakes examines the seismic intensities experienced before the S-wave, which minimizes the possible losses and estimates the energy released at the focal point and the magnitude. In the early warning system for earthquakes, the data generated by seismometers set up in a settlement after recognizing the earthquake hazard are collected through computers and high-speed communication systems. In this way, the location and magnitude of the earthquake are determined. If an earthquake of high magnitude is recorded, warnings are issued to the community in the region. The time between the start of the earthquake and the issuing of warnings can be sufficient for the evacuation of many individuals, even if it is a small amount of time (Yenilmez, 2011).

The magnitude, depth, location, and instantaneous time of earthquakes in Türkiye are determined by AFAD (AFAD Earthquake Map, 2023) and Boğaziçi University Kandilli Observatory and Earthquake Research Institute Regional Earthquake-Tsunami Monitoring and Evaluation (KRDAE, 2023) systems. The features related to realized earthquakes are announced to the public on the

institutions' websites, social networking platforms, and SMS applications. Zschau et al. studied an early warning system for Istanbul consisting of four phases: long-term, medium-term, short-term, and instantaneous. In the long-term phase, the tectonic structure of Istanbul and the seismic data of the region were collected. In the medium-term phase, the necessity of establishing systems such as SABONet to monitor seismic data in the region was emphasized. The short sustained phase is involved in the process with the onset of the earthquake. In other words, the characteristics of the earthquake, such as its magnitude and location, are determined. If the earthquake has a destructive characteristic for the region, it is envisaged that the system will generate alarm warnings. In the instantaneous phase, it is aimed to analyze the situation after the earthquake (Zschau et al., 2003).

Earthquake early warning systems consist of several components. These components consist of telemetry, sensors in the field, central receiving stations where the data is collected and analyzed, and communication channels to provide the necessary warnings to the community. The warnings that these systems will transmit within seconds can play an effective role in the evacuation of the community, in the activities carried out to reduce the effects of multiple hazards such as fire, and in minimizing the damage to life and property. One of the countries with these systems is Mexico. There are a total of 12 technologically strong motion field stations in the country. Each field station monitors seismic events within a radius of 100 km and estimates the magnitude of an earthquake within 10 seconds. If the earthquake early warning system, or seismic alert system (SAS), detects an earthquake with a magnitude of more than 6, it transmits warnings to the central receiving station via telecommunications. If more than two field stations transmit earthquake warnings, a general warning is issued through the radio warning section (Lee and Espinosa-Aranda, 2003). In 2010, the seismic monitoring system in this country was renewed under the name SASMEX. In this system, the devices that simultaneously prove the magnitude of earthquakes occurring have been organized by considering factors such as communication size in the distribution of warnings and seismic detection stations. As of 2012, the earthquake magnitude has been renewed as 5.5 and above for general warnings. It is aimed that warning broadcasts for earthquakes should be made within 5 seconds and thus reach many people. In addition, the necessity of building earthquake early warning systems for public institutions in a local capacity was also emphasized. The SASMEX system provides early warnings about earthquakes through technological types such as television and radio, special radio receiving devices, loudspeaker devices, and mobile phone applications (Suárez et al., 2018).

An earthquake early warning system has been established by the Japan Meteorological Agency (JMA) to help public institutions and society prepare for the adverse effects of an earthquake. The main purpose of this system is to determine the intensity, magnitude, focal point, and duration of the S-wave of an earthquake in residential areas. The necessary warnings are transmitted to the community within seconds before the earthquake's devastating effects are experienced. A total of 1,000 seismic stations, 200 from the Japan Meteorological Agency (JMA) and 800 from the National Institute of Earth Science and Disaster Prevention Research (NIED), have been installed for tsunami and earthquake early warning. It was emphasized that the warning process should start when an earthquake with a magnitude of 7-8 and above is detected according to the Mercalli intensity scale. Multiple types of messages can be used to communicate warnings to the public. These are municipalities' radio, SMS, internet, television, and loudspeaker systems (Kamigaichi et al., 2009). In addition to these situations, elevators in apartment buildings can be opened on the nearest floor so as not to close during the transmission process of warnings. Railway companies can send notifications to the personnel on active trains to stop the vehicle (Hoshiba et al., 2008).

4. The Role of Early Warning and Alert Systems in Risk Management

Integrated disaster management is a combination of risk management and crisis management with main phases and intermediate elements. Risk management includes mitigation, preparedness, forecasting, and early warning. When a disaster strikes, crisis management, which includes impact analysis, response, recovery, and reconstruction processes, comes into play (Kadioğlu and Özdamar, 2008). It should not be forgotten that the risk and crisis management phases are interrelated. A problem or deficiency that may arise in any of these phases may negatively affect other phases (Ayker, 2022: 207)

Adopted in 1994, "Yokohama Strategy for a Safer World" is an action plan to prevent, reduce, and be prepared for the risks and impacts of natural disasters. This plan aims to carry out risk activities based on preparedness policies to mitigate natural disasters. It is explained that it is important to increase the resilience of institutions with local capacity against natural disasters and to receive support from non-governmental organizations. It is stated that coordination should be ensured within the scope of natural disaster mitigation activities from local to international level. It has been explained that it is important to establish forecasting and early warning systems within the scope of disaster mitigation activities, and if there is an existing system, it is important

to strengthen it. Dissemination of early warning messages for possible disasters through communication networks is important in combating the risks of natural disasters. These systems can strengthen communication not only regionally but also with neighboring countries in disaster management (United Nations Yokohama Strategy, 1994)

In 2005, the 10-year (2005-2015) Hyogo Framework for Action based on disaster risk reduction was adopted. The Yokohama Strategy and Action Plan has been a renewed framework by analyzing its positive and negative aspects. This framework aims to create resilient societies with sustainable development policy, reduce vulnerability, develop early warning systems, and strengthen disaster risk assessment and preparedness activities. It was decided to take the following actions within the scope of early warning systems:

- The development of early warning systems that create warning content at a level that can be understood by individuals at risk and taking into account the socio-demographic structure of the region, transmit it on time and provide information on how to evacuate,
 - Institutions have the quality to support response organizations,
 - Establishment and regular inspection of information devices connected to early warning systems in order to be effective in emergency and warning processes,
 - Incorporate early warning systems in the management of emergencies at both local and national levels,
 - Increasing coordination among all organizations involved in the early warning process (UNISDR, 2005).

In 2015, the Sendai Framework for Disaster Risk Reduction (2015-2030) was organized in Sendai, Japan, aiming to reduce disaster risks. Under this framework, it is aimed to increase the number of countries with local and national disaster risk reduction policies by 2020. By 2030, it was decided to take the following measures:

- Reducing the proportion of individuals adversely affected by disasters, economic damages, loss of life, and interruptions in the functioning of important institutions such as education and health,
 - The need for improved international coordination for developing countries to complement national action with sustainable support efforts,

- It is aimed to increase the dissemination of multi-hazard early warning systems. Building and developing early warning systems for people-oriented multi-hazards, coordinated by many institutions and suitable for sociocultural needs, is necessary. In addition, the telecommunication structure where hazards are observed through disaster risk communication networks should be strengthened (UNISDR, 2015).

4.1. Harm Mitigation Phase

The mitigation phase is the process of preparing at national, regional, and local levels, starting with recovery or reconstruction activities until a new disaster occurs. The following actions should be taken in this phase, which is an important risk management process.

- Earthquake and building regulations should be examined. They should be updated when necessary.
- Institutional structuring and legislation implemented during disasters should be examined and updated when necessary.
- National early warning and earthquake recording systems should be established and developed.
- Disaster risk reduction policy should be integrated into every stage of sustainable development.
- Disaster preventive structures should be built at this stage within the scope of engineering studies.
- In case of need, R&D activities should be planned and implemented.
- Small and large-scale maps should be created according to disaster risks and hazards. In addition to this, event pattern maps suitable for disasters should be prepared.
- Community-based training and awareness-raising programs should be organized to minimize the damage caused by disasters (Ergünay, 2009).

4.2. Preparation Phase

One of the stages in risk management is the preparation stage (Asghar et al., 2006). The things to be done in this phase in order to reduce disaster risks are as follows:

- Preparation of plans at central and local levels and updating them when necessary,

- Training the institutions and personnel involved in the prepared plans and supporting them with exercise scenarios,

- Establishment, training, and development of search and rescue teams,
- Establishment and development of early warning and alarm systems

(Ergünay, 2009).

- Awareness-raising activities for the public about the contents of early warning messages,

- Providing disaster-related training to the community, including vulnerable groups, and ensuring coordination with institutions,

- Use of building materials that reduce the effects of disasters,

- Identifying preparedness strategies by prioritizing environmental and infrastructure factors,

- It consists of institutions creating logistics centers and supplying materials to inventories when necessary (Oloruntoba et al., 2018).

5. Conclusion

Disasters and their negative impacts are events that pose a threat to many societies around the world. Many disasters have occurred globally from the past to the present and continue to occur. The important point is that disasters cannot be completely eliminated. Only their impacts can be significantly reduced. Risk management-based preparedness activities are very important in policies to combat these events.

One of the factors included in the scope of preparedness strategies is early warning and alert systems. As stated in the literature, the main purpose of these systems is to provide appropriate information flow to society as a result of prediction, observation, and data analysis before the hazard event occurs. Thus, it is aimed to minimize the possible loss of life and property. In general, recommendations on risk management based early warning and alert systems are as follows:

- The more effective and planned the risk management policies are, the fewer difficulties may be encountered in crisis management.

- Day by day, the increase in the types and impacts of disasters due to global climate change makes it essential to prepare for multiple hazards. For this reason, plans prepared at global, national, regional, and local levels should solve multiple hazards.

- Destructive effects of past disasters experienced regionally and locally should be analyzed. By prioritizing the geopolitical position of the region and meteorological factors, early warning and warning systems for possible disasters should be increased.
- The types of technology used in early warning and warning systems and messages should be renewed under the leadership of developing technology.
- Inter-institutional coordination should always be for effective early warning and warning systems management. Inter-institutional drills should be conducted during certain processes to identify deficiencies and create updated plans.
- The importance of early warnings and alerts should be emphasized to society. The training to be given to society and the drill scenarios to be implemented should be sufficient for individuals to understand. For this reason, the training materials to be created should be organized by considering individuals' age and sensitivity factors.
- Early warning and alert contents should include clear and accurate information sources not open to interpretation. It is vital that the notifications include the source of the information, the type of hazard, location, time, and helpful explanations for individuals at risk to follow the appropriate steps.
- Considering that not only the local community is present in the region, notification platforms should have the potential to be translated into multiple languages, especially English.

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CHAPTER XX

IN THE CYCLE OF ENERGY, ECONOMIC GROWTH AND CLIMATE CHANGE: BRICS COUNTRIES

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1. Introduction

Energy is one of the indispensable elements for continuous development and economic growth (Mohamed and Lee 2006: 2389). The smooth running of other aspects of life and the economy (Hussaina et al. 2017: 12), rapid population growth and civilizational developments have led to a growing demand for energy. The need for energy, which is met by fossil fuels, has led to climate change, which is one of the serious environmental problems with the release of greenhouse gases in large quantities. The fact that climate change causes weather changes, health problems, sea level rise, changes in the ecosystem, etc. (Olabi and Abdelkareem, 2022: 2) has brought renewable energy resources to the agenda in the fight against climate. It has strengthened expectations that the transition to renewable energy sources in solving the problem will be the key to a low-carbon future (Solaun and Cerda, 2019: 2). In this direction, most OECD countries have ambitious plans and targets. In the BRICS countries group, especially China, India and Brazil are focusing on renewable energy sources with the support of government policies (Gross et al., 2003:105). In this study, it is aimed to emphasize the importance of the global climate change problem that develops due to the relationship between energy and economic growth and to reveal the current situation and differences in terms of the countries subject to the study. Data for the period 2011-2020 were taken from “World Bank”, Energy Agency “IEA” and “Our World in Data” bases to

the extent of data availability. In the study, firstly, information about energy will be given and then the relationship between energy and climate and economic growth will be mentioned. Finally, explanations will be given within the scope of energy for BRICS countries.

2. Energy

Energy is recognized as the lifeblood of an economy and one of the most vital and most important strategic tools of socio-economic development. It is a strategic resource that pollutes as much as it cleans the environment, affecting the outcome of wars (Sahir and Qureshi, 2007: 2032). In addition, it is a fundamental element of the sustainability of national economies. In particular, fossil fuel energy is the most widely used component worldwide (Sebri and Salha, 2014: 17). It is known that the energy economy in the current world has been based on fossil fuels since the early days of industrialization, moving from coal to oil and natural gas. Today, fossil fuels account for 83.5% of energy use (Groll, 2023: 2). Despite this high rate, the share of fossil fuels in primary energy is expected to fall from 80% in 2019 to 55-20% in 2050. However, there is also a positive expectation that renewable energy will increase from 10% to 35-65% by 2050. This is due to the increased cost competitiveness of renewable energy and the prevalence of policies promoting the transition to low-carbon energy (Energy Outlook, 2023: 19). Energy efficiency realized through these policies is an important emission reduction tool in achieving decarbonized economic growth and mitigating ecological change (Akram et al., 2021: 2). The need to reorganize energy supply to decarbonize societies (Arndt, 2023: 2) has put renewable energy sources [wind, solar, bioenergy and geothermal, ocean (tidal and wave), wood, etc.] on the agenda (Energy Outlook, 2023: 19). Unlike conventional energy, renewable energy is clean, safe and inexhaustible. As this energy is growing rapidly worldwide, it is expected to take a leading position in the total share of energy consumption (Sebri and Salha, 2014: 17). Renewable energy use is the fastest growing type of energy due to its environmental benefits as well as its contribution to increasing employment and reducing the external dependence of economies (Aslan and Ocal, 2016: 954). However, this type of energy has some problems in itself. Especially in renewable energy production, apart from high infrastructure, start-up and operating costs, it also has some financial difficulties. Therefore, it is necessary to have a solid financial structure in the production of such resources (Eren et al., 2019:190).

3. Energy Climate Relationship

Among the most important problems of the 21st century is climate change, which is increasingly shaping social and market conditions (Chen et al., 2019: 996). Global climate change and the increase in energy consumption cause concerns about the security of energy resources (Batley et al, 2001: 479) and environmental problems that lead to the destabilization of ecosystems (Economou, 2010: 1497). These environmental problems include loss of biodiversity (Bradshaw et al., 2021: 2), progressive acidification, and pollution of oceans with chemicals and plastics (Moriarty and Honnery, 2023: 2; Gross, 2022: 141; Economou, 2010: 1497). There are also global concerns caused by global warming (Chen et al., 2019: 996), such as pollution of the atmosphere and soil and widespread antibiotic resistance (Larsson and Flach, 2022: 260). Climate change is the mother of all externalities and is more complex and more uncertain than other environmental problems (Tol, 2009: 30). Increasing global energy use with income and population growth leads to an increase in global greenhouse gas emissions. Another effective factor on energy use is the level of economic development of countries (Zhang et al., 2022: 9). As the level of development of countries increases, greenhouse gas emissions also increase. On the other hand, when we look at low-income countries, it is observed that they contribute the least to climate change and are the most vulnerable (Tol, 2009: 30). It can be said that there will be large differences in regional scale studies due to different regions and resources, and developing countries will suffer more from climate change due to the strong adaptability of developed economies (Huang et al., 2021: 1). In the literature on the economic impacts of energy use and climate change, studies on the basis of continent, country and region include Sailor and Muñoz (1997), Considine (2000), Mansur et al (2008), Isaac and Vuuren (2009), Deschênes and Greenstone (2011). In addition, Gupta (2012), Davis and Gertler (2015), Giannakopoulos et al. (2016), Wenz et al. (2017), Li et al. (2019) and Berkouwer (2020) are some of these studies. Climate change; directly affects the economy due to its negative impacts on many sectors such as energy consumption, urbanization (IPCC. 2014: 1), energy demand (Shaik and Yeboah, 2018: 692), consumption behavior (Chen et al., 2019: 997), human health (Cunsolo and Ellis, 2018: 275), labor productivity, water, etc. (Batten, 2018: 1; Huang et al, 2020: 2; Orlov et al, 2020: 2). In addition, one of the most vulnerable economic sectors to climate change is agriculture (Ciscar et al., 2018: 2). This is because it has numerous negative impacts on crop yields (Iizumi

and Ramankutty, 2016: 2; Schleussner et al, 2018: 2). Therefore, adaptation actions aimed at mitigating the negative impacts of climate change require large investments and lifestyle changes. It is also important to identify the costs and benefits of climate change (Park et al., 2018: 2). In the context of mitigating the negative impacts of climate change, rapid changes in the energy sector, especially the large-scale integration of renewable energy technologies to facilitate energy transition, can be considered as one of the main fronts in the fight against climate change (Perera et al., 2019: 359). There are also applications such as increasing energy efficiency (Lovins, 2018: 1), replacing fossil fuels with renewable energy or nuclear energy, removing carbon dioxide by biological or mechanical means, and solar geoengineering (Moriarty and Honnery 2022: 3). This struggle necessitates measures to reduce greenhouse gas [carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O)] emissions that cause climate change (IPCC, 2014: 4; Economou, 2010: 1497; Stigka et al, 2014: 101). Greenhouse gases are fundamental to the world's energy system and food production. CO₂ is produced by the combustion of fossil fuels and in particular thermal energy, breaking chemical bonds in carbohydrates of oil, coal, and natural gas and oxidizing the components to CO₂ and H₂O. Similarly, emissions of methane (CH₄), one of the greenhouse gases, are necessary to prevent hydrogen accumulation in anaerobic digestion and decomposition (Tol, 2009: 30). For the above-mentioned struggle, it is necessary to reduce pollution due to the use of fossil fuels. As a way to do this (Stigka et al., 2014: 101), renewable energy sources such as wind, geothermal, solar, hydroelectric, biomass, etc. (Economou, 2010: 1496), which are the focus of the energy sector are emerging (Solaun and Cerda, 2019: 1). In particular, the profound impact of the fossil fuel-based energy system that characterized the industrial revolution on the climate requires a radical shift away from fossil fuels that cause carbon emissions as a solution to climate change (Desai, 2021: 361). A carbon-free world order, in theory, requires carbon absorption and carbon storage technologies, but the high costs encountered and the difficulties and uncertainties in storing carbon reliably are in favor of reducing carbon emissions by moving away from fossil fuels. In such a case, in order to manage energy well, carbon emissions can be reduced by setting a separate price for carbon emissions and thus saving in energy use (Desai, 2021: 362).

4. Energy Economic Growth Relationship

Energy, which is the main source of economic growth, is the basic input of many production and consumption activities (Asgar, 2008: 167). There is no doubt that the relationship between economic growth and energy has deeper roots

than the history of human civilization. Initially, it was an important resource for the survival and continuity of human society (Cicea et al., 2021: 2). However, over time, it is seen that energy, which is the driving force of modernization, has formed an important link with economic growth. Energy consumption promotes economic growth, while economic growth makes it possible to increase energy use efficiency (Wang et al, 2017: 394). However, in the modern era, there is an unstable relationship between energy and economic growth (Apergis and Payne, 2012:733; Asghar, 2008: 167). On the one hand, energy is an engine for the economic, social and cultural development of human society (Miller et al., 2013: 135), on the other hand, this economic development has led to an increase in energy production and energy consumption by diversifying sources from fossil fuels to renewable energy (Cicea et al., 2021: 2). However, it has shown that energy is one of the determining factors that positively affect economic growth (Asghar, 2008: 167; Kouton, 2021: 145). The energy-economic growth relationship is widely discussed in the literature around four hypotheses. These are the growth hypothesis, the conservation hypothesis, the feedback hypothesis and the neutrality hypothesis. The growth hypothesis argues that energy consumption clearly plays an important role in economic growth, supports a unidirectional causal relationship from energy consumption to income, and therefore energy conservation policies that aim to reduce energy consumption will negatively affect growth. The growth hypothesis is confirmed by Pao and Tsai (2010), Riti et al. (2017), Kahia et al. (2017), Cai et al (2018), Le and Quah (2018), Maji and Sulaiman (2019) and Zalle (2019). The conservation hypothesis proposes a unidirectional causality from growth to energy consumption and attributes a vital role to energy consumption in the process of economic development. Therefore, in such a case, energy supply shocks may have little or no negative impact on growth. Studies supporting the Conservation Hypothesis include Lee et al (2008), Menegaki (2011), Ocal and Aslan (2013), Azlina et al (2014), and Destek (2016). The feedback hypothesis requires a bidirectional relationship between output and energy consumption, where energy conservation policies that aim to reduce energy use may distort growth, and changes in economic growth will be reflected back to energy consumption. Finally, the neutrality hypothesis is supported by the fact that energy consumption has a relatively small role in the economic growth process and that there is no causality between energy consumption and economic growth. In this case, reducing energy consumption through energy-saving policies will not affect economic growth (Apergis and Payne, 2012: 734; Dinç and Akdoğan, 2019: 149). A number of studies have examined whether economic growth precedes energy consumption or whether

energy consumption increases economic growth (Asghar, 2008: 168). The first pioneering study on economic growth and energy consumption was conducted by Kraft and Kraft (1978). Odhiambo (2009), Adjaye (2000) and Ghosh (2002) Morimoto and Hope (2004) showed that there is a unidirectional relationship from energy consumption to economic growth and Hondroyiannis et al. (2002), Paul and Bhattacharya (2004) and Akinlo (2008) showed a bidirectional relationship. Jobert and Karanfil (2007) and Karagöl et al. (2007) find that this relationship does not exist in the long run. According to Lise and Montfort (2007), economic growth increases energy consumption, while Kar and Kınık (2008) confirmed that economic growth is realized as energy consumption increases. Erdal et al. (2008) revealed that there is a correlation between the two variables.

5. BRICS Countries and Energy

Today, environmental degradation, climate change, and increasing global warming are the most discussed issues. These factors are the main cause of deterioration in production and consumption activities (Saidij and Hammami 2015: 62). The necessity of controlling CO₂ emissions in greenhouse gases, which are the main cause of environmental degradation, in order to ensure sustainable development requires rigorous policy actions towards the goal of reducing emissions (Anser et al. 2021: 48012). The first of these actions is the Kyoto Protocol signed in 1997. This protocol aimed to reduce greenhouse gases (GHG) that cause climate change. Although BRIC countries have signed the Kyoto Protocol to reduce emission levels, environmental concerns still exist given the recent economic growth of the region (Pao and Tsai, 2010:7850). The rapid growth of the global economy over the last few decades has increased energy consumption. Therefore, meeting the increasing energy demand with fossil fuel-based energy resources has led to environmental problems related to climate change (Wang, 2019: 1076). The BRICS countries (Brazil, Russia, India, China, and South Africa), which are considered to be newly industrialized and transition economies, have in common large populations, underdeveloped but fast-growing economies and governments willing to embrace global markets. On the other hand, the countries in the BRICS group represent the oldest civilizations and the richest cultures. Looking at the last three decades of the BRICS economies, it is observed that they have made significant progress in economic growth (Wang, 2019: 1075). With their high-decarbonized economic growth, these countries not only make a significant

contribution to global energy production and consumption but also increase both global carbon (CO₂) emissions and global energy demand (Khubai et al., 2021: 424). Population growth, rising living standards, production improvements, and economic competitiveness as well as the industrialization process are some of the reasons for high-energy demand (Eren et al., 2019:190). India is expected to increase its energy consumption by 129% by 2035. This is significantly higher than other BRICS countries such as China (47%), Brazil (41%) and Russia (2%). India's energy consumption largely depends on fossil fuels. The country is considered the fifth country in the world (Eren et al., 2019: 190) as it prioritizes the development of the renewable energy component to reduce carbon emissions (Sebri and Salha, 2014: 17). The BRIC countries have formulated a series of long-term and strategically oriented measures to develop renewable energy to reduce carbon dioxide (CO₂) emissions. These are Brazil's "Pro-Alcohol Program", the "Biodiesel Production and Use Program", Decree Nos. 11097 and 11116 and other developments (Zhanga et al., 2011: 4905). Thanks to these developments, it has become the only country that produces approximately 45% of its energy from renewable sources (Khubai et al., 2021:424). In the direction of the development of renewable energy in Russia, the laws "Main Directions of Energy Policy", "Energy Strategy", "Main Provisions of Energy Strategy" and "Electricity Sector" have been implemented. In addition, India's renewable energy legislations of 2001, 2003 and 2006, China's Seventh Five-Year Plan, Renewable Energy Law, Climate Change Policies and Energy Industry Planning since the mid-1980s are among them. The energy production and consumption structures of China and India are mostly similar. Brazil's energy structure differs partially from Russia's in that it is predominantly oil, natural gas and biomass energy (Zhanga et al., 2011: 4905). South Africa, a member of the BRICS group, is a country with rich natural resources such as gold, platinum, palladium, diamonds, silver, coal, iron and chromium (Ministry of Trade, 2023: 4). However, it does not have crude oil and natural gas in commercial terms (DEIK, 2017: 98). In addition to the necessary measures to solve the energy crisis, the country is also aware of the risks that climate change poses to society. For this reason, it makes statements that necessary measures will be taken to ensure a just transition to a low-carbon economy (Ministry of Trade, 2023: 6). Below, energy in BRICS economies is explained under different topics.

Table 1: Total energy supply by source, People's Republic of Brazil 2011-2020, (TJ)

Years	Wind, solar, etc	Biofuels and Waste	Hydro	Oil	Natural gas	Coal
2011	27.320	3.261.180	1.541.999	4.544.243	1.012.413	646.796
2012	39.007	3.277.967	1.495.231	4.807.413	1.204.435	640.416
2013	46.766	3.419.880	1.407.571	5.032.690	1.418.726	696.130
2014	69.897	3.517.048	1.344.380	5.196.858	1.564.552	733.966
2015	107.156	3.650.761	1.295.075	4.822.794	1.557.154	740.345
2016	152.927	3.599.022	1.371.280	4.571.733	1.319.999	666.590
2017	190.476	3.676.731	1.335.263	46.284.470	1.399.404	7.025.509
2018	224.752	3.796.351	1.400.296	4.337.820	1.318.745	687.356
2019	266.282	3.915.319	1.432.357	4.391.065	1.333.401	648.095
2020	288.187	4.044.054	1.426.778	4.134.734	1.258.436	587.272

Source: [https://www.iea.org/countries/ Brazil](https://www.iea.org/countries/Brazil)

Not: TJ: Terawatt-saat

Brazil ranks 15th in oil production with the largest oil reserves in the world after Venezuela in South America (<https://www.deik.org.tr/uploads/deik-brezilya-info.pdf>). In Table 1, it is seen that the amount of wind, solar, etc. energies in the total energy supply by source, which was 27,320 TJ, has increased over the years and realized as 288,187 TJ in 2020. Likewise, it is observed that Biomass and Waste generated 3,261,180 TJ of energy in 2011 and that there has been an increase in production over the years. In water resources, it is noteworthy that while it was 1,541,999 TJ in 2011, it has exhibited ups and downs over the years, and in oil, while it was 4,544,243 TJ in 2011, it contributed to energy production of 46,284,470 TJ in 2017. It is seen that the highest value in natural gas was 1.564,552 TJ in 2014, and in coal in 2017 with 7,025,509 TJ.

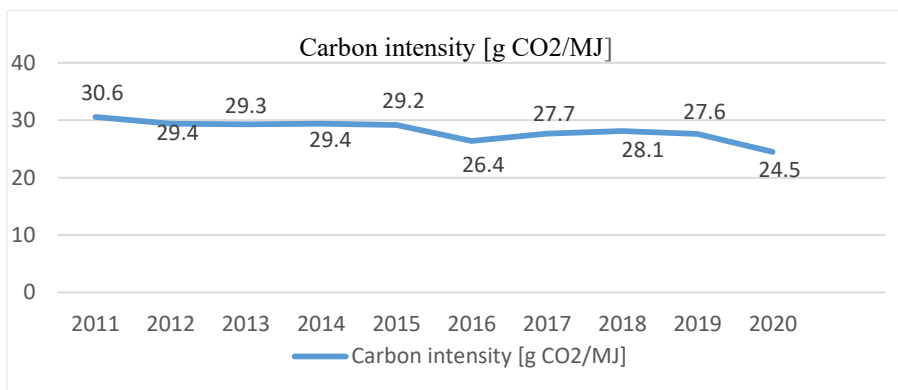


Figure 1: Carbon intensity of industry energy consumption, Brazil 2011-2020 (TJ)

Source: [https://www.iea.org/countries/ Brazil](https://www.iea.org/countries/Brazil)

In Figure 1, it is noteworthy that the carbon intensity of industrial energy consumption in 2020 is 24.5 TJ, which is lower than the current years. It is possible to say that there is a trend towards fuels that reduce carbon emissions.

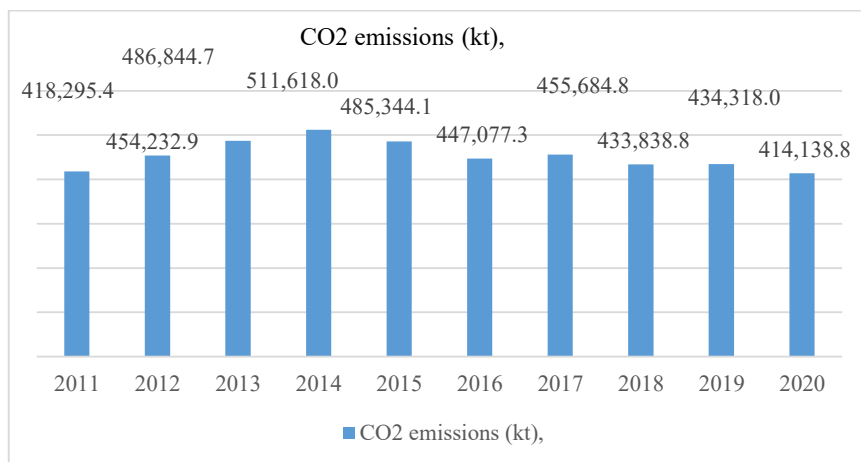


Figure 2: CO2 emissions (kt), Brazil (2011-2020)

Source: <https://data.worldbank.org/>

In Figure 2, it can be seen that the CO2 emissions, which were 418,295.4 kt in 2011, increased to 511,618.0 kt in 2014 and 414,138.8 kt in 2020. This can be attributed to Brazil’s focus on government policies on renewable energy sources and its geographically good location in terms of resources.

Table 2: Total energy supply by source, People's Republic of China 2011-2020 (TJ)

Years	Wind, solar, etc	Biofuels and Waste	Hydro	Oil	Natural gas	Coal
2011	908.591	5.302.359	2.476.962	18.512.488	4.605.193	81.267.278
2012	1.139.411	5.030.027	3.106.058	19.433.591	5.169.212	83.160.903
2013	1.620.516	4.781.778	3.274.600	20.322.274	5.883.071	84.807.758
2014	1.808.175	4.806.545	3.814.855	21.199.185	6.434.601	854.984.190
2015	2.056.636	4.758.105	4.012.092	22.555.622	6.639.779	83.697.393
2016	2.489.578	4.703.660	4.151.693	23.360.743	7.150.050	80.666.232
2017	3.027.456	4.893.288	4.194.404	24.598.775	8.172.269	81.946.147
2018	3.587.554	5.016.948	4.315.993	25.730.858	9.973.055	84.311.423
2019	4.041.335	5.299.254	4.581.059	27.096.365	10.390.620	86.732.570
2020	4.474.057	5.603.192	4.758.344	27.682.038	11.101.199	88.963.268

Source: <https://www.iea.org/countries/china>)

Table 2 shows that wind and solar energy supply, which was 908,591 TJ in 2011, reached its highest value of 4,474,057 TJ in 2020. According to the Global Energy Monitor (GEM) report, wind and solar energy production in China has increased significantly and is expected to double its capacity in 2025. (<https://www.bbc.com/turkce/articles/c3gmy03v21jo>). It is observed that the energy obtained from biomass and waste resources reached its highest value in 2020 with a supply of 5,603,192 TJ. While it was 2,476,962 TJ in 2011, it gradually increased in the following years. It is noteworthy that the amount of utilization of primary energy resources consisting of oil, natural gas, and coal is higher. Approximately 69% of the greenhouse gas emissions of China, the world's second-largest economy, is caused by coal consumption (<https://www.bbc.com/turkce/articles/c3gmy03v21jo>)

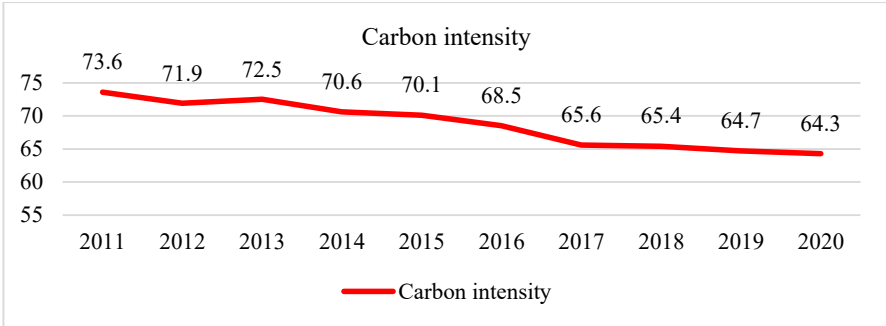


Figure 3: Carbon intensity of industry energy consumption, China 2011-2020 (g CO2/MJ)

Source: <https://www.iea.org/countries/china>

Figure 3 shows that while the carbon intensity created by the industrial energy consumption of the country with intensive industrialization was 73.6 TJ in 2011, it gradually decreased in the following years and reached 64.3 TJ in 2020.

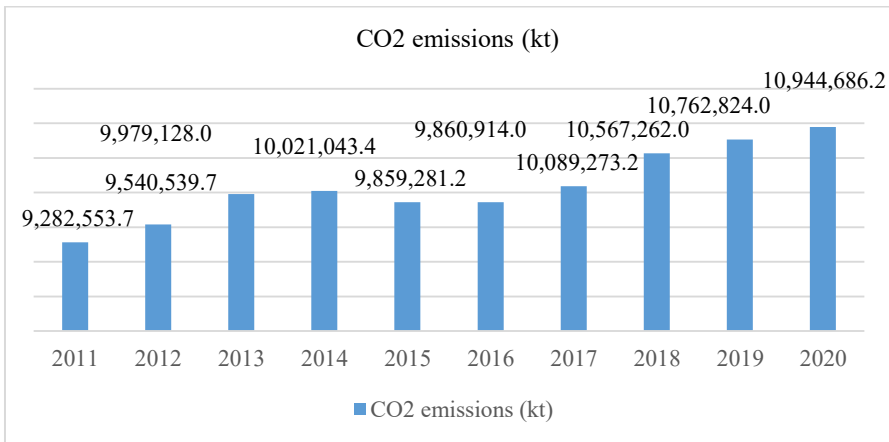


Figure 4: CO2 emissions (kt), China (2018-2020)

Source: <https://data.worldbank.org/>

Figure 4 shows that China’s CO2 emissions started to increase from 9,979,128.0 kt in 2013 to 9,979,128.0 kt in 2018. It is possible to say that the increasing industrialization of the Chinese state is effective here.

Table 3: Total energy supply by source, People's Republic of India 2011-2020 (TJ)

Years	Wind, solar, etc	Biofuels and Waste	Hydro	Oil	Natural gas	Coal
2011	108.418	6.441.727	511.987	6.959.642	2.302.067	12.356.911
2012	136.112	6.564.460	454.692	7.418.374	2.048.164	13.668.447
2013	152.906	6.764.597	533.990	7.383.858	1.860.153	14.441.876
2014	175.217	6.930.819	516.249	7.716.303	1.840.743	16.082.358
2015	191.524	7.081.603	491.381	864.230	1.889.434	15.780.773
2016	271.048	7.366.503	495.925	9.073.983	2.008.647	15.543.893
2017	327.274	7.731.836	516.356	9.334.606	2.136.133	16.495.775
2018	421.522	7.923.573	544.702	9.852.055	2.194.154	17.459.601
2019	483.898	7.984.418	620.882	9.858.637	2.323.211	17.054.144
2020	516.549	8.200.446	579.272	8.682.120	2.201.934	15.870.570

Source: <https://www.iea.org/countries/india>

As seen in Table 3, India's renewable energy resources increased in 2011. However, it is seen that coal is used more than oil and natural gas among primary energy sources. This is of course related to India's energy structure, which is dependent on coal as a primary energy source..

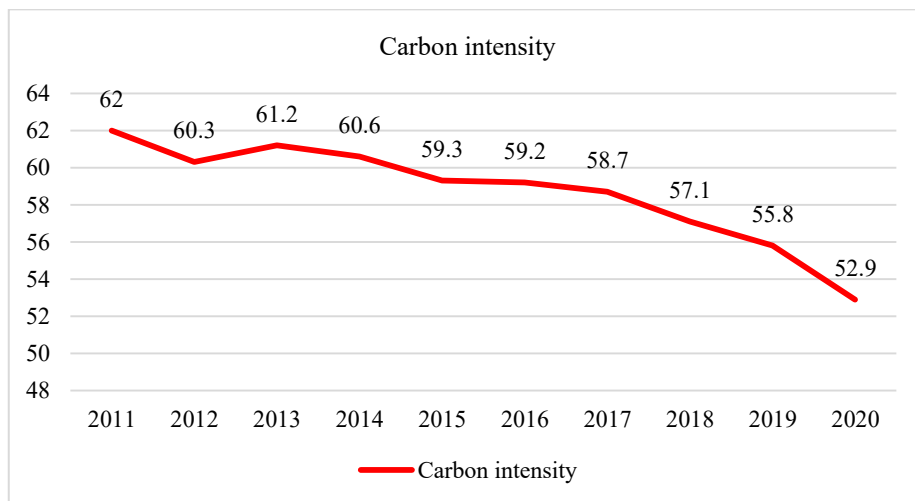


Figure 5: Carbon intensity of industry energy consumption, India 2011-2020 (g CO₂/MJ)

Source: <https://www.iea.org/countries/india>

Figure 5 shows that the carbon intensity created by industrial energy consumption decreased from 62 TJ in 2011 to 52.9 TJ in 2020.

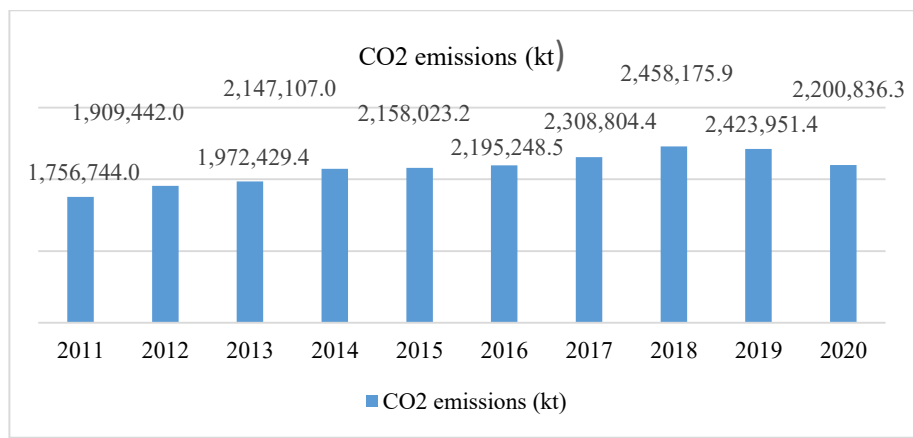


Figure 6: CO2 emissions (kt) India (2011-2020)

Source: <https://data.worldbank.org/>

In Figure 6, it is observed that India's carbon intensity has shown a continuous increase after 2011 and reached the highest level of carbon emissions in 2018 with 2,458,175.9 kt. In 2019 and 2020, it is seen that it entered a downward trend.

Table 4: Total energy supply by source, South Africa 2011-2020 (TJ)

Years	Wind, solar, etc	Biofuels and Waste	Hydro	Oil	Natural gas	Coal
2011	3.138	313.502	7.405	927.584	161.000	4.127.000
2012	3.386	298.577	4.338	770.118	169.303	4.068.506
2013	3.908	286.596	4.025	762.548	171.697	4.016.845
2014	11.675	266.603	3.287	837.093	163.579	4.275.376
2015	22.655	254.233	2.916	839.611	179.752	3.965.084
2016	32.692	250.002	2.452	854.365	177.821	4.131.712
2017	42.191	265.129	2.912	823.021	172.360	4.130.416
2018	51.712	245.934	3.974	909.018	178.316	3.916.806
2019	57.963	252.894	2.632	795.675	180.049	3.977.306
2020	55.015	263.792	5.198	809.420	176.447	3.814.504

Source: <https://www.iea.org/countries/south-africa>

In Table 4, it is seen that energy production such as wind, solar, etc., which was 3,138 TJ in 2011, was produced in 2019 with a maximum of 57,963 TJ. However, it is observed that energy resources obtained from biomass and waste contribute to energy production more than other resources. When we evaluate it in terms of primary energy sources, it is noteworthy that the highest amount of oil-based energy production is provided..

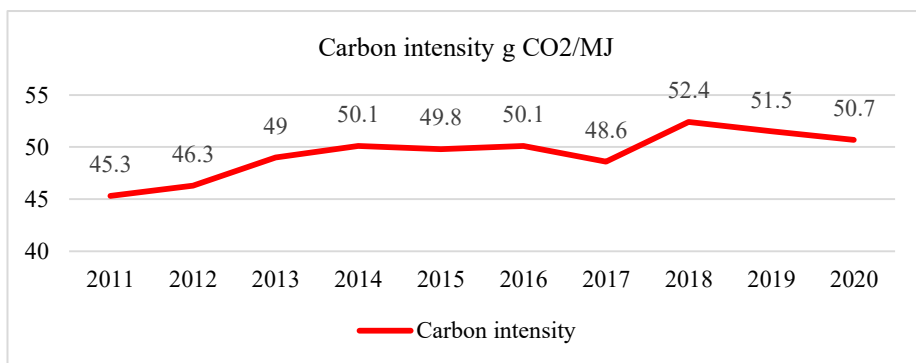


Figure: 7 Carbon intensity of industry energy consumption, South Africa 2011-2020

Source: <https://www.iea.org/countries/south-africa>

Figure 7 shows that the carbon intensity created in the industry was at its lowest level in 2011 with 45.3 g CO₂/MJ. However, it reached its highest point in 2018 with 52.4 TJ..

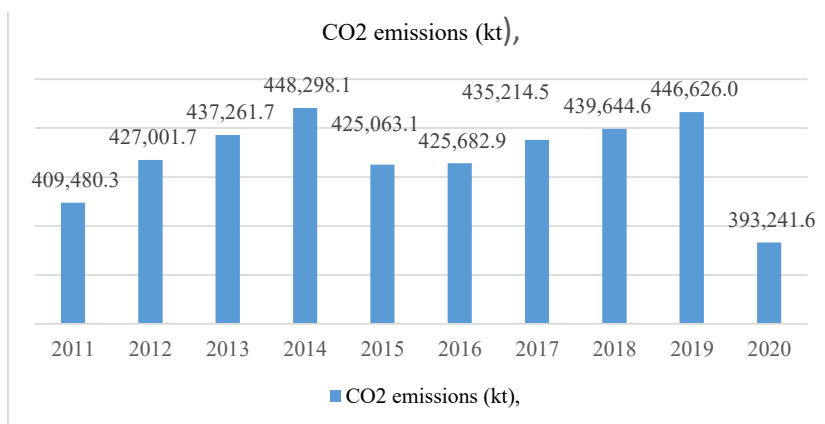


Figure 8: CO₂ emissions (kt), South Africa (2018-2020)

Source: <https://data.worldbank.org/>

Figure 8 shows that Southern carbon emissions reached its highest value in 2014 with 442,298.1 kt. Considering that carbon emissions increase mostly as a result of the use of primary energy sources, this result may be considered inevitable. However, considering the problems created/will be created by climate change all over the world, the shift towards renewable energy sources will naturally lead to a decrease in carbon emissions. This is best illustrated by the low level of emissions in 2015. While there is an increase in carbon emissions in 2017-2019, it is noteworthy that in 2020, the amount of carbon emissions will be as low as 393,241.6 kt with a significant difference.

Table 5: Share of energy consumption by source, Russia (2011-2020, TJ)

Years	Wind	Solar	Biofuels and Waste	Hydro	Oil	Natural gas	Coal
2011	0,01	0,01	0,02	5,57	21,31	53,91	13,53
2012	0,01	0,01	0,02	5,53	14,13	52,92	14,13
2013	0,01	0,01	0,02	6,17	13,16	53,13	13,16
2014	0,01	0,01	0,02	5,86	22,88	52,6	12,7
2015	0,01	0,01	0,02	5,74	22,36	51,86	13,1
2016	0,01	0,01	0,02	6,14	22,43	52,23	12,89
2017	0,01	0,01	0,02	6,08	22,21	53,21	12,05
2018	0,01	0,01	0,02	6	21,66	54,1	12
2019	0,02	0,01	0,03	6,14	22,29	53,28	11,88
2020	0,04	0,02	0,06	6,78	21,94	52,79	11,4

Source: <https://ourworldindata.org/energy/country/russia>

Table 5 shows that although wind, solar, and biomass energy sources meet a small portion of total energy consumption in the 2011-2020 period, energy consumption from water is higher. In the energy consumption by sources, it is seen that oil decreased in 2012 and 2013, realized 22.88 TJ in 2014, and continued to increase in the following years. Again, the highest consumption of natural gas was 54.1 TJ in 2018. It is noteworthy that coal consumption among primary energy sources is lower than natural gas. This can be attributed to the fact that Russia is the world's second natural gas producer.

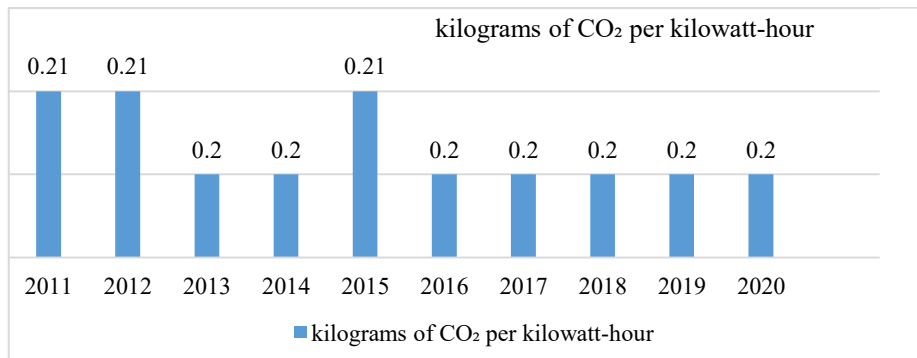


Figure 9: Carbon intensity of energy production, Russia, kilograms of CO₂ (per kilowatt-hour)

Source: <https://ourworldindata.org/energy/country/russia>

Figure 9 shows that carbon intensity as a result of power generation was highest in 2011, 2012 and 2015 with 0.21 per kilowatt-hour.

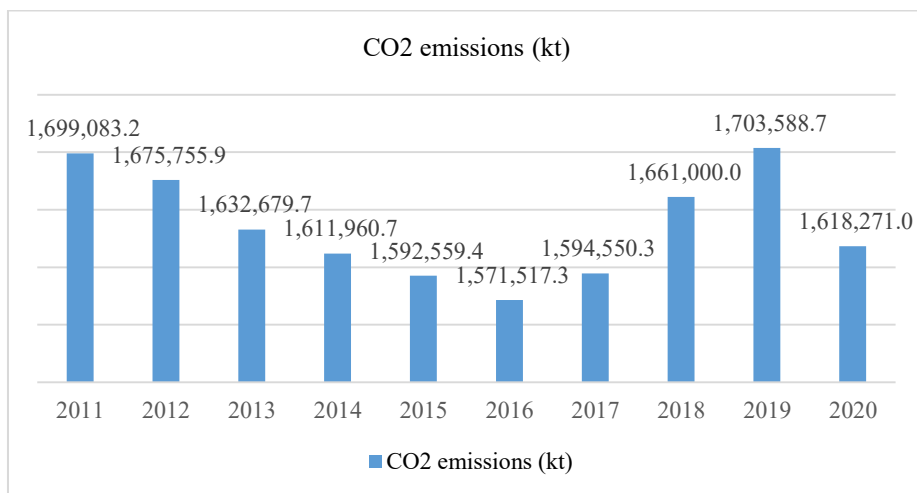


Figure 10: CO₂ emissions (kt), Russia (2018-2020)

Source: <https://data.worldbank.org/>

As seen in Figure 10, the downward trend in CO₂ emissions started in 2011 and reached its lowest level in 2016 with 1,592,559.4 kt. However, with the increase realized in 2017, it was observed that CO₂ emissions reached its highest value with 1,703,588.7 kt.

6. Conclusion

Energy is one of the indispensable elements for economic growth and facilitating human life. The intensity of energy use during production and consumption has caused permanent effects on the ecosystem, especially climate change, which is one of the serious environmental problems. This has brought renewable energy resources to the agenda in the fight against climate change. In this study conducted to investigate the effects of energy, economic growth and climate change, it is seen that China obtains the most energy from renewable energy sources such as wind, solar and water in terms of total energy supply by source. On the other hand, India ranks first in energy obtained from biofuels and waste. In 2011, China ranked first and India ranked second in energy production from primary energy sources such as oil, natural gas and coal. In terms of carbon intensity related to the energy used in industry, China, India, the Republic of South Africa, Brazil and Russia rank first. In 2020, despite a fluctuating trend in these countries, the Republic of South Africa was the only country to show an increase. Considering the impact of industrialization, etc., as well as the population of these two countries on the high carbon intensity in energy consumption can best explain the situation. Looking at the carbon intensity values of BRIC countries in 2020, it is noteworthy that the carbon intensity followed a fluctuating course in the 2011-2019 period, but decreased in 2020. It is noteworthy that the country with increasing carbon intensity is the Republic of South Africa. In terms of carbon emissions, the two countries with the highest carbon intensity in 2011 were India and Russia, respectively. In 2020, it is seen that the highest carbon emission was realized in China and the lowest in the Republic of South Africa. The results obtained reveal the increase in carbon emission patterns due to energy use and the importance of measures to prevent this situation. In addition, the results show that economic growth increases energy consumption and thus carbon emissions. Expectations that environmental problems will gradually increase with the increase in the level of economic development lead countries to take various policy measures and implement these policies in terms of renewable energy. In addition, it can be said that the consumption-intensive economic structure in countries with large populations such as India and China has also triggered the development of this environmental pollution. It is thought that the policies that BRIC countries have implemented and will implement in terms of minimizing the environmental disasters and damages caused by climate change will be effective.

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CHAPTER XXI

A GOVERNANCE CASE STUDY: TÜSİAD'S REACTIONS TO THE WORLD ECONOMIC CRISIS OF 1978

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1. Introduction

Trade unions emerged with the emergence of the industrial revolution in England in the 18th and 19th centuries and with the organization of workers against the difficulties that emerged after it, especially those faced by the working class. As a matter of fact, many of the bottlenecks, or crises, that occur in the world economic system are investigated by unions and suggestions and policies are developed to eliminate them.

In this study, the reactions and suggestions given by TÜSİAD in Turkey to the crises that shook the world economy in 1978 were discussed. The method of the study is literature review. In this context, in the first part of the study, the issue of unions and crises was examined, in the second part, the issue of crises and unions in the world was discussed, and in the third part, TÜSİAD's reactions and suggestions to the 1978 crisis were evaluated.

2. Unions and the Crisis

Trade unions are organizations established to protect and develop the rights and interests of their members (Tokol, 2002). The origins of the definition of union go back quite a long way. The word "Syndic", which is originally given to those who protect the interests of the city apart from the city council, or to those who leave to protect the interests of their customers instead of the judicial organs, is known as the root from which the word union is derived. Over

time, interest-defending organizations created to defend the interests of workers' groups began to be called unions. For this reason, we can define trade unions as an organization formed by a group and aiming to defend the interests of this group. Trade unions, which were previously known as the defenders of not only workers and employers but also all kinds of interests, realized the economic and social misery experienced by workers' organizations during the Industrial Revolution and started to emerge in France from the status of workers' association under the name of union. In this process, the concept of union has been referred to as private organizations aiming to defend the conflicting interests of workers and employers (Turan, 2000: 8; Acar, 2007: 3; Işıklı, 1990).

In this direction, the concept of union is used to describe workers' organizations in some countries (England, USA, Germany) and both worker and employer organizations in some countries (France, Turkey). However, the breadth of the social group they are interested in and the economic weakness of this group constantly bring trade unionism to the fore. For this reason, trade unionism is more important than employer unions in all countries, and when the union is mentioned, the worker organization comes to mind (Tokol, 2002).

The most important features of the crisis periods for the unions and the workers are the decrease in employment security and the decline in real wages. During the development periods of the economic conjuncture, the unions intensify their collective bargaining policies on wage bargains that will provide a share of the welfare increase, but employment bargaining has an important place in the collective bargaining in times of crisis. Unions consent to a certain wage level in return for employment security (Turan, 2000: 11).

3. Crisis and Unions in the World

The ancestors of the majority of unions in European countries are fraternal organizations formed by journeymen against the oppression and exploitation of masters in guilds. These secret organizations, on the one hand, provided cooperation between journeymen, on the other hand, they protected the rights and interests of the journeymen against the masters and ensured that strikes were held when necessary (Acar, 2007: 7).

In the modern sense, unions emerged as a part of the working class movement after the Industrial Revolution. Under these social conditions, the birthplace of trade unionism was England. From the last half of the 17th century, workers in England started to form permanent trade union organizations. The economic, political and social evolutions that led to unionization began to take place in this country for the first time. The industrial revolution, which led to

the social classification underlying unionization, first emerged in England and the technical transformation it created caused a separation between labor and ownership of the means of production in terms of production relations. This change in the relations of production has been the main variable of unionization as well as many other important social developments (Bal, 2007: 33; Işıklı, 1990: 62; Uğur and Doğan, 2019).

The development of trade unions was adversely affected by the First World War and the 1929 economic crisis, and the authoritarian statist systems that became widespread after the crisis brought a negative attitude towards unionization. In a way, the unions lived their golden age in the post-World War II period. During the 60s and 70s in Europe, as in every region of the world, unions made significant gains in terms of strikes and collective bargaining; In addition, they lived their most political periods by being in contact with political parties (Bal, 2007: 40).

In this period, both developed and developing countries took part directly in state production, and as a result of this trend, a large part of the wage labor force became employed by the state. Thus, the state, as the largest employer, made a significant contribution to the unionization of the workforce (Erdoğan and Ak, 2009: 11).

The establishment of the World Labor Organization (ILO) after the Second World War was also an important development in terms of European trade unionism. In this period, especially in most of the European Union countries, unionism; it has achieved significant gains especially in terms of wages, right to strike and working hours (Bal, 2007: 40; Doğan and Uğur, 2018: 4522).

As a result of the economic crisis at the end of the 1970s, Neo-liberal policies replaced Keynesian economic policies and social state practices in the world. The Keynesian welfare state was politically based on a compromise between labor, business, and the state, and reached its peak in practice in the late 1970s. The end of the compromise that led to the formation of the Keynesian welfare state with the economic depression in the world meant that organized labor lost its gains. Those who adopted the neo-liberal view argued that the crisis that emerged in the second half of the 1970s was a product of the Keynesian welfare state (Tokol, 2002; Erdoğan and Ak, 2009: 10; Doğan and Uğur, 2020; Kalkışım, 2011; Yılmaz and Çelik Efşan, 2019: 343).

The loss of power experienced by the unions; Especially the decrease in the number of members and the rate of unionization has made the issue of “the future of unions” one of the important discussions in social sciences since the 1980s. Due to factors such as the collapse of the Fordist consensus in the

1970s, the increasing dominance of neo-liberal economic policies, the spread of flexibility and deregulation approaches in working life, the weakening of the role of the state in the economy, and the change in the composition of the workforce, the unions began to suffer a serious loss of membership in the 1980s (Çelik, 2004; Yılmaz and Turan, 2019: 313).

The replacement of the traditional collectivist values of the working class with more individualistic tendencies has also weakened the understanding of “class consciousness and collective action”, which played an important role in the rise of traditional trade unionism. Traditional unions acted by creating the consciousness of the working class, mobilizing this working class collectively, taking the power of a conscious working class, not individual workers, and it was easier for them to organize the workers. The weakening of collective movement and class consciousness, and the increase in the number of labor force capable of individual bargaining cause unions to gradually cease to be a necessity for workers (Erdoğan and Ak, 2009: 12).

From the beginning of the 20th century, the trade union movement developed until the 1970s in the struggle of the working class in the 19th century, the threat of socialism on capitalism, the organizational structure of the fordist production system and the conditions that provided labor-capital reconciliation. In the said period, the unions not only came to terms with the capitalist class, but also structured all their organization and other activities in accordance with the current conditions of the capitalist system. This restructuring process has made the unions so dependent on the capitalist system that the crisis of capitalism that emerged in the 1970s has turned into a crisis of the unions. The most basic indicator expressing the union crisis is unionization rates. After the 1970s, there was a rapid decrease in the rate of unionization (Bal, 2007: 47).

4. TÜSİAD and the Crisis of 1978

At the beginning of the 1970s, big businessmen thought that the developments were against them and that it was necessary to take the initiative in the face of this trend (Işık, 2006: 140). Because they could not find the opportunity to be represented within the organizations such as TİSK and TOBB, of which they were members, in proportion to their real economic power, they could not act independently and create an effective force against the government (<http://tr.wikipedia.org/wiki/T%>). C3%9CS%C4%B0AD).

As a result, businessmen saw themselves as the most realistic tendency among the various groups and had a feeling that they were being wronged. This

trend had a scope that emerged from the economic perspective, but also included social and political processes as a result of the force of circumstances. In short, at the beginning of the 1970s, the big industrialists seriously considered the social, economic and political developments in Turkey contrary to their interests and demanded conciliatory measures to be taken against this situation. At the same time, this group was also trying to distinguish themselves from others within the identity of a businessman (Işık, 2006: 140).

In this environment, TÜSİAD, whose establishment protocol was signed on April 2, 1971, with the participation of 12 industrialists based in Istanbul, was officially established on May 20, 1971 by the decision of the Council of Ministers (Yılmaz, 2001: 71).

TÜSİAD is committed to the development of a social structure loyal to Atatürk's goal and principles of contemporary civilization and to the development of democratic civil society and secular law in Turkey, where there is an effective state that is committed to the universal principles of democracy and human rights, respects freedom of enterprise, belief and thought, and focuses only on its essential duties. It has adopted the aim of helping the understanding of the state to settle (http://www.tusiad.org/tusiad_cms.nsf/TanitimTR.pdf). As a matter of fact, a new constitution aimed at improving human rights and democracy in Turkey left its mark on the period (Kalkışım, 2019: 154).

At first, the organization mostly defended the interests of Istanbul-based big capital. There were also a small number of industrialists from Adana, Ankara, Bursa and Eskişehir among the members (Işık, 2006: 143).

Although TÜSİAD was not very influential politically at the beginning, it gradually gained power in economic and political terms towards the end of the 1970s. Although he did not take kindly to the Nationalist Front governments, he also came into conflict with the short-term Ecevit governments that were established after them. He played an important role in the fall of the government headed by Bülent Ecevit as a result of the advertisement campaign he started on May 15, 1979 in the newspapers. He also supported the minority government headed by Süleyman Demirel, which was established after him, and played a key role in the adoption of the January 24 Decisions (<http://tr.wikipedia.org/wiki/T%C3%9C%C4%B0AD>).

As a result, TÜSİAD is a non-governmental organization that aims to support liberal democracy and make it dominant in economic life. TÜSİAD, also known as the club of the rich in public, represents big capital in terms of class (Yılmaz, 2001: 72).

4.1. TÜSİAD in the crisis of 1978

In its evaluation, TÜSİAD included the opinion that the indicators for the first month of 1978 were negative, and it was emphasized that the alarm bells of the economy were ringing seriously and that the important thing is not to delay in taking the measures since the economic problems will be solved by economic measures (Cumhuriyet, February 25, 1978).

In its report on the program and budget of 1979, TÜSİAD advocated that the solution to the economic crisis should be sought inside, not outside. In the report, which defends the necessity of removing the SEEs from being a burden, making fair tax regulations and continuing the infrastructure investments, it is also argued that Turkey has to implement a serious fiscal and economic policy in order to ensure its creditworthiness and to get the green light from the IMF. It is stated in the TÜSİAD report that the IMF is important because it can not save Turkey from the deadlock, but because it can announce to the world that it is getting out of the deadlock (Cumhuriyet, Hürriyet, 17 January 1979):

It has been stated that SEEs have shown great failures and therefore should be removed from being a burden, and the importance of not disrupting infrastructure investments. In addition to these, TÜSİAD suggested that the state should not go beyond its main function. The following comments were made in this regard:

“It is imperative that the state does not go beyond its main function. The main function of the state is specified by the Constitution and laws. If the state canned food, feeds turkeys, sews shirts, opens a grocery store and swallows all of its time and resources, the state will not be able to find the time and resources to fulfill its duties and responsibilities in matters such as protecting the country’s borders and protecting life and property inside the country” (Cumhuriyet, Hürriyet, 17 January 1979).

Feyyaz BERKER, chairman of TÜSİAD’s board of directors, said that the growth rate of the public sector should be limited in order to control inflation (Cumhuriyet, 28 January 1979).

TÜSİAD placed a series of advertisements in the newspapers, and in these advertisements, the current economic situation was tried to be revealed and solution suggestions were put forward to get out of the depression:

1. The rate of inflation needs to be slowed down. For this, the state, which should be the keeper of the money that our people receive, should look for other ways instead of printing free money. In this direction, for example, it is

necessary for the finance to minimize tax evasion by applying the right methods. Our parliament, on the other hand, should now tax the segments that have not yet been taxed. Budgets with a constant deficit and public expenditures that increase inflation must be brought under control.

2. The loans we desperately need and the economic system we apply are very closely linked. In other words, with an understanding that moves away from the market economy, we cannot find the place we deserve in the Western world, neither sufficient credits nor the necessary foreign capital for investments.

3. We must now understand that the main power of our democratic society that produces – productively – is free enterprise. The very intrusive and distrust-shaking mentality that suffocates our economy in a prohibitive “regulatory network”, discourages people from attempting, and leads people in wrong directions is the main cause of the depression.

4. The realistic way to work more, produce more and attain abundance: “encourage the person in competition”. Production does not increase with coercive, preventive measures. If anything, the economic structure is distorted. The regime changes. In addition, the weakening of free enterprise is the weakening of liberal democracy. The disappearance of free enterprise, on the other hand, is the disappearance of liberal democracy along with all political, economic, union and intellectual freedoms (Hürriyet, 13 May 1979).

5. If a real tax reform is introduced, instead of punishing the taxpayer by aggravating the tax burden by excluding those who can pay taxes, the state will provide secure sources of income.

6. Not expanding the scope of State Economic Enterprises with annual losses exceeding 50 billion liras, but narrowing them on the contrary will alleviate this burden on the country's economy.

7. Our economy will recover rapidly if a safe and encouraging working environment is provided instead of making the investors tired of investing and starting a business (Hürriyet, 3 June 1979).

8. The opening of the Turkish economy to foreign countries should be taken as soon as possible with a decision that will accelerate its development within the western economy based on free competition (Hürriyet, 20 May 1979).

Upon the government's implementation of policies reminding socialist policies, businessmen headed by TÜSİAD issued a joint declaration. In the declaration, the president was called to duty to ensure that a mentality that would not deviate the economy from the mixed economy rules prevails (Hürriyet, 14 May 1979). Speaking at a meeting organized by TÜSİAD, businessman Rahmi

KOÇ said: “Today we say that we are developing in democracy, but some decisions taken on issues concerning the private sector resemble those taken in socialist countries... This situation causes the private sector to worry about its future. In addition, Koç stated that he has positive views on foreign capital, and foreign capital plays a major role in the development of the country, creating employment, paying taxes and bringing technology to the country” (Hürriyet, 28 January 1979).

At the beginning of 1980, TÜSİAD prepared a report called “The Way Out of the Economic Depression”, revealing the current state of the economy and listing the measures to be taken to get out of this situation. First of all, TÜSİAD stated that there was no new devaluation of the Turkish Lira at the beginning of 1980, and stated that constant exchange rate adjustments were required in order to keep the Turkish Lira at a realistic exchange rate. Noting that the foreign exchange resources that Turkey can use are around 7.6 billion dollars, TÜSİAD argued that if this resource is ignored, it will be used for imports that will be harmful to the economy, so the public should direct this resource (Cumhuriyet, 18 November 1979).

TÜSİAD stated that in 1979, efforts were made to expand exports by public assistance, and argued that this practice should be abandoned, otherwise the economy could suffer great damage and the chance to enter foreign markets would gradually disappear. Noting that Turkey’s current foreign exchange resources are sufficient to pay the current oil bill and continue oil imports, TÜSİAD stated that determining a price policy and changing the price control order of the public and preventing the formation of double prices will be a factor in the success of this policy. In addition, TÜSİAD reiterated that SEEs should be reorganized and demanded that these institutions be operated under market economy conditions (Cumhuriyet, 18 November 1979).

5. Conclusion

Economic crises in Turkey have caused constant negative consequences and a fragile structure throughout the historical process. There are many reasons for economic crises, most of which are political and cultural in origin. These crises are political problems in society. It also affects and social organizations and directs them in a certain direction. As a matter of fact, in order to get out of the crisis that caused such heavy damage, every segment of the society, from the government to the opposition, interpreted the crisis from their own perspectives and put forward solution proposals (Kalkışım et. al., 2023: 660).

In its evaluation, TÜSİAD stated that the indicators for the first month of 1978 were negative, and emphasized that alarm bells were seriously ringing in the economy, and that the important thing was not to delay, since economic problems would be solved by economic measures. take precautions.

The 1978 world economic crisis affected the whole world and caused many economic problems and troubles in Turkey. In this context, TÜSİAD published reports and organized seminars to minimize the effects of the crisis. He also made notifications to the government of the period and the public. In this process, TÜSİAD has made recommendations on economic and financial policies aimed at reducing the inefficiency of State Economic Enterprises, tax justice, controlling inflation, removing obstacles to the free market economy, opening up to the outside world and increasing investments.

As seen in this study, unions, which can be seen as an element of civil society, make suggestions to the government to minimize the effects of the economic crisis in Turkey and overcome the crisis, and the synergy they show between different actors.

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ISBN 978-2-38236-639-4



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