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Integrated Coastal Zone Management Studies in Turkey in the Context of the United Nations Sustainable Development Goals: An Evaluation Using Bibliometric Analysis

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Abstract: In this study, within the framework of four of the UN Sustainable Development Goals, which form the basic principles of coastal sustainability, the targets determined to be related to Turkey were examined in detail, to contribute to the development of an evaluation and measurement system, using the bibliometric analysis method on articles from the Web of Science. Then, we attempted to develop solutions in line with Turkey's conditions to eliminate the current problems. This study also aimed to contribute to the creation of criteria that could be used as the basis for determining the adequacy and effectiveness of the ICZM through the determination of the goals. In addition, within this study, we assessed Turkey's current situation regarding integrated coastal zone management and suggested a roadmap for evaluation and future solutions.

Keywords: integrated coastal areas; UN sustainable development goals; bibliometric analysis

1. Introduction

Of the 6 billion people alive today, an estimated 1.7 billion, or 38 percent of the world's population, live within 50 km of coasts, and approximately 45 percent of the world's population lives within 150 km of coasts, equal to the size of the global population in the mid-1950s. Assuming the same proportion of coastal residents, by 2050, there will be approximately 4 billion people living 150 km away from coasts, equal to the global population in the mid-1970s [1]. In Turkey, the ratio of the coastline length to the total border length is 73.3%, well above the global average of 55.09%; with a coastline of 8333 km, Turkey has 2.67% of the world's total coastline. It has a very strategically important position, as the longest coastline among European, Asian, African, and Black Sea countries [2] (Figure 1).

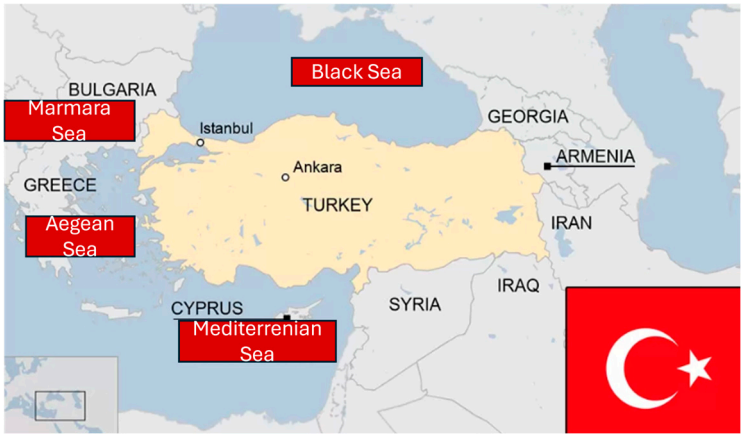

Figure 1. The coastline of Turkey.

New approaches are needed to protect and use, benefit economically from, and manage and plan coastal areas in a sustainable and balanced manner. For this reason, approaches to

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the integrated management of coastal areas have emerged and are being implemented. The worldwide realization that the environment is deteriorating due to the rapidly increasing human population led to the emergence of the concept of sustainable development in the late 1980s and early 1990s [3]. Sustainable development is currently the basis for most coastal management around the world. "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" is a concept at the center of this effort [4]. As a result of the "Environment and Development Conference" held in Rio de Janeiro in 1992, integrated coastal zone management (ICZM) gained importance. The documents prepared at this conference and the *Integrated Coastal and Marine Areas Management Principles Series* published by the United Nations Environment Program (UNEP) were adopted in 1995 [5]. After this date, the number of theoretical and practical initiatives regarding ICZM increased internationally, and experience and knowledge have accumulated [6].

"Integrated Coastal Zone Management refers to a comprehensive approach that includes all sectoral activities affecting coastal areas and resources, as well as environmental and ecological concerns, as well as economic and social dimensions" [7]. ICZM (integrated coastal zone management), which includes a full cycle of processes such as information collection, planning, decision making, and implementation management and monitoring, aims to evaluate the objectives in a particular coastal area and take the necessary actions to achieve them, using the informed participation and cooperation of all stakeholders, i.e., "targets" [8].

The objective of the integrated coastal area plans in Turkey are as follows:

- To introduce a new approach to coastal planning and implementation studies;
- To determine measures regarding protection and control of the coasts;
- To direct local expectations and demands in coastal areas;
- To regulate overlapping jurisdictions on the coasts;
- To ensure that coastal areas are harmonious.

There is also a need to ensure holistic policy and decision-making processes that take into account all sectors in order to promote balanced protection and use and produce guiding strategies and targets for applications regarding the building of coastal structures [9].

International studies have contributed to the formation of the administrative, legal, institutional, technical, and methodological infrastructures that the ICZM process should cover. Principles, strategies, targets, etc., related to ICZM, which have emerged as a result of the studies carried out by international organizations such as the United Nations (UN), the World Bank, the Organization for Economic Development and Cooperation (OECD), and the European Union (EU), have become universal and form the basis of knowledge and methods, as well as a reference for countries for ICZM activities. International strategy documents and country experiences show that integrated coastal zone management is considered holistically in the coastal and interaction areas, adopts a management and planning approach covering all coastal sectors, and is the subject of projects and practices that differ according to the conditions of the countries [10].

In this context, the purpose of this research is to ensure that ICZM studies in Turkey are carried out within the framework of the four targets of "Clean Water and Sanitation", "Sustainable Cities and Communities", "Climate Action", and "Life Below Water", which are the basic principles of the UN Sustainable Development Goals in the context of coasts. The effects, tools, and new perspectives that ICZM provides, a comparison of the ICZM implemented in Turkey, and Turkish practices based on the principles of ICZM in the context of sustainability are examined in detail using the bibliometric analysis method, and the current problematic situation is presented.

In order to highlight the unique aspects of this study and its importance for academia, the current situation and problems in Turkey are tabulated in terms of the main focus areas (scan the qr code for the full table).

In this study, it was determined that there was inadequate communication between the central and local governments through various commissions and organizations, as well as between institutions and actors, and the lack of access to databases showed similarities with other studies in terms of the limitations.

1.1. Integrated Coastal Zone Management in the Context of the UN Sustainable Development Goals

Before discussing ICZM, it is necessary to explain the concept of coastal zone management, a more general concept. Coastal area management is defined as "planning and taking action against environmental changes in the coastal area" [11]. Sesli et al. define coastal zone management as "a continuous, precautionary and adapted resource management process for sustainable development in coastal areas" [12].

ICZM is a concept that has emerged with changing conditions. Currently, ICZM is at the forefront of work in coastal area management. In a workshop held in the USA in 1989, integrated coastal zone management was accepted as "a dynamic process that aims to ensure the development and application of environmental, social, cultural and institutional resources that will ensure the protection and multi-faceted use of the coastal zone in a sustainable manner" [13].

Integrated coastal zone management (ICZM) is a dynamic, continuous, and iterative process that aims to strengthen sustainable management in coastal areas [14]. At the same time, ICZM aims to ensure a balance between environmental, economic, social, cultural, and recreational goals over the long term [15]. The concept of "integrated" in the definition of ICZM means the integration of the objectives and the components needed to achieve the objectives, that is, all appropriate policy areas, sectors, and levels of government. At the same time, the concept of "integrated" means integrating the terrestrial and marine components of the targeted region in time and place [14].

In this context, the "Integrated Coastal Zone Management (ICZM) Plan" emerges as an important tool, where "integrated" has become a vital keyword for different environments. This struggle for integration includes sectoral, administrative, spatial, interdisciplinary, and international dimensions. A set of basic principles can also be derived from the literature to achieve a better implementation of an ICZM plan. These principles are "a broader perspective", "a long-term perspective", "adaptive management and monitoring", "local characteristics, specific solutions and flexible measures", "carrying capacity of ecosystems", "a participatory process", "good coordination of policies and partners", and "consistency between sectoral policy objectives planning and management" [16].

In order to ensure the sustainability of ICZM, ref. [15] proposed a structure that grouped the development of integrated coastal management into five steps, as shown in Figure 2.

According to Gesamp, achieving the goal of a sustainable quality of life in coastal communities and ecosystems begins with allowing time to complete a series of policy cycles. Mature and successful ICM programs make clear that the end goal requires a sustained effort measured in decades, spanning several generations of a given program. This timescale is beyond the duration of the vast majority of projects currently supported by international donors or financiers, and such projects will typically not span a single full generation of an ICM program. In developing countries, a first-generation ICM program often focuses on one or more pilot sites and a limited number of topics. A pilot project may produce improvements in the quality of life of a small community in the field within a single generation; however, several generations are required to achieve similar results for the entire region or country [15].

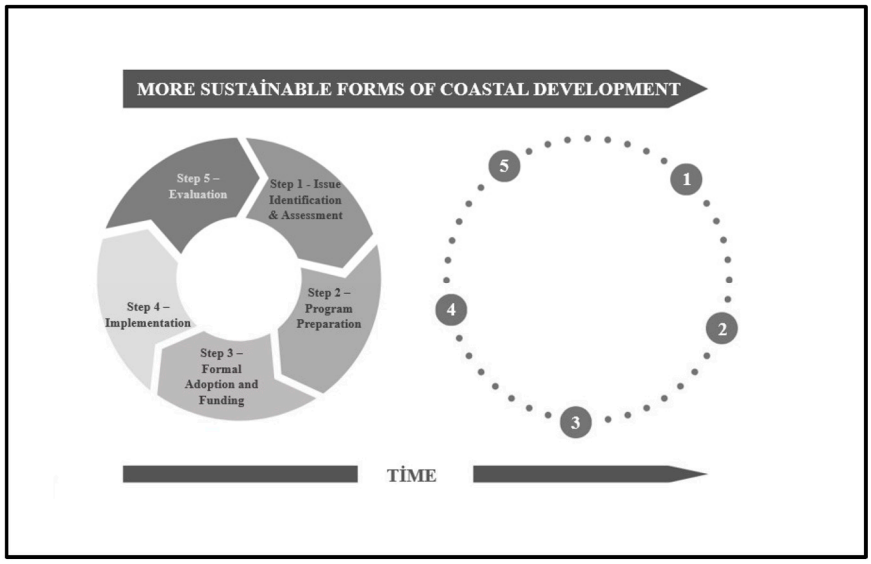

Figure 2. Development cycle of integrated coastal management [15].

It is important that the objectives set are appropriate to the analyses compiled, are specific, have a set of ideas, beliefs, or assumptions about what constitutes effective strategies for coastal management, and are sustainable. Goals should be developed by adopting a scientific and objective approach. According to Meadows et al., a sustainable society is a society that can last for generations, is sufficiently forward-thinking and flexible, and is intelligent enough to not weaken either physical or social support systems [17].

ICZM integrates some management and planning approaches, including marine spatial planning and ecosystem-based management, to achieve sustainability and resilience goals in the face of various challenges in coastal areas [18,19], with globally sustainable development as the long-term goal. To achieve this ambitious goal, ICZM has been chosen as an effective tool in the context of the UN-SDG framework [20].

The Sustainable Development Goals (SDGs) were established in 2015 by the international community as part of the UN 2030 Agenda for Sustainable Development, through which countries of the world collectively pledged to eradicate poverty, find sustainable and inclusive development solutions, ensure everyone's human rights, and ensure that no one would be left behind by 2030 [21].

The United Nations (UN) Sustainable Development Summit adopted 17 Sustainable Development Goals (SDGs) (Figure 3), aiming to chart a sustainable path for the world [22]. The Agenda [23] comprises 169 Goals and 232 unique indicators [23,24]: no poverty; no hunger; good health; quality education; gender equality; clean water and sanitation; affordable clean energy; decent work and economic growth; industry, innovation, and infrastructure; reduced inequality; sustainable cities and communities; responsible consumption and production; climate action; life below water; life on land; peace, justice, and strong institutions; and partnerships to achieve these goals.

A sound ICZM must meet the principles of sustainable development [25]. Therefore, some future directions have been proposed based on the UN Sustainable Development Goals framework. The role of ICZM in achieving the UN Sustainable Development Goals for coastal areas has been recognized.

In this context, studies carried out in Turkey within the scope of ICZM and four goals—"clean water and sanitation", "sustainable cities and communities", "climate action", and "life under water"—were analyzed using the bibliometric analysis method.

Figure 3. UN Sustainable Development Goals [9].

1.2. Integrated Coastal Zone Management in Turkey

There are a total of 29 provinces in the coastal areas of Turkey, including 12, 9, 4, and 4 on the Black, Marmara, Aegean, and Mediterranean Seas, respectively. Turkey's coastline, which is 8333 km in total, including 1785 km on the Black Sea, 1089 km on the Marmara Sea, 2805 km on the Aegean Sea, 1577 km on the Mediterranean Sea, and 1067 km in the islands, is strategically important. Unfortunately, these regions face serious problems, such as environmental degradation, erosion, floods, and coastal erosion due to industrialization, commercial developments, and ever-growing population pressure. Turkey, which has coasts in three separate seas, is a rare country in terms of its coastline length and natural, ecological, and touristic richness. However, due to flaws in the legislation, frequent changes, and incorrect practices caused by the deficiencies in control and sanctions, Turkey does not benefit from this wealth in terms of correctly and consciously adapting to future generations [12]. The three most important sources of the problems experienced in coastal areas in Turkey are irregular urbanization, uncontrolled tourism activities, and industrial use. The coastal areas are the areas most affected by environmental problems due to rapid and unplanned urbanization and illegal construction, resulting from rural-to-urban migration movements in the 1960s [26]. Nuclear power plants located on the Black Sea and Mediterranean coasts, the filling of coastal areas, large real estate and transportation projects in cities such as Istanbul, and urban transformation projects, including ones related to coastal areas, have caused irreversible destruction and environmental pollution. These activities have been carried out for economic gain. However, coastal areas need to be planned with an ecosystem-based approach, a participatory governance system, coordination between institutions of different scales and sectors, and a sustainable management approach [27]. Unfortunately, evaluation of the management of the coasts in Turkey from past to present shows that the most basic feature is that the authority and responsibility for these areas are fragmented [2].

In Turkey, ICZM plans are prepared in accordance with the requirements specified in the Spatial Plans Construction Regulation (MPYY) of the Ministry of Environment, Urbanization and Climate Change. According to the MPYY, the integrated coastal area plan "addresses the coasts with an integrated approach, including the interaction area, all sectoral activities and plans, and social and economic issues; ensuring harmony between functions and activities in coastal areas and targets for coastal areas; considering the protection of the coastal ecosystem and the use of natural resources in line with the principle of sustainable development and it includes the infrastructure facilities required to be built on the coast regarding transportation types with the relevant institutions and organizations within the framework of the strategic planning approach, as a whole, with the plan sheet and planning report, in accordance with the schematic and graphic planning language at a scale of 1/25,000 or 1/50,000, covering the spatial target, strategy and action

suggestions and management plan in a way to ensure the balance of protection and use. It is a plan prepared in cooperation" [28]. In Turkey, issues concerning the coasts are covered by multiple laws rather than comprehensive regulation, and there is no special institutional structure for coastal management. This situation causes uncertainty in terms of authority among the relevant stakeholders in coastal area management. The authors of [29] stated that the most difficult goal that Turkey must achieve is the development of a comprehensive and consistent institutional and regulatory framework for all coastal regions; there is a need to make new arrangements in the current system, which is divided into independent jurisdictions managed by various central government, provincial, and municipal organizations.

Although various countries around the world prepared single-sector pilot projects related to coastal management in the 1980s, Turkey's coastal law initiatives were introduced in the 1990s. Studies then began to be carried out in pilot regions selected for integrated coastal zone management in Turkey with the support of international funds. Some of the pioneering studies were carried out by the Ministry of Environment and Urbanization and Climate Change. In this context, the Izmit Bay (Kocaeli–Yalova) Coastal Areas Integral Plan and the Iskenderun Bay Coastal Areas Integral Plan, approved in 2008, were the first.

The objectives of the integrated coastal area plans in Turkey are as follows:

- To introduce a new approach to coastal planning and implementation studies;
- To determine measures regarding protection and control on the coasts;
- To direct local expectations and demands in coastal areas;
- To regulate overlapping jurisdictions on the coasts;
- To ensure holistic policy and decision-making processes that take into account all sectors in order to promote the harmonious and balanced protection and use of coastal areas;
- To produce guiding strategies and targets for applications regarding coastal structures set to be built in coastal areas [30].

2. Materials and Methods

Bibliometric analysis, first introduced by [26] is an effective tool in assessing the current situation or gaps by capturing the characteristics of documents [31]. Bibliometrics is often combined with social network analysis (SNA) and ontent analysis to discover scientific collaboration patterns and research hotspots [32,33] and has been widely used in the environmental field, as well as in science, ecology, and management [34–36]. With the help of these quantitative methods, research on specific topics or fields from past to present can be clearly summarized [37,38].

This research provides a comprehensive understanding of ICZM-related research through objective and quantitative methods; open knowledge gaps should be focused on in further research under the framework of the UN Sustainable Development Goals. The findings of this article provide direction and advice to researchers, stakeholders, and policymakers. Common word analysis was conducted to identify the focal themes. Future directions for ICZM are included using the United Nations Sustainable Development Goals (UN-SDGs) framework [38].

In this study, 336 publications from the Web of Science and Core Collection databases (WoSCC) were evaluated quantitatively using bibliometrics, SNA, and content analysis. In particular, the ICZM review was conducted from the perspective of the spatio-temporal distribution of publications, high-productivity characteristics, international cooperation models, hotspots, and future directions.

Four targets from the UN's seventeen Sustainable Development Goals were entered as keywords (clean water and sanitation, sustainable cities and communities, and climate action), and studies on these subjects in Turkey were downloaded from the Web of Science.

3. Findings

In order to shed light on research trends regarding the Sustainable Development Goals in Turkey, an analysis of the scientific literature on the Sustainable Development Goals retrieved from the Web of Science database was conducted. According to the results of the bibliometric analysis, 199 of the 336 published articles on the four key targets within the scope of the Sustainable Development Goals were studies that met the selection criteria. A total of 35 of these studies were proceedings papers, 12 were early-access articles, 10 were book chapters, and 142 were articles (Figure 4).

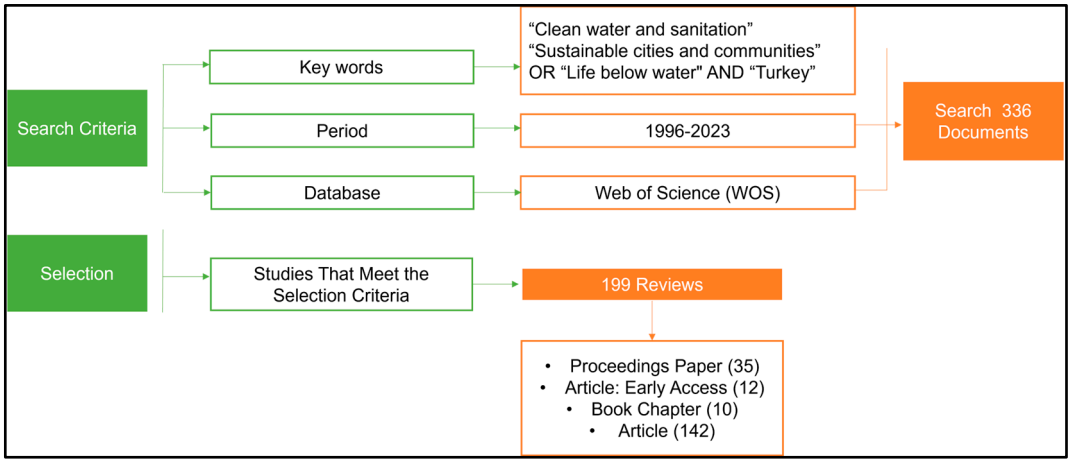

Figure 4. Workflow.

The SDG-6 keywords "clean water and sanitation" AND "Turkey" were scanned through the WS scientific search engine. Ten of the nineteen different results were related to Turkey and added to the analysis. Co-occurrence analyses were conducted by selecting the author information, titles, abstracts, keywords, categories, and document types of the 10 studies as the criteria. Eight of the studies were articles, and two were early-access articles. The selected studies were published between 2012 and 2023. The research areas of the 10 analyzed studies are shown in Figure 5.

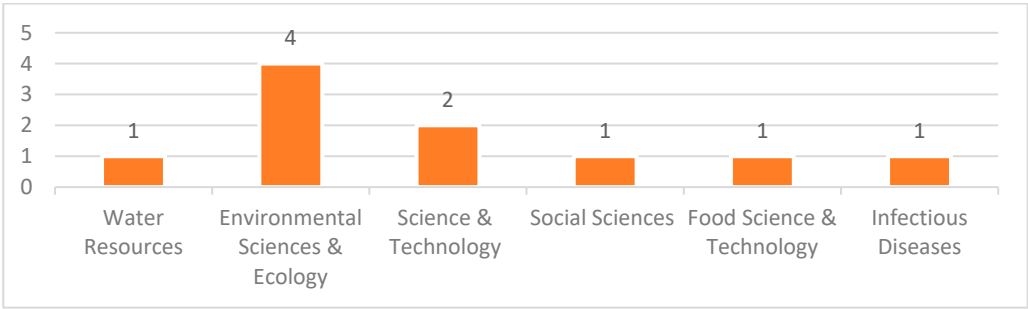

Figure 5. Research area distribution of the 10 selected studies.

As a result of the "clean water and sanitation" AND "Turkey" analysis conducted using Vosviewer (1.6.18), the co-occurring (most recurring) words were determined to be "water, challenges, hygiene, management, countries, children, and economic growth" (Figure 6).

The keywords "life below water" AND "Turkey", representing SDG 14, were scanned through the WoS scientific search engine. Here, 61 of 91 different results were related to Turkey and added to the analysis. Co-occurrence analyses were conducted by selecting the author information, titles, abstracts, keywords, categories, and document types of the 61 studies as the criteria. Nine of the studies were proceedings papers, two were early-

access articles, and fifty were articles. The selected studies were published between 1997 and 2023. The research areas of the 61 studies analyzed are shown in Figure 7.

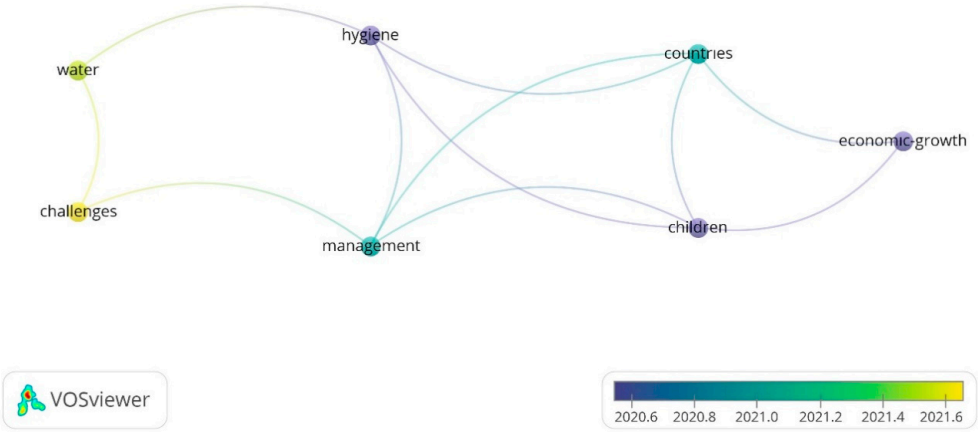

Figure 6. "Clean water and sanitation" AND "Turkey" analysis (Vosviewer (1.6.18) 2023).

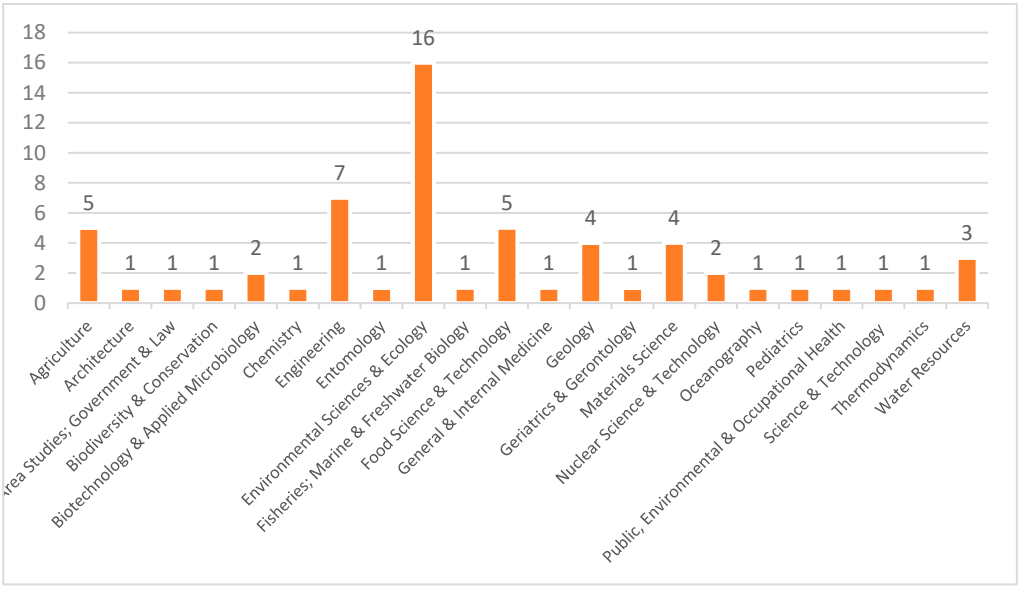

Figure 7. Research area distribution of 61 selected studies.

As a result of the analysis conducted using Vosviewer (1.6.18) and the criteria determined in the studies, the co-occurring (most recurring) words are shown in the graph below (Figure 8).

The keywords "sustainable cities and communities" AND "Turkey", which represent SDG 11, were scanned through the WS scientific search engine. It was determined that 109 of 155 different results were related to Turkey, and these were added to the analysis. Co-occurrence analyses were conducted by selecting the author information, titles, abstracts, keywords, categories, and document types of the 109 studies as the criteria. Twenty-five of the studies were proceedings papers, six were early-access articles, eight were book chapters, and seventy were articles. The selected studies were published between 1996 and 2023. The research areas of the 109 studies analyzed are shown in Figure 9.

As a result of the analysis conducted using Vosviewer (1.6.18) and the criteria determined in the studies, the co-occurring (most recurring) words are shown in the graph below (Figure 10).

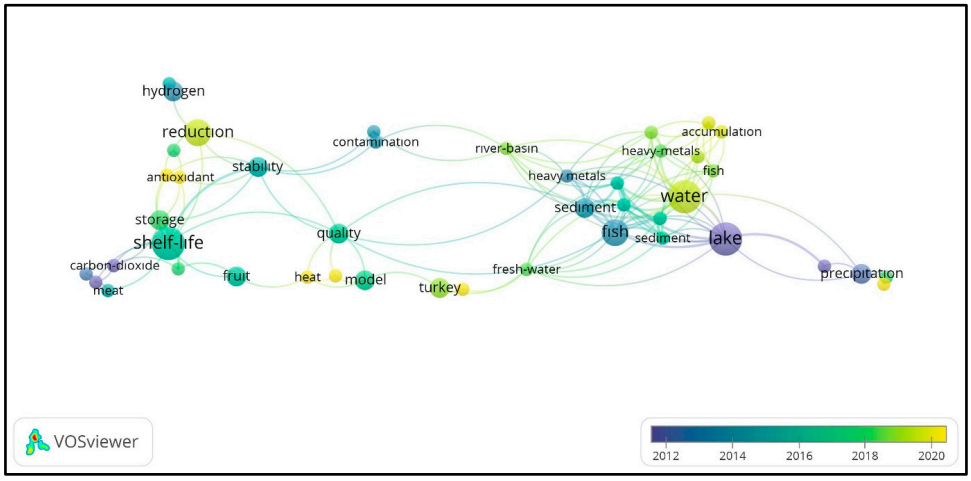

Figure 8. "Life below water" AND "Turkey" analysis (Vosviewer (1.6.18) 2023).

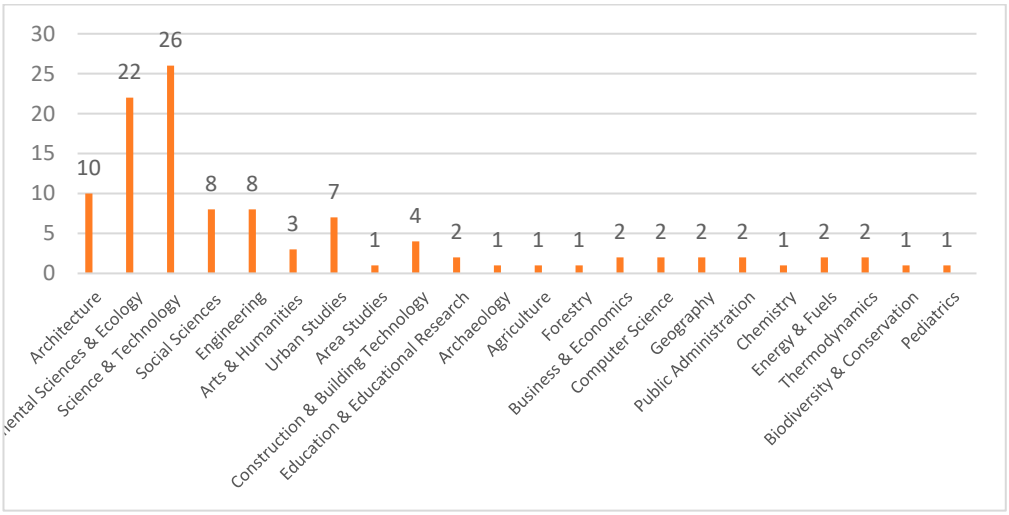

Figure 9. Research area distribution of 109 selected studies.

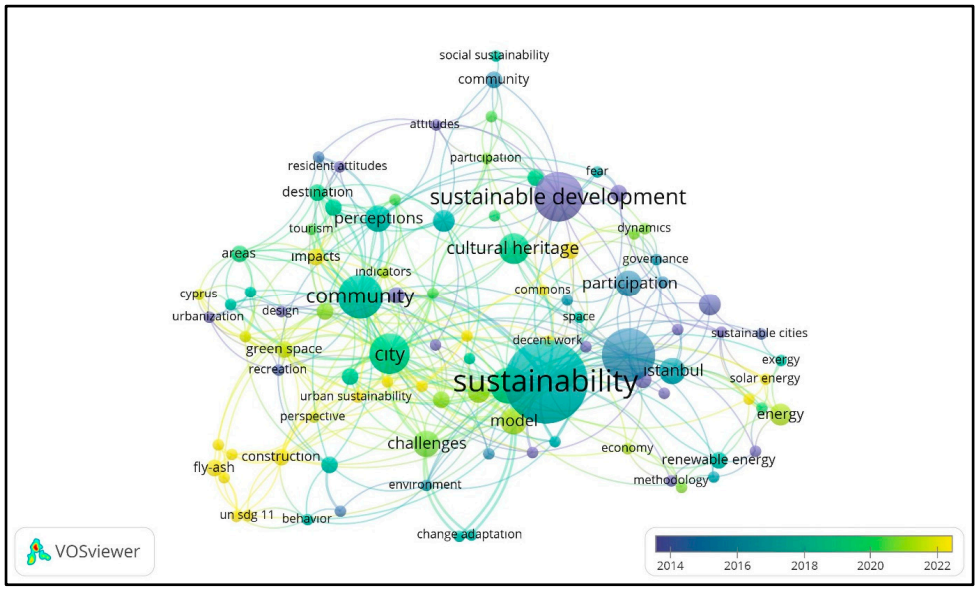

Figure 10. "Sustainable cities and communities" AND "Turkey" analysis (Vosviewer (1.6.18) 2023).

The SDG-13 keywords "Climate action" AND "Turkey" were scanned through the WS scientific search engine. Here, 19 of 71 different results related to Turkey were added to the analysis. The selected studies were published between 2012 and 2023. The research areas of the 19 studies analyzed are shown in Figure 11.

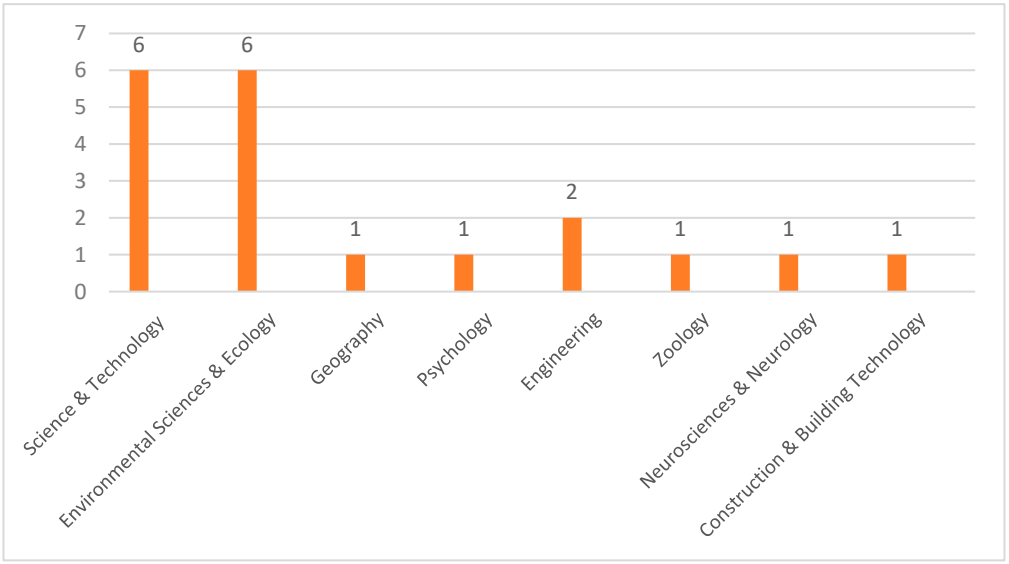

Figure 11. Research area distribution of 19 selected studies.

As a result of the analysis conducted using Vosviewer (1.6.18) and the criteria determined in the studies, the co-occurring (most recurring) words are shown in the graph below (Figure 12).

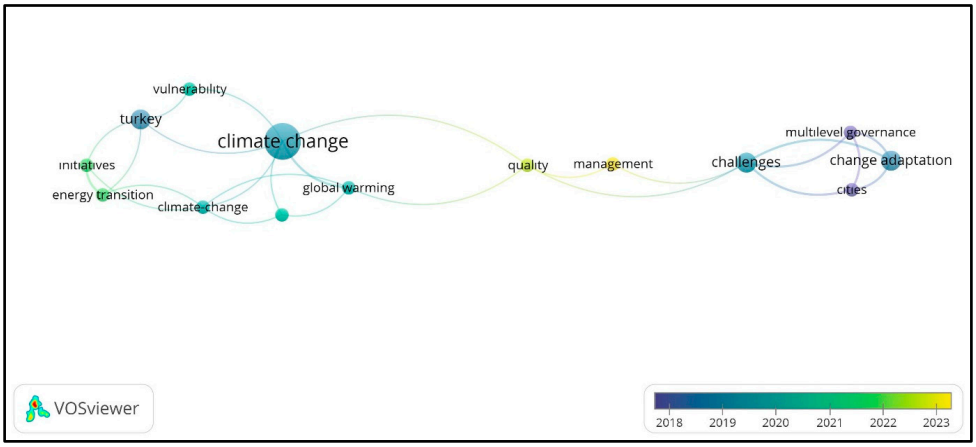

Figure 12. "Climate action" AND "Turkey" analysis (Vosviewer (1.6.18) 2023).

In another stage of this study, a common keyword network was created by combining all the networks analyzed by Vosviewer (1.6.18). Thus, the keywords for "climate action" AND "sustainable cities and communities" AND "life below water" AND "clean water and sanitation" AND "Turkey" in all the scanned studies (109 studies) are shown in the graph below (Figure 13).

In this context, a total of 336 studies were scanned through WS; finally, 199 of these were included in the scope of this study as a result of searches made with the pre-determined SDG keywords and "Turkey".

The subject of sustainable cities and communities has become the most researched in Turkey (Figure 14).

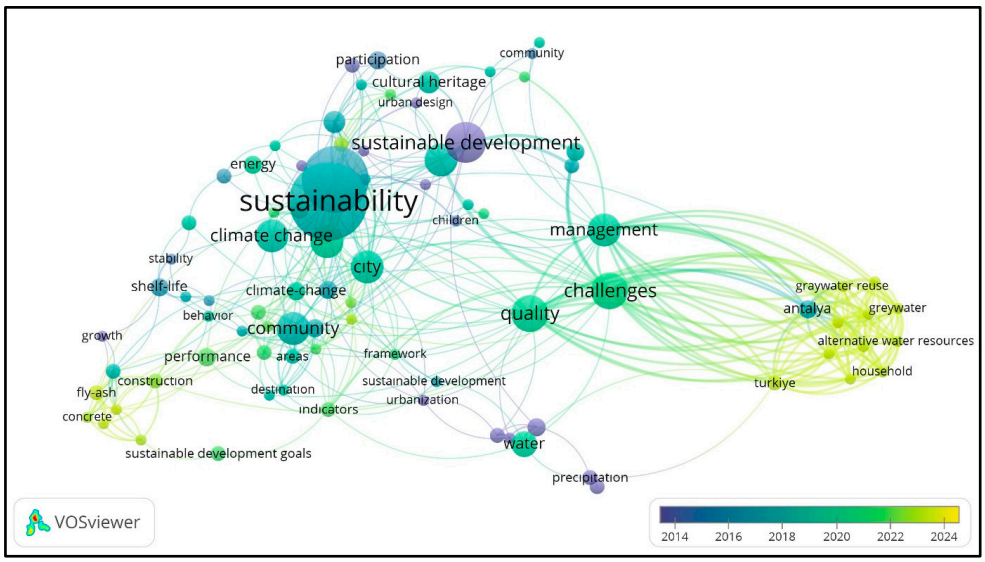

Figure 13. "Climate action" AND "sustainable cities and communities" AND "life below water" AND "Clean water and sanitation" AND "Turkey" analysis (Vosviewer (1.6.18) 2023).

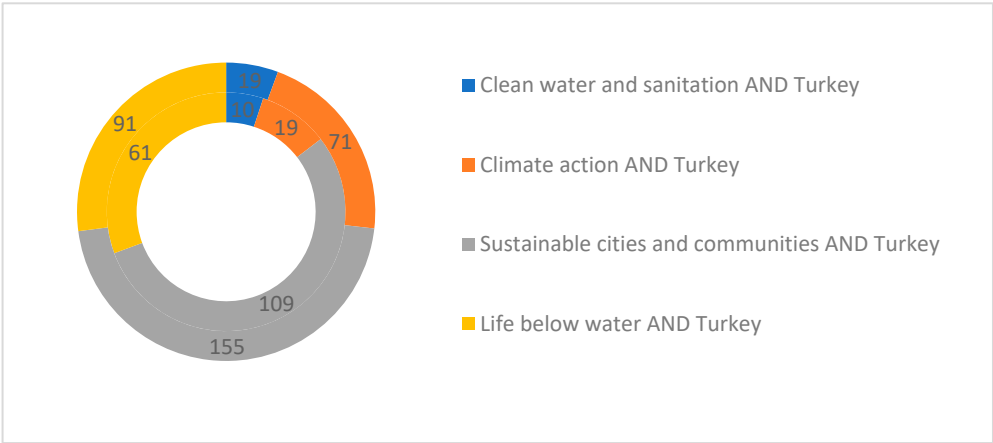

Figure 14. Sources scanned and selected via WS.

Research on the topics of climate action and sustainable cities and communities began in 2006, while research efforts on clean water and sanitation began in 2012 and life below water in 1995 (Figure 15).

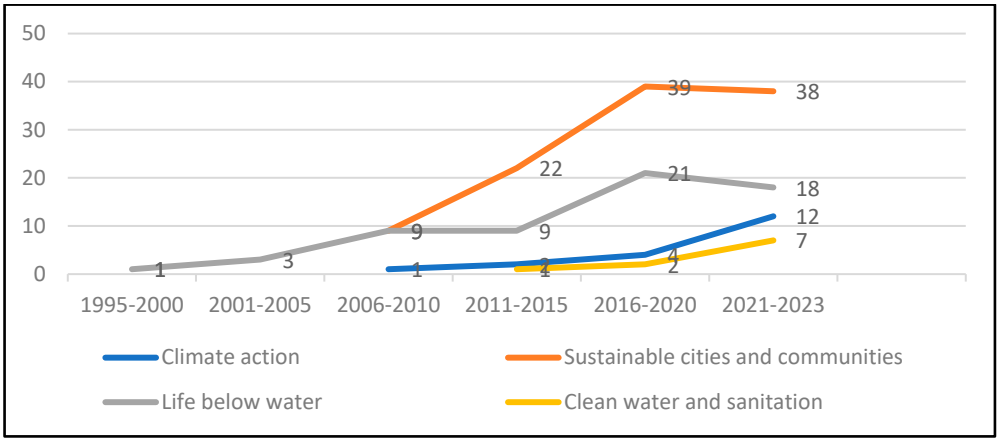

Figure 15. Publication years and numbers of the 199 studies examined.

Also within the scope of this study were the purpose, scope, strategy, threats, and opportunities of 20 integrated coastal area studies in Turkey, compiled from the *Strategic Environmental Assessment Reports* published by the TR Ministry of Environment, Urbanization and Climate Change, General Directorate of Spatial Planning. We used co-occurrence analysis among a total of 39 words that had been repeated at least twice, and the most dominant and frequently used words are shown in Figure 16.

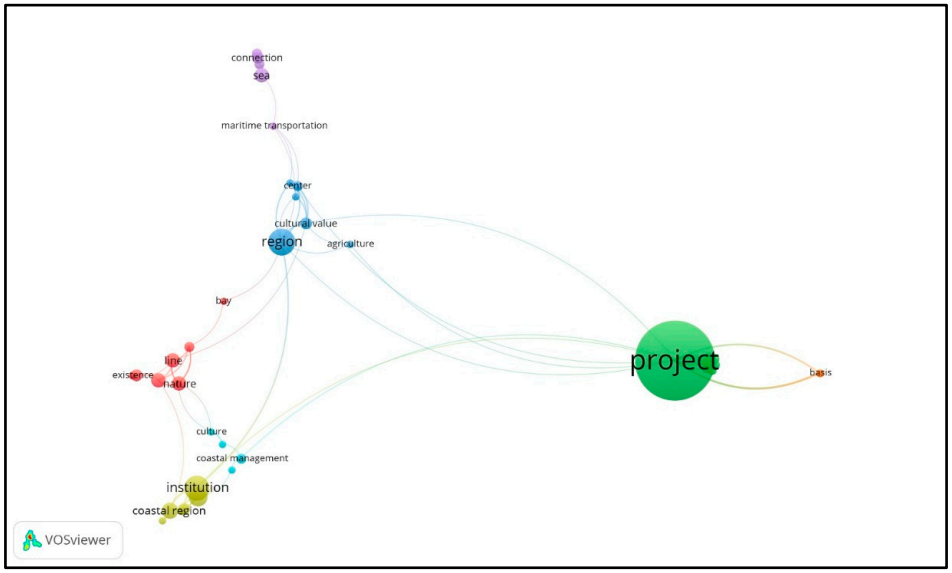

Figure 16. Integrated coastal area analysis in Turkey (Vosviewer (1.6.18) 2023).

4. Discussion and Conclusions

Sustainable development has been constantly on the agenda in recent years; however, today, it is impossible to say that sustainable development has been achieved at local, national, and international scales. Now, as in all areas of environmental resource management, the management of coastal resources in line with the principle of sustainable development has become inevitable, especially for Turkey. However, this is not an easy task to achieve; on the contrary, it is a challenge. What is at stake is the reconciliation of the views of different stakeholders regarding the management of coastal resources. Integrated coastal zone management (ICZM) is the tool needed to achieve this goal.

Integrated coastal zone management ensures that all activities carried out in coastal areas follow an agreed common program, that the most important factor is people's education, information, and awareness, that policies, plans, and programs are made and that their effects on the environment are evaluated, that all kinds of infrastructure and precautions are taken by monitoring the results and interactions, and that the environment is protected, with provisions to repair damage.

The largest challenge in implementing the Sustainable Development Goals is the gap between the indicators and the targets. One of the main reasons for this gap is the lack of availability of measurement tools and data [39]. Furthermore, progress on the agenda requires effective follow-up and regular reviews; this requires quality data and statistics to be available and comparable over time [40]. The findings obtained within the scope of this study showed that there are almost no studies on coastal areas and integrated coastal areas in the context of sustainability.

In the study, where all 102 countries with 17 Sustainable Development Goals were analyzed, Turkey (TUR), USA, Greece (GRC), India (IND), Iraq (IRQ), Togo (TGO), Angola (AGO), and Sudan (from a general perspective, SDN) were among the countries with the least success in achieving the Sustainable Development Goals [41]. Among the studies on integrated coastal areas in Turkey, the lack of data and gaps regarding the Sustainable Development Goals indicators are the most important deficiencies in the implementation

of these goals in Turkey. The problems of coastal management in Turkey are the "lack of plans", the "lack of data", the "lack of benefiting from science", the "confusion of authority", and the "lack of supervision and sanctions" [16]. In this study, the results obtained from the criteria determined as keywords within the examined framework of the UN Sustainable Development Goals did not constitute data for sustainable ICZM studies in Turkey. In all studies (109 studies) found using the keywords "climate action" AND "sustainable cities and communities" AND "life below water" AND "clean water and sanitation" AND "Turkey", it was found that the co-occurring words (the most recurring) were climate change, city, sustainable development, management, quality, and energy issues. Adaptation and risk reduction policies have not been developed against the negative effects of climate change.

Coasts are a country's gateway to the world; therefore, there should be a state policy on coasts. It should not be forgotten that the coast is one of the most important regions of a country. Integrated coastal zone management must use a process supported by scientific studies, aiming to manage the coast as a resource, to provide the maximum benefit with the minimum damage to the nature of this resource, so that future generations can benefit from this natural heritage. Turkey is a strategically important country, with approximately 3% of the world's coastal regions [42]. It covers a total area of 8333 km, 1701, 1441, 3484, and 1707 km of which belong to the Black, Marmara, Aegean, and Mediterranean Seas, respectively, with 28 cities located in the coastal region [43].

In this study, we examined Turkey's integrated coastal zone management in the context of the UN Sustainable Development Goals. There is a need for educated, goal-oriented, conscious, and knowledgeable managers, with a high understanding of the coast and the environment in order to protect, monitor, and evaluate environmental impacts and leave the natural values and cultural assets to future generations in a sustainable manner. Action should be taken in this respect without wasting time (Figure 17).

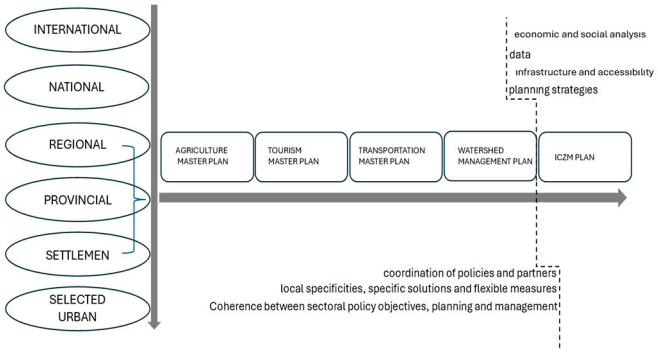

Figure 17. ICZM recommended within the planning policy of the Turkish planning system.

According to Taussik [44], ICZM should include management strategies "… in order to manage sectoral activities in a sustainable manner, within and between sectors; within and between units and levels of government, including internationally, in the international community; at varying temporal scales, across fields of science, and between science and management; through natural systems and across the land–sea divide; it must meet the needs of all stakeholder groups". The ICZM studies that we analyzed in Turkey were initiated by the Ministry of Environment, Urbanization and Climate Change, in the light of international agreements, with the financial support of international organizations and the responsibility of non-governmental organizations. When the results of these projects, carried out as pilot studies, i.e., the first examples of implementation in Turkey, were examined, it was seen that some of them were only at the research report and data collection stage, while, for some, a management plan had been prepared, and policies and strategies for implementation had been developed.

In addition, the purpose, scope, strategy, threats, and opportunities of 20 integrated coastal areas studies in Turkey, compiled from the *Strategic Environmental Assessment Reports*

published by the TR Ministry of Environment, Urbanization and Climate Change, General Directorate of Spatial Planning, were provided in this article. Classical political economy provides an analytical backbone of certain elements, including the important role of history, the necessity of an interdisciplinary approach, and the analytical primacy of social classes, which can be critical in enriching sustainable development studies [45].

We examined the implementation of the Sustainable Development Goals in Turkey in the context of their components and scope in the international ICZM literature, for example, the sustainability of ICZM projects. However, the studies carried out did not comply with the framework of the ICZM components accepted in the international ICZM literature. The problems must be identified correctly, alongside the methods to solve them, and the planning, management, and implementation stages must be carried out within the framework of holistic and interactive cooperation.

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References

1. Kay, R.; Alder, J. *Coastal Planning and Management*; CRC Press: Boca Raton, FL, USA, 2017.
2. Uçlar, S. Integrated Coastal Zone Management and Istanbul Example. Master's Thesis, ITU, Institute of Science and Technology, Istanbul, Turkey, 2012.
3. Ozhan, E.; Trumbic, I.; Skaricic, Z.; Prem, M. *Coastal Area Management in Turkey*; Priority Actions Programme Regional Activity Centre (PAP/RAC): Split, Croatia, 2005.
4. World commission on environment and development. *Our Common Future* **1987**, *17*, 1–91.
5. Bekçi, B. A Case Study on the İnterdependence Between the Coastal Ecosystem and Humankind. *Ocean. Coast. Manag.* **2021**, *210*, 105666. [CrossRef]
6. Gülbitti, M.; Özüduru, B.H. An Evaluation of Integrated Coastal Zone Management Processes in Relation to Strategic Spatial Planning Processes in Turkey. *J. Plan.* **2020**, *30*, 36–53.
7. Akkaya, M.A. Coastal Zone Management and Legal Regime in Turkey. Ph.D. Thesis, Institute of Marine Sciences and Management, Istanbul, Turkey, 2004.
8. Bahar, Ö. The Importance of Integrated Coastal Area Management and Marine Spatial Data Infrastructure for Turkey. Master's Thesis, KTÜ, Institute of Science and Technology, Trabzon, Turkey, 2007.
9. Available online: https://www.ecohz.com/standards-and-initiatives/sustainable-development-goals (accessed on 22 December 2023).
10. Available online: https://www.unep.org/ (accessed on 19 May 2024).
11. Klee, G.A. *The Coastal Environment: Toward Integrated Coastal and Marine Sanctuary Management*; Prentice Hall: Hoboken, NJ, USA, 1999; pp. 32–33.
12. Sesli, F.A.; Aydınoğlu, A.Ç.; Akyol, N. Management of Coastal Areas. *J. Chamb. Surv. Cadastre Eng.* **2003**, 757–768.
13. Sorensen, J. *Coastal Zone Management Techniques and Instruments*; Presented in Med Campus Certificate Program on Coastal Zone Management in the Mediterranean and Black Sea; Medcoast Instute: Ankara, Turkey, 1995.
14. E Costa, C.A.B.; Ensslin, L.; Cornêa, É.C.; Vansnick, J.C. Decision Support Systems in Action: Integrated Application in a Multicriteria Decision Aid Process. *Eur. J. Oper. Res.* **1999**, *113*, 315–335. [CrossRef]
15. GESAMP—Joint Group of Experts on The Scientific Aspects of Marine Environmental Protection. *The Contribution of Science to Integrated Coastal Management*; GESAMP Reports and Studies, No:61; GESAMP: London, UK, 1996.
16. Özügül, M.D.; Yerliyurt, B.; Seçilmişler, T. Evaluation of Integrated Coastal Zone Management Plan Practices in The Turkish Case. *IOP Conf. Ser. Mater. Sci. Eng.* **2017**, *245*, 062032. [CrossRef]
17. Meadows, D.H.; Meadows, D.L.; Randers, J. *Beyond the Limits: Confronting Global Collapse Envisioning a Sustainable Future*; Chelsea Green Publishing Company: Chelsea, VT, USA, 1992.
18. Granek, E.F.; Polasky, S.; Kappel, C.V.; Reed, D.J.; Stoms, D.M.; Koch, E.W.; Kennedy, C.J.; Cramer, L.A.; Hacker, S.D.; Barbier, E.B.; et al. Ecosystem Services as A Common Language for Coastal Ecosystem-Based Management. *Conserv. Biol.* **2010**, *24*, 207–216. [CrossRef]
19. Domínguez-Tejo, E.; Metternicht, G.; Johnston, E.; Hedge, L. Marine Spatial Planning Advancing the Ecosystem-Based Approach to Coastal Zone Management: A Review. *Mar. Policy* **2016**, *72*, 115–130. [CrossRef]

20. Kandrot, S.; Hayes, S.; Holloway, P. Applications of Uncrewed Aerial Vehicles (UAV) Technology to Support Integrated Coastal Zone Management and the UN Sustainable Development Goals at the Coast. *Estuar. Coast* **2021**, *45*, 1230–1249. [CrossRef]
21. Available online: https://international-partnerships.ec.europa.eu/policies/sustainable-development-goals_en (accessed on 22 December 2023).
22. Jiang, L.; Yang, T.; Wang, X.; Yu, J.; Liu, J.; Zhang, K. Research on Integrated Coastal Zone Management from Past to The Future: A Bibliometric Analysis. *Front. Mar. Sci.* **2023**, *10*, 1201811. [CrossRef]
23. UNstats. Global Indicator Framework for The Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development. A/RES/71/313E/CN.3/2018/2. 2018. Available online: https://www.sightsavers.org/policy-and-advocacy/global-goals/?gad_source=1&gclid=CjwKCAjwk8e1BhALEiwAc8MHiPAZUeFQkJN1NzhyRnntQZP7dcB6hAE9bcleirHnzJFKxGZVhKKJlRoCo7wQAvD_BwE (accessed on 1 March 2021).
24. SDG. Measuring Progress Towards the Sustainable Development Goals. 2018. Available online: https://sdg-tracker.org/ (accessed on 19 May 2024).
25. Barker, A. Strategic Environmental Assessment (SEA) as a Tool for Integration within Coastal Planning. *J. Coast. Res.* **2006**, *22*, 946–950. [CrossRef]
26. Uehara, T.; Niu, J.; Chen, X.C.; Ota, T.; Nakagami, K. A Sustainability Assessment Framework for Regional-Scale Integrated Coastal Zone Management (ICZM) Incorporating Inclusive Wealth, Satoumi, and Ecosystem Services Science. *Sustain. Sci.* **2016**, *11*, 801–812. [CrossRef]
27. *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean Annex II: List of Endangered or Threatened Species*; RAC/SPA: Tunisi, Turkey, 2012.
28. Official Gazette. Available online: https://www.resmigazete.gov.tr/ (accessed on 19 May 2024).
29. Önal, İ.; Nuray, A. Coastal Zone Management and Problems in Turkey. In Proceedings of the Turkey's Coastal and Marine Areas 1st National Conference, Ankara, Turkey, 24–27 June 1997; Turkish Coastal 97 Conference Proceedings Book. pp. 15–20.
30. Available online: https://mpgm.csb.gov.tr/sss/butunles-ik-kiyi-alanlari-yonetimi-ve-planlamasi (accessed on 19 May 2024).
31. Karimi, F.; Khalilpour, R. Evolution of Carbon Capture and Storage Research: Trends of International Collaborations and Knowledge Maps. *Int. J. Greenh. Gas Con.* **2015**, *37*, 362–376. [CrossRef]
32. Gallardo-Gallardo, E.; Nijs, S.; Dries, N.; Gallo, P. Towards an Understanding of Talent Management as a Phenomenon-Driven Field Using Bibliometric and Content Analysis. *Hum. Resour. Manag. -US* **2015**, *25*, 264–279. [CrossRef]
33. Huang, M.X.; Wang, Z.Z.; Chen, T. Analysis on the Theory and Practice of Industrial Symbiosis Based on Bibliometrics and Social Network Analysis. *J. Clean. Prod.* **2019**, *213*, 956–967. [CrossRef]
34. Feng, Y.T.; Zhu, Q.H.; Lai, K.H. Corporate Social Responsibility for Supply Chain Management: A Literature Review and Bibliometric Analysis. *J. Clean. Prod.* **2017**, *158*, 296–307. [CrossRef]
35. Zhang, S.; Mao, G.; Crittenden, J.; Liu, X.; Du, H. Groundwater Remediation from the Past to The Future: A Bibliometric Analysis. *Water Res.* **2017**, *119*, 114–125. [CrossRef]
36. Webber, Q.M.R.; Vander Wal, E. Trends and Perspectives on The Use of Animal Social Network Analysis in Behavioral Ecology: A Bibliometric Approach. *Anim. Behav.* **2019**, *149*, 77–87. [CrossRef]
37. Mao, G.Z.; Huang, N.; Chen, L.; Wang, H.M. Research on Biomass Energy and Environment from the Past to The Future: A Bibliometric Analysis. *Sci. Total Environ.* **2018**, *635*, 1081–1090. [CrossRef]
38. Orhan, C.C.; Guajardo, M. Analytics In Developing Countries: Methods, Applications, and the Impact On The UN Sustainable Development Goals. *Int. Trans. Oper. Res.* **2021**, *29*, 2041–2081. [CrossRef]
39. Fukuda-Parr, S.; McNeill, D. Knowledge and Politics in Setting and Measuring The SDGS: Introduction to Special Issue. *Glob. Policy* **2019**, *10*, 5–15. [CrossRef]
40. Cázarez-Grageda, K.; Zougbede, K. *National SDG Review: Data Challenges and Opportunities*; Partners for Review; Paris21: Paris, France, 2019.
41. Carlsen, L.; Bruggemann, R. The 17 United Nations' Sustainable Development Goals: A Status by 2020. *Int. J. Sustain. Dev. World Ecol.* **2022**, *29*, 219–229. [CrossRef]
42. Doğan, E.; Burak, S.; Akkaya, M.A. *Coasts of Türkiye (Description—Planning—Use)*, 1st ed.; Beta Publishing House: Istanbul, Turkey, 2005.
43. Akengin, H.; Dölek, İ.; Özdemir, Y. Seas and Coasts of Turkey. *Phys. Geogr. Türkiye* **2019**, 286–310.
44. Taussik, J. Collaborative Coastal Zone Management. *Period Biol.* **2000**, *102* (Suppl. S1), 193–198.
45. Manioudis, M.; Meramveliotakis, G. Broad strokes towards a grand theory in the analysis of sustainable development: A return to the classical political economy. *New Political Econ.* **2022**, *27*, 866–878. [CrossRef]