

Full Length Research Paper

Coastal legislation and administrative structure in Turkey

F. Ahmet Sesli^{1*}, Aziz Sisman¹ and A. Cagdas Aydinoglu²

¹Ondokuz Mayıs University, Engineering Faculty, Department of Geomatics Engineering, 55139 Kurupelit, Samsun, Turkey.

²Istanbul Technical University, Informatics Institute, 34469, Maslak, İstanbul, Turkey.

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Having coast on three distinct seas, Turkey is one of the rare countries in terms of its coastal length and natural, ecological and touristic richness. However, it is impossible to say that Turkey benefits this richness in the way Turkey adapts it to the future generation properly and consciously, due to the failures in legislation, frequently made changes and the incorrect and unconscious practices caused by the impairments in controls and sanctions. On considering the legislation concerning marine and coastal areas from past to present, it is seen that there are many laws, legislations, circulars and statutes etc. Related to coasts directly or indirectly, except for the Coastal Law and that various institutions and organizations take on task in the scope of the authorizations given by these laws. The deficiency of coordination among these institutions and organizations – though their goals correspond – leads to conflicts and impeditions especially in practice and in the authorities in control. This chaos of authority constitutes a big impediment for the management of coastal areas. Through this study, the coastal legislation and the tasks of the institutions and organizations related to seacoast were analyzed in general and the chaos of authority in the use and planning of coasts was presented. It was emphasized that the existing managerial and institutional approaches should be revised, practice oriented precautions be taken and policies of coastal management body be arranged.

Key words: Coast, coastal area, coastal legislation.

INTRODUCTION

Coastal areas are the most variable units among the various kinds of areas on earth. Coast is a unique environment in which atmosphere, hydrosphere and lithosphere contact with each other (Dellepiane et al., 2004; Alesheikh et al., 2004). The coasts are difficult places to manage, involving a dynamic natural system those have been increasingly settled and pres-surized by expanding socioeconomic systems (Turner, 2000). It is currently estimated that in excess of 37% of the global population (over 2.1 billion people) live in coastal areas (Vitousel and Money, 1997). Knowledge of coastline is the basis for overcoming coastal problems, measuring and characterizing land and water resources such as the area of the land and the perimeter of coast-line (Kuleli, 2009). In recent years, the coastal zone, probably more than any

other part of society has been exposed to pressure and processes of change. Among these changes are urbanization and new infrastructure, exploitation for recreation and tourism, acute nature and environmental problems, retreat of coastal occupations, reorganization of freight traffic between land and sea and changed functional demands and working conditions for harbours (Anker et al., 2004). Coastal areas are important natural habitats, which must be conserved (Williams, 1990). Human activities in these areas themselves may be fairly related to alternations of coastal lands (Ringrose et al., 1988; Jensen et al., 1995; Gerakis and Kalburtji, 1998; Chopra et al., 2001; Wang et al., 2006).

Turkey has a long coastline surrounded by the Mediterranean, Aegean and the Black Sea, which are 1707, 3484, 1701 km, respectively. Littoral of the land of Turkey is 8333 km in total with the islands (Burak et al., 2004).

There are totally 28 cities and about 220 municipalities in only coastal areas of Turkey. Of the Turkish population,

*Corresponding author. E-mail: fasesli@omu.edu.tr.

20% live in coastal cities and towns located wholly in coastal regions. The population of the cities in coastal areas has rapidly increased due to new policies and encouragements of tourism after 1985 (Ongan, 1997).

Especially during the last 25 - 30 years coastal areas of Turkey have been under an intensive restraint associated with a population press due to the internal and external touristic demands. In addition to this, construction of dams, settlements and greenhouses, urbanization on the filled up areas, the highways constructed to overcome the traffic problem and the other applications clearly show this intensive compulsion. Recently, it has become to be a unique tool in coastal and seaside areas management and planning (Sesli et al., 2009).

COASTAL LEGISLATION IN TURKEY

According to the Turkish Constitution Law, coasts and shore buffer zones are at the disposal of the government. In utilizing from the sea, lake and river coasts one must take care of first of all the Public Benefit (Durukan, 1997). According to the Turkish Civil Law, the places with no property and the goods in the benefit of the public are in no ones landownership and can never be a subject of a private landownership. According to the Coastal Law numbered 3621/3830, the detection of the shore border line is obligatory to be able to make plans and plan's implementation on the coast and shore buffer zones. But unfortunately, the usage out of public benefit is being seen because of the agitated in planning and the detection of shore border line not in the way or at the time it must be done. An extensive framework law for integrated coastal management is not available in Turkey now (Önal ve Nuray, 1997). Several pieces of legislation in existence, however do address various issues of coastal zone management (PAP/RAC, 2005).

Turkish Constitution Law (number: 2709, date: 1982)

Article 43 of the Turkish Constitution Law is devoted to coasts and shore buffer zones (Yalçın, 1982). This article states: "Coasts are under the jurisdiction and responsibility of the State. In benefiting from the sea, lake and river coasts and from shore buffer zones bordering sea and lake coasts, benefit to the public is primarily sought. The widths of coasts and shore buffer zones, in relation to purposes of use, possibilities and conditions for people to benefit from these places, are established by law".

Turkish Civil Law (number: 4721, date: 2001)

According to the article 715 of the Turkish Civil Law, the places with no property and the goods in the benefit of the public are in no ones landownership and can never be a subject of a private landownership (Türk Medeni Kanunu,

2002).

Municipality Law (number: 5393, date: 2005)

According to the article 79 of the Municipality Law, the places with no property and the goods in the benefit of the public are in no ones landownership and can never be a subject of a private landownership.

Cadastre Law (number: 3402, date: 1987)

According to the article 16/c of the Cadastre Law, the places with no property and the goods in the benefit of the public are in no ones landownership and can never be a subject of a private landownership (Özmen and Çorbali, 1991).

Coastal Law (number: 3621/3830, date: 1990/1992)

The purpose of Coastal Law is stated (Art 1) as "to set out the principles for protection of the sea, natural and artificial lakes and river coasts and the shore buffer zones, which are extensions of these places and are under their influence, by paying attention to their natural and cultural characteristics and for their utilisation towards the public interest and access for the benefit of society". As it is understood from this statement, the Coastal Law is not a comprehensive coastal management law. The Law gives definition as the "coastline" and the "coast". The "coastline" is defined as "the line along which water touches the land at the coasts of seas, natural or artificial lakes and rivers, excluding the inundation periods". The "coast" is the area between the coastline and the "shore border line", which is defined as "the natural limit of the sand beach, gravel beach, rock, boulder, marsh, wetland and similar areas, which are created by water motions in the direction of land starting from the coastline".

It is observed that, although the location of the shore border line is very important for managing development at the coast, its definition is far from clear and precise. The "shore buffer zone" is set to have a minimum of 100 m width horizontally, starting from the "shore border line", according to the amendment-dated 1992. Shore is "open to benefit of all, equally and freely" (Art. 6). It is illegal "to excavate the coast and to mine sand, gravel etc. At scales which may cause changes at the coast". It is forbidden to dump excavated soil, furnace ballast, debris, or wastes along the coast and the shore buffer zone. On the coast, subject to a land use planning permit; i) infra-structural and other facilities such as pier, port, harbour, berthing structure, quay, breakwater, bridge, seawall, lighthouse, boat lift, dryberthing and storage facility, salt-production plant, fishery installations, treatment plant and pumping station, which aim either shore protection or utilisation of the coast for the public interest; ii) buildings

and facilities like shipyards, ship dismantling plants, fishfarming-mariculture-facilities which can not be located inland due to the nature of the activity; can be built.

Along the first 50 m width of the shore buffer zone apart from those which can also be built on the coast as described above, no building of any kind is allowed. This area can only be planned and used “for pedestrian access, walking, relaxing, sightseeing and recreational purposes”. On the remaining part of the shore buffer zone (at least 50 m wide), roads, recreational and tourism facilities open to public use and public waste treatment plants can be built, subject to land use planning permit. Across the coast and the shore buffer zone, building of barriers that hinder free access, such as walls, fences, ditches, piles or similar, is prohibited. The Law describes the procedure for determining the shore border line for a specific location. Fixing of the shore border line is a necessary requirement prior to any kind of planning and development along the coast.

The Coastal Law outlines the rules and regulations for gaining land through reclamation and drainage. It rules that these activities, subject to a land use planning permit, can be carried out along sea, lake and river coasts only in cases where the public interest is served and under the proviso that sufficient attention and care are given to ecological characteristics. On land areas gained through reclamation and drainage, in addition to the facilities which may be located on the coast as described earlier, technical and social infrastructural facilities such as open car parks, recreational parks and children’s playgrounds can be built (PAP/RAC, 2005).

Harbours Law (number: 618, date: 1923)

Management, cleaning, deepening, enlargement, dredging, placement of buoys and protection and all related harbour works are the responsibility of the Government. The government agency, which carries out this responsibility, is the Ministry of Transport. “Without obtaining an official permit from the harbour master, pier, quay, lift, boat shelter, repair shop, factory, recreational facility, warehouse, shop and public sea baths cannot be constructed on sea coasts; debris, excavation material, ballast, wastes and similar substances can not be dumped in places which are prohibited by the harbour master” (Art. 4).

The relevant articles of the Environmental Law superseded this article. “At places in harbours, specified and restricted by the Government, it is forbidden to drill piles at the sea coast; to occupy sea area by reclamation; to build restaurants, boarding houses, or similar facilities; and to restrict the size of the harbour in any way” (Art. 5). Diving activities in coastal waters are subject to permits from the harbour master (Art. 6). Other items covered by the Harbour Law include: i) Removal of shipwrecks and other objects that disrupt the safety of navigation in harbour areas; ii) Regulations on ship sheltering and

loading and unloading in harbours (PAP/RAC, 2005).

The Environmental Law (number: 2872, date: 1983)

This Law administered by the Ministry of Environment and Forestry covers environmental issues generally. Some of the articles however, have strong implications for the coastal zone. Several by-laws that have been passed under the Environmental Law deal with issues such as air pollution, noise, water quality, solid waste management and Environmental Impact Assessment (EIA) and provide the rules and regulations for environmental management. Art. 8, entitled the “prohibition of pollution”, refers to by laws that cover various issues related to pollution of coastal waters. The By laws on “Water Pollution Control” classify lake waters according to their quality (Art. 9) and coastal and seawaters according to their dominant use (Art. 14). The By laws provide water quality criteria for lake (Art. 10) and seawater (Art. 15). Pollution control measures for lakes (Art. 21) and seas (Art. 23) are outlined.

The discharge of oil and oil products, including ballast water, into bodies of water is banned (Art. 24). Obligations and remedial measures to be taken at the time of an accidental oil spill are described. Rules and regulations concerning wastewater discharge into coastal waters are given in Art. 26 and 27. Quality standards for wastewater from municipalities (Art. 32) and from various industries (Art. 31) that can be discharged into water bodies are provided. Procedures and criteria for discharging sewage into sea environment by sea outfalls are outlined in detail (Art. from 33 to 42) (PAP/RAC, 2005).

The Fisheries Law (number: 1380, date:1971)

The scope of this law is the “protection, exploitation, production and control of living resources” (Art. 1). The responsible government unit is the Ministry of Agriculture and Rural Affairs. The Law provides detailed rules and regulations on the exploitation of living resources and the establishment of fisheries and mariculture facilities. It endeavours to protect production and exploitation areas by specifying that the opinion of the Ministry of Agriculture and Rural Affairs is sought as a prerequisite before any kind of activity is executed which may have a negative impact on the production and exploitation of living resources in certain areas. The Law prohibits the dumping of substances into inland waters and into the production areas in seas and their neighbouring areas, which may cause harm to living resources, or to people who catch or consume them, or to the vehicles, gears and tools that are used to catch them (PAP/RAC, 2005).

National Parks Law (number: 2873, date: 1983)

The purpose of this Law is the purpose of this law specified

as the “identification of areas which possess values of national and international importance, as national park, nature park, nature monument and nature protection area and the protection, enhancement and management of these areas without degrading their values and characteristics” (Art. 1). National parks are declared by a decree of the Council of Ministers, following a proposal of the Ministry of Environment and Forestry, which is supported by earlier reports from the Ministries of National Defence, Public Works and Settlements, Culture and Tourism and other ministries if deemed necessary (Art. 3). The Ministry of Environment and Forestry is responsible for the management of the areas covered by this Law. If these areas are included within the borders of a “tourism region, area or centre”, also declared by a decree of the Council of Ministers according to the Tourism Incentives Law, planning decisions for tourism investments are finalised after obtaining the consent of the Ministry of Environment and Forestry (Art. 4) (PAP/RAC, 2005).

Law on the Protection of Cultural and Natural Wealth (number: 2863, date: 1983)

The purpose of this Law is described as “to establish definitions for mobile and immobile cultural and natural wealth which needs protection, to regulate processes and activities to be carried out, to identify the institution and its duties, which will decide on principles and practices needed in this respect” (Art. 1). Cultural wealth is defined as “all mobile and immobile wealth, on land, below land or water, which reflects science, culture, religion and fine arts of historical periods”. On the other hand the natural wealth is defined as “values on land, below land or water, which belong to geological, prehistoric or historical periods, and which need to be protected because of their scarcity or their values and attractions”.

Finally, “site”, is defined as “being products of the civilisations from prehistoric periods to the present, city and city ruins which reflect social, economic, architectural and other characteristics of their periods; places where important historical activities were staged; and areas which need to be protected on the basis of their established nature characteristics” (Art. 3). Furthermore, “historical caves, rock shelters, special trees and forests and the like” are mentioned as examples of immobile natural wealth (Art. 6). The Law authorises “regional councils”, which are set up through appointment by the Ministry of Tourism and Culture, to identify the areas to be protected and to decide whether it is permissible to build in these areas or not. The authority for the enforcement of this Law is the Ministry of Tourism and Culture (Art. 10). This Law places more emphasis on cultural sites and wealth. The definitions of natural sites and wealth are unclear and incomplete. Some coastal areas have been designated as “natural sites” according to this Law and many areas as “historical sites”. These areas are identified on maps and restrictions for development are enforced (PAP/RAC, 2005).

Council of Ministers’ Decree for the Establishment OF an agency for Specially Protected Areas (number: 383, date: 1989)

This Decree aims to set up an Agency for Specially Protected Areas, which has duties and responsibilities “in specially protected areas already declared or yet to be declared, to take all kinds of measures to solve environmental problems and to protect environmental wealth, to establish principles of protection and utilisation in these areas, to prepare land use plans, to revise and approve plans of all scales and planning decisions” (Art. 1). The Agency was initially set up under the Prime Minister’s Office. It was transferred to the auspices of the Ministry of Environment and Forestry after its formation in August 1991. The central organisation of the Agency, which is located in Ankara, has two major departments. These are the Department of Planning and Project Implementation and The Department of Environmental Protection, Research and Investigation (Art. 11). The Agency can establish field offices (Art.5).

The Coastal Security Force Law (number: 2692, date: 1982)

This Law establishes a specialised unit in the framework of the armed forces, responsible to the Ministry of Domestic Affairs, for the handling of various matters of coastal security and protection. These include border patrol, measures against smuggling in general and the smuggling of cultural and historical wealth, the enforcement of the Fisheries Law, the safety of navigation and sea operations, the supervision of diving activities and the pollution caused by marine and air artefacts and by sea facilities, etc. (Art. 4) (PAP/RAC, 2005).

The Settlements Law (number: 3194, date: 1985)

The Settlements Law outlines the rules and regulations pertaining to the development of urban areas, as well as new settlements and residential development in rural and urban areas. The Law defines several levels of planning, including the “environmental profile plan” on the scale of 1/25000, framework land-use plan on the usual scale of 1/5000 and the detail land use plan on the scale of 1/1000. The Law describes the process of development of these plans and their approval procedure (Keleş, 1990). The law is not specific to the coastal zone, but has a general application. It is administered by Ministry of Reconstruction and Settlements (PAP/RAC, 2005).

The Tourism Incentives Law (number: 2634, date: 1982)

This law was enacted to promote, guide and regulate the

development of the tourism sector in Turkey, which has proliferated along the coastal areas. According to the Law, “tourism regions”, “tourism areas”, and “tourism centres” are declared by a decree of the Council of Ministers. Tourism areas are defined as, “areas inside or outside the tourism regions, where cultural and natural wealth is concentrated, the location and boundaries are decided and declared by a decree of the Council of Ministers, following the proposal of the Ministry” (Art. 3). In tourism areas and centres, land and forests belonging to the State are put at the disposal of the Ministry of Tourism and Culture.

Privately owned land in these areas can be taken over by the Ministry through expropriation (Art. 8). No appeal may be brought to the court against such a decision. The Ministry allocates and leases these areas to potential developers of tourism facilities (Art. 8). In addition to the planning, guiding and controlling of tourism development, the Law outlines rules and regulations governing foreign-flag yachts, navigation in Turkish coastal waters and wintering in Turkey (Art. 28). This Law provided numerous significant incentives to developers including the lease of land for 49 years, low interest loans, tax exemptions, provision of the infrastructural facilities, etc. It resulted in a boom in investments in tourism development projects during the mid and second half of the 1980s (PAP/RAC, 2005).

The Forestry Law (number: 6831, date: 1956)

This Law, under the title of “National Parks”, enforces the establishment of protected areas, through the article: “Forests and areas which are classified in the forest regime maybe declared, developed and managed as national parks, nature parks, nature monuments, nature protection areas and forest recreational areas for the purposes of promoting scientific uses, protecting the nature, contributing to the natural beauty of the country, satisfying the sport and recreational needs of the public and supporting tourism” (Art. 25, Amend. 1983). Furthermore, the management of coastal forests is carried out by the Ministry of Environment and Forestry, according to rules and regulations set forth by this Law, in the same way as the inland forests (PAP/RAC, 2005).

RELATIONS OF AUTHORITY AND RESPONSIBILITY IN THE USE OF COASTS

The institutions and organizations that obtained authorization under the present legislation and these legal regulations in Turkey are demonstrated in Table 1.

Conclusion

Many laws and legislations concerning coastal areas subsist in Turkey such as the Constitution Law at first, the

Civil Law, the Coastal Law, the Cadastre Law etc., and several institutions and organizations have authority in coastal areas within the scope of these laws and legislations. Facts like lack of determination of authority limits and coordination defects lead to chaos. The biggest impediment a comprehensive coastal areas management program faces in Turkey is that the authorities in the affairs of planning and development are distributed among various ministerial, central government institutions, provincial and municipal organizations, which caused the benefit oriented use of coastal regions.

Derived from daily needs rather than scientific data, these interpretations decrease the consistency of application. Coasts and coastal areas are under the domination and possession of the state, that coasts are protected and used for the public benefit have been the basic principles of coastal legislation since its initiation in Turkey. Despite this positive approach, even the proper use of the legislation has failed to protect the natural beauties and sources of coasts. The most distinct negativity, on analyzing the coastal legislation in general, is that it lacks a Coastal Management approach. Another negative aspect is that the legislation is also lacking in comprising sufficient matters concerning the preservation of environment.

SUGGESTIONS

- i. A new legislative arrangement should be made by abolishing the contradictions concerning laws and legislations.
- ii. Authorities and obligations should be stated clearly; an administrative structure that includes features like planning, program, control and provides interinstitutional cooperation and coordination and is authorized in only subjects related to coasts should be founded and perfectly supported by central government.
- iii. Citizens should be instructed about the importance and healthy use of coastal areas.
- iv. The coastal legislation should also include sea surface, marine transportation, activities that may be conducted both in sea and in sea bottom, and all activities concerning pollution and preservation of environment.
- v. The present structuring on coasts should be kept under control.
- vi. Municipalities that administer the use of coasts should reorganize coasts for the public benefit and protect coastal areas from the repression of personal properties and public institutes.
- vii. Necessary infrastructure and preparation works should be launched in order to adapt the works of Integrated Coastal Zone Management to the country.
- viii. Positive and negative experiences should during these works be contemplated by analyzing the implementations in the world.
- ix. Coastal areas should be separated into plan regions, considering their geographical, social, economical and physical conditions.

Table 1. Legal regulations concerning seacoasts and relevant institutions.

Subject	Legal Regulations	Relevant Institutions	Purpose and Latitude
Use of seacoasts development plan, Construction permit etc.	43 rd article of the constitution law (1982)	State of the Republic of Turkey	Domination and possession of the state on seacoasts, priority of public welfare in the use of coasts.
	Coastal Law (1990-1992)	Ministry of Public Works and Settlement Municipalities/ Governorships	Land use, planning, applications and control in the area of Coast and Coastline.
	Settlements Law (1985)	Ministry of Reconstruction and Settlements/Municipalities/ Governorships	Decisions on planning, application, construction and giving permission of use.
Permission, control and inspection about environment	Environmental Law (1983) / EIA Regulations (1993-1997)	Ministry of Environment and Forestry/ Municipalities/Governorships	Stating policies about environment, inventory, planning, contamination control and precautions, penal sanctions.
	Municipality Law (2005)	Municipalities	Taking environmental precautions directed at preserving the health of inhabitants, planning and control.
Protection of natural and cultural properties, Management of sensitive areas	Law on the Protection of Cultural and Natural Wealth (1983)	Ministry of Tourism and Culture/ Protection of natural and cultural properties /Region Regulations/ Municipalities/Governorships	Determination of the protected areas of cultural and natural properties, its classification aimed at being protected, planning and control.
	National Parks Law (1983)	Ministry of Environment and Forestry,/ Directorate of National Parks	Determination, planning, protection and operation of the areas suitable for the statute of natural park.
	Council of Ministers' Decree for the Establishment of an Agency for Specially Protected Areas (1989)	Council of Ministers/ Department of Planning and Project Implementation/ Department of Environmental Protection	Including the areas, having the risk of extinction under the development repressure of their rare flora and fauna properties in terms of environ-mental protection, into the statute of "specially protected environment area", their planning, application, permission of use and control.
Sectoral Adjustments	Tourism incentives law (1982) concerning the non-agricultural use of agricultural lands	General Directorate of Rural Services/ Ministry of Tourism and Culture	Classification of fertility of agricultural lands, determination of non agricultural areas Determination of tourism areas and centers, provision of infrastructure, permission for tourism investments and enterprises, their control and encouragement for business enterprises.
	Fisheries Law (1971)	Ministry of Agriculture & Rural Affairs / Development Bank	Classification of fertility of agricultural lands, determination of non agricultural areas.
Sectoral Adjustments	Aquaculture Law	General Directorate for Aquaculture/	Protection, production and control of aquaculture, determination of aquaculture production areas to be founded in inland water and seas
	Forestry Law (1956-1983)	Ministry of Environment and Forestry	Protection, development and management of forest areas, forestation and erosion control
Groundwork, Administrating, Security etc.	Harbour Law (1923)	Ministry of Transport/ Undersecretariat of Maritime Affairs	Management and control of harbours, arrangement and security of marine traffic
	Law of the foundation of Ministry of Transport	Ministry of Transport / General Directorate of State Harbors and Airports	Permission for marine structures
	The Coastal Security Force Law (1982)	Ministry of National Defence Coast Guard Command	Observation of all kinds of trafficking, marine accident, fishing and of the application of fishing bann, protection and security services for the matters such as contamination control etc.

Table 1. Contd.

Ministry of Transport	Law no. 3348 concerning the Organization of the Ministry of Transport and its obligations	Harbor Hydraulic Research Branch Office	Making field survey and measurements in the areas on which coastal and harbor structures be constructed, analysis of data gathered.
			Analysis of long shore current and sediment movements, determination of the problems likely to occur in seacoast depending on these movements, and suggesting solutions.
Ministry of Transport	Law no. 3348 concerning the Organization of the Ministry of Transport and its obligations		Determination of the problems occurring in existing coastal and harbor structures and suggesting solutions.
		General Directorate of DLH Construction	Guiding personnel in field surveys and laboratory services with a system that tasks are done properly and quickly, observing and controlling their works
Ministry of Transport	Law no. 3348 concerning the Organization of the Ministry of Transport and its obligations		Preparation of the plan and program of railways, harbors, shelters, related establishments, coastal defense facilities, coastal structures and establishments, taking necessary precautions and providing facility, conduct the tasks of research, reconnaissance survey, project and estimation, and having them conducted.
		Harbor Project Branch Office	Analyzing and certifying the projects of coastal structures considered to be made by public agencies and institutes (within the scope of the regulations concerning the application of the Coastal Law no. 3621)
		Shelter and Wharfage Branch Office	Development of existing harbors in the coasts of Turkey in future if necessary, making master plan study oriented at new harbor building or having it made.
		Estimate, Specification and Bidding Branch Office	Initiation of targets and policies concerning wharfs and shelters and other coastal structures in Turkey's scale, making master plan study or having it made for such structures that shall be needed in the future
Under secretariat of maritime affairs	Law concerning the foundation of the undersecretariat of maritime affairs and its obligations (21673)	Private Sector Coastal Structures Branch Office	Preparation of outline specifications relative to harbors, shelters, marinas, wharfs, coastal protection structures and other coastal structures made by the state; arrangement of bidding documents concerning survey tasks; execution of bidding tasks.
		Undersecretariat of maritime affairs / Ministry of Transport / Undersecretariat of maritime affairs	Analyzing the effects of public investments by providing the coordination of coastal structures to be made by private sector with public institutes (within the scope of the regulations concerning the application of the Coastal Law no. 3621), analyzing and certifying application projects.
Under secretariat of maritime affairs	Law concerning the foundation of the undersecretariat of maritime affairs and its obligations (21673)	Undersecretariat of maritime affairs / Ministry of Transport / Undersecretariat of maritime affairs	Determining the borders of seas, inland waters and harbors; stating coordinates related to it; giving, coordinating and controlling all official authorizations within these borders.

Table 1. Contd.

		General Directorate of Ship Construction and Shipyards	Determination, planning, allocation, control of and permission for shipyard locations in the scale of country coasts.
Ministry of Public Works and Settlement	Law concerning the foundation of Ministry of Public Works and Settlement and its obligations	General Directorate of Technical Research and Implementation – Directorate of Development Planning	Making development plans concerning coasts and coastal fill areas or have them made; presenting them to general directorate for approval.
			Mapping the areas that have coast; having them mapped; presenting them to general directorate for approval.
			Establishing principles, standards and methods concerning the equal use and protection of coasts for the public benefit.
			Accomplishment of plans together with relevant managements, and making specific projects concerning coastal management.
			Supporting shore edge determination commissions; analyzing the proposals of shore border lines and making necessary adjustments
		Sectoral Areas and Countryside Branch Office	Establishing principles, standards and methods concerning the equal use and protection of coasts for the public benefit
			Accomplishment of plans together with relevant managements, and making specific projects concerning coastal management.
			Analysing the proposal of development plans concerning coasts and coastal fill areas; having development plans made; presenting them to general directorate for approval
		Coastal Analysis and Evaluation Branch Office	Mapping the areas that have coast; having them mapped; presenting them to general directorate for approval.
			Making researches for more rational and proper use of coasts and coastlines for the public benefit.
			Supporting shore edge determination commissions; analyzing the proposals of shore border lines and making necessary adjustments.

x. Regions should be organized in accordance with their necessities and for the public benefit and plans should be made taking these conditions into consideration.

xi. Coasts, coastlines and areas of coastal use are directly concerned with the nature, geographical position and topographic structure of coasts. Regional adaptations should be made in the legislation related to coasts.

xii. Necessary infrastructure and preparation works should be launched in order to adapt the works of integrated Coastal Zone Management, taking up a more ranked position at international profile in the last ten years, to the country.

REFERENCES

- Alesheikh AA, Ghorbanali A, Talebzadeh A (2004). Generation the coastline change map for Urmia Lake by TM and ETM+ imagery, Map Asia Conference, Beijing, China.
- Anker HT, Nellemann V, Sverdrup-Jensen S (2004). Coastal zone management in Denmark: ways and means for further integration. *Ocean and Coastal Management* 47: 495-513.
- Burak S, Doğan E, Gazioglu C (2004). Impact of urbanization and tourism on coastal environment. *Ocean and Coastal Management*, 47: 515-527.
- Chopra R, Verma VK, Sharma PK (2001). Mapping, monitoring and conservation of Harike wetland ecosystem, Punjab, India, through remote sensing. *Int. J. Remote Sensing* 1: 89-98.
- Dellepiane S, De Laurentiis R, Giordano F (2004). Coastline extraction

- from SAR images and a method for the evaluation of coastline precision. *Pattern Recognition Letter* 25: 1461-1470.
- Durukan M (1997). Kıyı Alanları Konusunda Ulusal Mevzuat ve İdari Yapı, Türkiye'nin Kıyı ve Deniz Alanları 1.Ulusal Konferansı, Ankara, Bildiriler Kitabı pp. 59-68.
- Gerakis A, Kalburtji K (1998). Agricultural activities affecting the functions and values of Ramsar wetland sites of Greece. *Agric. Ecosys. Environ.* 70: 119-128.
- Jensen JR, Rutchey K, Koch MS, Narumalani S (1995). Inland wetland change detection in the Everglades water conservation area using a time series of normalized remotely sensed data. *Photogrammetric Engineering and Remote Sensing* 61: 199-209.
- Keleş R (1990). Kentleşme Politikası, İmge Kitabevi Yayınları, Yayın no:13, Özkan Matbaacılık Sanayii, Ankara.
- Kuleli T (2009). Quantitative Analysis of Shoreline Changes at the Mediterranean Coast in Turkey, *Environmental Monitoring and Assessment*, ISSN: 0167-6369 (Print) 1573-2959 (Online), Springer Link Date: Tuesday, June 30, DOI: 10.1007/s10661-009-1057-8.
- Önal I, ve Nuray A (1997). Türkiye' de Kıyı Alanları Yönetimi ve Sorunları, Türkiye'nin Kıyı ve Deniz Alanları 1.Ulusal Konferansı, Ankara, Bildiriler Kitabı pp. 15-20.
- Ongan SE (1997). TR, Prime ministry, state planning organization, national environmental action plan, land use and coastal zone management, Ankara.
- Özmen I, ve Çorbacı H (1991). 3402 Sayılı Kadastro Kanununun Şerhi, Genişletilmiş 2. Baskı, Adalet Matbaacılık, Ankara.
- PAP/RAC: Coastal Area Management in Turkey (2005). Priority Actions Programme Regional Activity Centre, Split, ISBN 953-6429-54-3.
- Ringrose S, Matheson W, Boyle T (1988). Differentiation of ecological zones in the Okavango Delta, Bostwana, by classification and contextual analyses of Landsat MSS data. *Photogrammetric Engineering and Remote Sensing* 54: 601-608.
- Sesli FA, Karslı F, Colkesen I, Akyol N (2009). Monitoring the Changing Position of Coastlines using Aerial and Satellite Image Data: an Example from the Eastern Coast of Trabzon, Turkey, *Environmental Monitoring and Assessment* 153 (1-4): 391-403.
- Türk Medeni Kanunu (2002). Kanun Metinleri Dizisi 07, Seçkin Yayınevi, Ankara, ISBN 975-347-422-9.
- Turner RK (2000). Integrating Natural and Socioeconomic Science in Coastal Management. *J. Marine Systems*, doi:10.1016/S0924-7963(00)00033-6, 25: 447-460.
- Vitousel PM, Mooney HA (1997). Estimates of coastal populations. *Sci.* 278: 211-1212.
- Wang Z, Zhang B, Zhang S, Li X, Liu D, Song K, Li J, Li F, Duan H (2006). Changes of land use and of ecosystem service values in Sanjiang Plain, Northeast China. *Environmental Monitoring and Assessment* 112: 69-91.
- Williams THL (1990). Aerial Photograph Coverage of Antigua and Barbuda, West Indies p. 28.
- Yalçın A (1982). TC, Anayasası, İnkılap Kanunları, Bayrak Kanunu, Geçit Kitabevi, İstanbul.