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# The problems and resolution approaches to land management in the coastal and maritime zones of Turkey



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### ABSTRACT

Today, like in terrestrial zones, the determination and registration of tenure in coastal and maritime zones appear to be mandatory not only from legal, social and economic perspective but also for sustainable environmental administration. In this context, there is a need to redefine and reconstruct these zones. In this study, the institutions and corporations operating in coastal and maritime zones in Turkey and current laws were established and a matrix was formed between the operations and the institutions operating in coastal and maritime zones to evaluate the current structure as a whole. Furthermore, with the objective of determining the problems seen in coastal and maritime zones, some survey and interview studies were conducted concerning the institutions and corporations operating in this field and the current situation was displayed. As a consequence of the study, it was found that the current structures in coastal and maritime zones were not adequate in terms of legal, institutional and technical points. The need for an integrated coastal and maritime zone administration was stated and some suggestions with regard to land management were put forward by developing new approaches.

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# 1. Introduction

(C. Bivik).

The value of coastal and marine spaces in the welfare of countries, communities and regions has considerably increased. These sites provide social, natural and economic functions to the increasing life quality (Sesli and Çölkesen, 2007). The marine spaces are also subject to the pressure as in the terrestrial lands and it has become widespread that these sites are economically valuable (Widodo, 2003). The developments in the mining technology have increased the trade of mineral sources mining. Therefore, the pressures on the accuracy of nautical surface maps have also increased. The consumed marine sources and the increase in people-driven pollution have enabled to plan coastal sites comprehensively and to impose legal sanctions. As a result, the need for digital coastal and sea borders defined with (Fowler and Treml, 2001).

All the countries need to develop healthy coastal and maritime policies which consider socio-cultural structures, administrative forms and priorities and extensive information for the effective administration of coastal and maritime zones in the sustainable development framework. Moreover, protecting the sources the system should meet the needs of usage, development and preservation which sometimes contradict with each other or should be emphasized more (Barrett, 1989; Belfiore, 2003).

Cadastre and spatial data are the structures facilitating the decision mechanism of sustainable development areas in the terrestrial surrounding. Such kinds of initiatives accelerate effective decision-making process (Rajabifard, 2007). National benefits do not end on the point where land and water merge. In the world the natural sources are increasingly destroyed, this reality also paves the way for the economic, social and environmental problems in the coastal zone management (Rajabifard, 2007).

The studies conducted for the coastal and maritime zone management have shown that there is a need for a holistic approach. Thus, an integrated administrative system can be formed by providing land, coastal and maritime integration (Strain et al., 2006). Integrated Coastal Zone Management (ICZM) is regarded as useful by the literature (Taljaard et al., 2012; Bower and Turner, 1998; Cicin-Sain, 1993), and seen as a balanced planning and administrative process (Celliers et al., 2015; Christie et al., 2005). Coastal areas should be monitored at regular intervals during the

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administrative process and assembly areas where there is intense pressure should be followed (Karsli et al., 2011). The detection of proper areas is significant in terms of the preservation of present fertile areas or for the determination of other potentially fertile areas (Güneroğlu, 2002).

According to the current legal system in Turkey, property right or cadastral border measurements are applied until shore edge line and as there is not any property right until the baseline from shore edge line, any cadastral measurements are not made. Hence, these areas are out of registry. However, that these areas are the subject of private property (except for the legal regulations) can not be considered in our country as it is in many countries (Nişancı, 2012). In other words, necessary limitation measurements should be made and property should be owned by the state. As a result, some rights such as servitude and renting will be carried out only through parcels as stated in the legal statute. In this context, specific land registers can be established as it is in pasture law. Also, our coastal law considers coastal area only as a terrestrial area and any legal regulations about maritime aspect have not been made. In the determination of coastal zone, 100 m area was specified in terrestrial direction, any border was not specified in coastal direction. This problem arises significantly in the bulkhead line. Today, while there are zones that can be constructed as maritime park in the seafloor, there are not any legal regulations related to these zones (Nişancı et al., 2011; Akkaya,

In this study, current situation analysis was made in coastal and maritime zone management in the institutional, technical and legal framework and some findings related to the research were put forth. In addition, solution approaches for the coastal and maritime zone management were developed and some suggestions were presented.

# 2. Methods

First, the current legal and institutional structure with regard to the use of coastal maritime zone was examined. In this direction, there are some regulations related to coastal and maritime zones chiefly in the Constitution, Civil Law, Statutory Decree, Bylaw, code, direction and circular (Cete, 2008). The scope of the study was limited with law, statutory decree and statutes. The amendments made in time were not evaluated as separate regulations. Benefitting from the laws and "State Organisational Database", the institutions operating in coastal and maritime zone were detected. Then, some questionnaires and interviews were conducted with the aim of taking the considerations of the staff and administrators working in these institutions operating in coastal and maritime zones. In this direction, a semi-structured interview form was prepared for these matters: (1) Personal information about sample group, (2) Coastal and maritime zone activities and tenures, (3) Use of spatial knowledge, (4) Data access problems, (5) Coastal and maritime zone administration, (6) A questionnaire form composed of solution, suggestion and comment sections, (1) The activities carried out by institutions related to coastal and maritime zones, (2) Interinstitutional cooperation levels, (3) The problems experienced during the application, (4) Individuals, institution administrators and solution proposals related to the problems of employees, (5) Use policy of coastal and maritime zones in Turkey. Then, an interview form was applied to ninety people from seventeen different occupational groups operating in coastal and maritime zones and a survey was applied to thirty-four people working in the coastal and maritime zone institutions operating in the provincial, regional and general directorates. The findings of these interviews and questionnaires were summarized in subtitles.

#### 3. Results

3.1. The institutions conducting activities and legal regulations in coastal and maritime zones in Turkey

The studies related to coastal and maritime zones are provided with legal regulations made in this field. Statute is the combination of rules containing regulations necessary for the realization of the studies related to this field. Therefore, the relevant legislation gives significant clues about the applicability of management system and coastal and maritime zone activities.

Within the framework of this study, it was found that there are forty-three laws, statutory decrees and regulations. The laws of constitution determining the authority and responsibilities were not included in the study. When all these laws are taken into consideration, the number will go up.

The execution of relevant statutes regarding coastal and maritime zone administration which determines the coastal and maritime policies is carried out by the institutions operating in this field. Therefore, the administration and effectiveness of coastal and maritime zone management depend on both the relevant statute and the effectiveness of institutional structuring.

In this context in Turkey, there are fifty-three institutions operating in coastal and maritime zones. These institutions operate as "Main Service Units", "Subsidiaries" or "Relevant Organisations" which depend on ten separate ministries and Prime Ministry. The majority of these organisations, thirty-eight of which are constructed as general directorates, are composed of provincial organisation, regional and provincial directorates.

After the determination of these institutions operating in coastal and maritime zones, the analyses of the activities carried out by these institutions were made. The fundamental sources used in this analysis are the findings obtained from questionnaires and interviews, and also laws explaining the duties and responsibilities of related institutions. With the evaluation of related statutes, questionnaires and interviews, "The matrix of institutions and Coastal and Maritime Zone activities matrix" seen in Table 1 was formed with the aim of having a holistic view about the effectiveness of this structure and by which institutions coastal and maritime zone activities were conducted. In the matrix, it is seen that the similar operations were carried out by various institutions in Turkey.

## 3.2. Interinstitutional cooperation and tenure concept

The same or similar activities related to coastal and maritime zones have been conducted by numerous institutions. In a questionnaire applied to employees working (Fig. 1) in twenty-four different institutions (Table 2), it was found that the rates of their institutions' operations related to coastal and maritime zones are 84%. Furthermore, the answers taken from the employees also support these rates. This rate shows that similar operations can be conducted by different institutions. In order to eliminate such kinds of repetitions, interinstitutional cooperation has gained importance.

During the interviews, many findings were obtained about the cooperation. For example, the attendees of the interview stated that cooperation was considerably fulfilled in the works which require the operations to be carried out within the permission of another institution and that the regulations' being insufficient in the sharing of available data and experience caused the cooperations to be subject to the goodwills of employees. Accordingly, it is seen in the questionnaire that interinstitutional obstacles take an important place among the data sharing problems. In the survey study, 84% of the sample group stated that they had difficulty finding data, 69% of them stated the maps were not updated, 55% stated they had

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