

Environmental Impact Assessment (EIA) in Protected Areas of Turkey and Sustainability Dilemma: The Case of National Parks

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Abstract. The EIA Directive was entered into force in 1993 and has been changed several times in Turkey. This study presents a conceptual perspective on the EIA practices in protected areas of Turkey. The study emphasizes the importance of the EIA process in all protected areas, particularly in the areas of national parks. The study also draws attention to the importance of the elimination of political, economic, sectoral pressures on the EIA process in Turkey. In this context, it is required to generate an active and balanced protection usage against encountered difficulties during environmental impact assessment (EIA) of either protected areas or investments near these areas. The aim of this study is start a debate on the relationship between protected areas and the EIA process.

Keywords. Protected Areas, EIA, National Parks, Sustainability, Turkey.

1. Introduction

The regulation of Environmental Impact Assessment (EIA) gives responsibilities to the corporations, installations and enterprises by law to prepare an “EIA Report” for the each activities that can cause environmental problems. Thus, it can be said that effective and efficient EIA process in protected areas is very important in terms of outstanding issues such as conservation of biodiversity and climate change. Some investment and development projects performed all owedly in protected areas under the scope of the national legislation and the existing legal procedure and around the areas have potentials to cause harms on some of the resource assets in protected areas and biological diversity. For this reason, EIA should include alternative project designs and alternative of location in order to reducing the harmful effects on protected areas. In this context, this study analyzes the relationship between protected areas and the EIA process in Turkey.

“A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” by IUCN. Protected areas – national parks, wilderness areas, community conserved areas, nature reserves and so on – are a mainstay of biodiversity conservation, while also contributing to people’s livelihoods, particularly at the local level [1] [2].

Protected areas store 15 percent of global terrestrial carbon stock, assist in reducing deforestation, habitat and species loss, and support the livelihoods of over one billion people. Since 1990, protected areas have increased in number by 58 percent and in their extent by 48 percent. However, many protected areas face management, governance and financial challenges and half of the world’s most important sites for biodiversity are still unprotected [3] [4]. National Parks also play an important role as natural laboratories and locations for developing ecological baselines against which data from more ‘disturbed’ areas can be compared [5] [6]. According to the UNEP World Conservation Monitoring Center, the protected area of about 200,000 covers around 14.6 % of the world's land surface (excluding Antarctica). This ratio is 2.8 % in

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marine protected areas [7]. This has risen from only 1,000 protected areas just 50 years ago. Only about 30% of these protected areas are effectively managed.

National parks are first priority within the IUCN's protected areas of the World. National Park is a concept which first emerged in the USA to conserve open space and scenic beauty, but was substantially influenced by European thought regarding access to the countryside and the conservation of its wildlife. In 1872 the world's first national park was founded at Yellowstone in the USA [8] [9]. National park designation in Turkey initially started in 1956 with the "Forest Law." The Yozgat Pine Grove National Park was established as the country's first national park in 1958. Nearly 30 years later in 1983 the "National Parks Law" was adopted to establish the criteria for the selection and designation of National Parks and 40 parks have been designated to date with a total area of 848,119 hectares. In Turkey, the *protected areas* are administered by the Directorate General of Nature Conservation and National Parks of the Ministry of Forestry and Water Affairs.

In Turkey, many protected areas which have been declared as, in accordance with the legal process, are under the risk. Such problems as illegal hunting, construction, tourism and recreation activities, illegal logging, mining, uncontrolled fires, toxic pollution and climate change whose effects spread over time are creating risk for the protected areas. Beside these problems, within the scope of the existing legal process and national legislation, some investment and development projects which are being carried out in some of the protected areas and around them, have the potential to harm the biodiversity and the resource assets in those protected areas.

The size of Turkey's terrestrial protected areas is 7,24 % of the country's surface. To ensure the sustainability of protected areas, EIA has a very important function. Environmental Impact Assessment (EIA), "... is a basic tool to decide whether it is appropriate in terms of biophysical, social and other aspects and to specify, predict, evaluate and eliminate the possible negative impacts before giving important decisions and before the start of the project's implementation" [10]. This study presents a conceptual perspective on the EIA practices in protected areas of Turkey. The study emphasizes the importance of the EIA process in all protected areas, particularly in the areas of national parks.

2. Protected Areas of Turkey and EIA Applications

Turkey's biodiversity values are in different protected area status and are protected by law. Some part of this conservation status have been established on the basis of international agreements and some established according to the national legislation. According to the results of "Turkey's Protected Areas Information System Project 2012", the size of Turkey's terrestrial protected areas has been identified as 5 million 647 thousand 568 hectares. This field's ratio to the country's surface area is 7,24 % [11] [12]. From the protected areas, long-term development plans for the national parks and nature parks; management plans are made for nature protection areas, natural monuments, wildlife protection and development areas, Ramsar sites, wetlands and biosphere reserve areas. There are eleven types of nationally protected areas in Turkey. All these areas are shown in the following Table 1 [11].

Table 1: Protected Areas of Turkey (February 2014)

Type of Protected Area	Value of Protected Area	Number
National Park	National	40
Nature Reserve Area	National	31
Nature Parks	National	184
Nature Monuments	National	107
Wild Life Reserve Areas	National	80
Conservation Forest	National	58
Nature Sites	National	1273
Specially Protected Areas	Regional	15
Ramsar Sites	Global	14
Biosphere Reserve	Global	1
World Heritage Site	Global	11

About the protected areas within the scope of the EIA, administrative and technical procedures and principles to be observed and modified in the process of Directive on Environmental Impact Assessment, and have been published in the Official Gazette with the date of 10/03/2013 and Number 28784 [13] [14].

In the context of “a” item titled as areas necessary to protect according to the regulations and included in the EIA Directive Annex V Sensitive Areas List, the defined and registered areas such as the National Parks, Nature Parks, Natural Monuments and Nature Conservation Areas and Cultural Heritage under "c" Article, Natural Heritage Sit are defined as protected areas. In ensuring the conservation of nature and sustainability, in the context of EIA Regulations under the 2872 Act, in order to determine the environmental impacts of the proposed project, an EIA report is prepared.

In the prevention of damage that implementation of projects under the EIA Directive might have on natural resources, a Project Identification File, which requires the disclosure of the projects the environmental effects in the way it includes the area features and interaction, within the framework of general format of Annex III and Annex-IV selecting qualifying criteria, has to be prepared [13]. To determine the potential impacts in the context of the project, according to the characteristics of the area, flora, fauna, such as the availability, in the field identification of species diversity and endemic species, field of biological, geological, geomorphological formations in terms of assets, to investigate the presence of natural resources such as landscape value, which remain in wetlands, archaeological finds, historical and cultural significance, forest areas and special protection areas and so on; an investigation as a whole is performed [13].

In investments in Turkey, permitting and investment process vary depending on the status of protected areas and the responsible institution. Any activity within the boundaries of the national park under the responsibility of Ministry of Forestry and Water Affairs, General Directorate of Nature Conservation and National Parks is not allowed. In wildlife habitat protected by Hunting Act, in the fields in which management plans are made, in the region designated as sustainable areas, depending on the nature of the investment, investment may be allowed by the General Directorate of Nature Conservation and National Parks. The situation is almost the same as in Wetlands, it is subject to general manager’s permission. Especially in energy investments, Ecosystem Assessment Reports prepared by experts are necessary in the permitting process. For the Natural Conservation and Special Protection Zones, the responsibility was transferred to the Ministry of Environment and Urbanization.

Assessment of the Technical Basis of Nature Site Areas has been established by the Ministry of Environment and Urban Planning, in recent years, by assessing the current status of especially nature site areas, studies have been initiated in order to reveal science-based methods related to the identification of nature site categories for the existing and new nature site areas. The status of the activities to be carried out in other sites depends on the decision to be made by the Protection Board created by the Ministry of Culture and Tourism, Cultural Heritage and Museums General Directorate.

Evaluated as part of the EIA Directive for activities and projects, by prohibiting construction in natural assets and protected areas subject to Sensitive Areas List, importance is given to the compliance with the provisions of the EIA regulation in the plans and activities planned for the protection of cultural and natural heritage, ecological environment containing endemic species for the country, in fields showing geological and geomorphological formations, and for the species that has been or may be endangered in these areas. However, in practice, by the year -2014, in total 3610 of the provisions, formed by energy projects in majority, of the EIA Decision (especially hydroelectric power plants) - there is still controversy about meeting all the requirements of EIA Regulations. Industrial, political and economic pressures affect EIA reports. However, the positive aspects of the EIA report is reduced to inactive by insufficient legal processes and uncontrolled bureaucracy, non-deterrent penalties.

3. National Parks and EIA Approaches

National Parks represent the beginning of areal nature conservation studies in Turkey as in the whole world. National park notion has found an implementation site and Yozgat Pine Grove was announced as the first national park in Turkey in 1958. By the Law no. 2873 which has gone in effect in 1983, national parks were legally defined and the principles concerning selection, identification, conservation, development and management of national parks, natural parks, nature monuments and nature conservation sites that have national and international values [15] [16] [17]. At present, (as of 2014), 40 National Parks covering **848 119** ha (2.095.748 acres) have been reserved [18].

Most of the protected areas remain within the scope of duties and responsibilities of Ministry of Forestry and Water Affairs, General Directorate of Nature Conservation and National Parks (GDNCNP) with the Legislative Decree No. 645 dated 06.29.2011. Carrying out the work needed to protect natural resource values of the national park, its ecological and biological richness and diversity and to carry it to the future are among the work of GDNCNP. Currently, long-term development plan is made for the 35 out of the 40 national parks which are under the responsibility of the GDNCNP.

The EIA has been come into existence as one of the most important preventing approach for the solutions of environmental problems and it has also been accepted all over the developed countries. Environmental threats in the assessment of national parks, pressures and threats of the highest dams and hydroelectric power plants, transport networks, tourism, pollution, waste and construction that has been demonstrated in some studies. According to the results obtained from studies; among the national parks, areas where the highest pressure and threats are; Olympos Mountains, Munzur Mountains, Lake Beyşehir and Kackar (Aba) Mountains. Construction (residential buildings and settlements) threat is a factor especially prominent in recent years. The Bey Mountains Coast National Park, the Munzur Mountain Valley and Kackar (Aba) Mountains are the examples of national parks that are faced with the pressure of construction [19].

In Turkey, there are two main aspects of environmental threats for the national parks:

- the national parks' being seen as "developments point" because of economic, social and cultural requirements,
- the inconsistencies of political approach through national parks not being able to coordinate them.

National park areas seen as a potential in economic, social and cultural activities has led to landscaping and habitat fragmentation, the changing of landscape composition and an increase in density of land use in these areas. National parks' being assessed as a potential source of economic value is further strengthened by "sustainability" concept which is common on a global scale. Therefore, one of the the source of problems in a national park is sustainability approach.

Sustainability approach envisages the use of "natural heritage" in conservation priority. However, investment projects produced in recent years are carried out on the basis of more sustainable development. Sustainability is transformed into the production process of development-oriented policy. That approach, has led to an increase in harmful effects of recreation and tourism activities made in national parks.

For instance; in the Boundary Waters Canoe Area in Minnesota, as a result of the use of the camping area, in a single season, 80% of the lower vegetation cover has been destroyed [20].

With some of the draft laws continuing to be worked over in Turkey, the existence of a political approach supporting the building up of the national park area and increasing tourism activities is a topic. Sometimes environmentalists, civil society, citizens and their associations react to this approach.

The various changes to environmental laws that have in the past two years removed remaining environmental obstacles to mining, dams, housing and other construction projects, leaving Turkey's protected areas practically defenceless in the face of such policies. With the Regulation Amending the Regulation on National Parks by the Department of Forestry and Water Affairs (March 18, 2014) without a Long Term Development Plan, the way of investment in the National Park area has been paved [21]. In 1986, the first regulation in Article 5 of the National Parks Regulation has been amended [22]. The following statement is added to Article 5: "for facilities showing the urgency of making in terms of drinking water supply, for facilities that are indispensable in terms of public interest and for facilities which are an absolute necessity Long Term Development Plan is not required. After obtaining the opinion of the relevant institutions this properties are processed in the Long Term Development Plan." However according to 4th Article of the Law on National Parks with the number of 2873, without a Long Term Development Plan, investment in a national park or construction is not allowed. New structures to be made can be built by preparing a development plan.

Legislative changes of this qualification are politicising the EIA process which necessitates analyzing the environmental impact of the projects in national parks. Furthermore, they lead to the projects' being exempt from the requirements of the EIA. Using conservation-based development of ecological planning approach to minimize environmental pressures on national parks is of great importance in terms of the sustainability of this sensitive area. EIA is an important tool in this respect. Via EIA, the ecological effects of the proposed project or activity are being reviewed and approval is not given for the implementation of projects involving high environmental threats.

National parks in Turkey, since the first EIA Regulation in 1993, has taken place in the context of EIA. National parks which are located in the current EIA Directive Annex V List of Sensitive Areas dated 10/03/2013 are defined as areas to be protected in accordance with national and international legislation [13] [14].

It is often difficult to get permission for the projects which will be made in the areas protected by national laws or international agreements (especially the dam projects). For granting of such permits, EIA committee established by the Ministry of Environment and Urbanization, including the members of environmental protection officials should apply to national legislation such as the Fisheries Act, National Parks Law reported in the EIA Directive Annex VI, Law on Protection of Cultural and Natural Heritage. In addition, despite being outside the boundaries of the national park, for dam projects affecting this area, the provisions of the legislation also applies. Although some national parks are within or affecting these parks, some dam projects still may be exempted from EIA process. However, such cases that local people, NGOs, trade associations and environmental organizations concerned in by a court to cancel their projects and ensure the preparation of EIA Report are available. (For example, Storm Valley). Besides there are good examples overseeing the values of the national parks.

Among the 75 EIA report Published between December 1993 and March 2010, as Köprüçay Beskonak Dam is planned to be constructed on the River in Canyonlands National Park, positive EIA decision by the Ministry of Environment and Urbanization was not given. The EIA report's not being approved has led to the cancellation of the project [23].

With the decision-making and planning processes that are put forward for the protected areas in Turkey, it is necessary to ensure coordination of investment at various sectors such as energy and mining. Today the risk analysis regarding investment are being made and the protected areas are tried to be avoided in the selection. It is necessary for the protected areas and the investments nearby to establish an effective usage and conservation plan against the problems encountered in the EIA process.

4. Conclusion and Suggestions

It is necessary to solve the following issues related to implementation EIA in protected areas of Turkey: (1) Legal loopholes in existing laws. The positive aspects of the EIA report is reduced to inactive by insufficient legal processes and uncontrolled bureaucracy, non-deterrent penalties. (2) Some dam projects affecting the biological diversity of protected areas still may exempted from the requirements of the EIA process, (3) Limited implementation of public participation in the EIA process, (4) Politicization of the EIA process which necessitates analyzing the environmental impact of the projects in national parks and all protected areas.

Turkey, since the first EIA Directive in 1993, has experienced a significant and persistent change process to upgrade the EIA Regulations the level of the European Union Standards. The last Directive was come into force in 2013. Constantly revised the EIA Directive has been developed by the relevant Ministry and have tried to harmonize with European Union (EU) EIA Directive dated 1985 (85/337/EEC) and attachments. The position and role of EIA have been strengthened during this process. However, Turkey still needs to take more steps on the environmental aspects of protected areas. Specifically in recent years, it is observed that the EIA provisions have not fully implemented in "energy investments." Hydroelectric Power Plant or Wind Power Plant should not be done in protected areas such as national park, nature park or wildlife habitat and the strict conservation areas in accordance with management plan. It should not be

allowed this kind of energy investments in the sensitive locations of strict conservation areas which are buffer zones.

EIA must be carried out very well in order to ensure the reliability about effects of major development projects in protected areas. Normally, the responsibility for such projects should be on the people proposing project. EIA, if necessary, should include alternative project design to reduce the impacts on protected areas. The provisions of the EIA Directive may be ineffectual with amendments in different laws. Harmonization of sectoral policies and related laws is important to the effective conservation and management of protected areas. New arrangements can be made to reduce the harmful effects on protected areas, identification of inconsistencies and removal of perverse incentives in sectoral policies. These arrangements should be capable of containing positive incentives in terms of “nature conservation”. It is necessary to develop databases on protected areas. Also in this context, a threat assessment for all protected areas must be analyzed, and threat prevention and mitigation activities can be added to the EIA process. For the improvement of the EIA process in general, it is also required to strengthen regional management tools including the capacity and financial resources.

One of the most important factors that cause damage to the ecological structure of national parks is tourism and recreation activities. Therefore, taking into account the ecosystem approach, specifically to integrate all stages of the EIA process on protected areas, Turkey can collaborate with International Association for Impact Assessment and other relevant institutions about the improvement of impact assessment or existing cooperation can be strengthened more. It may be benefit from EIA incentives for arrangements around protected areas [1] [24]. It is required to create descriptive parameters on the question of “how are integrated sustainability and EIA” and both processes should be brought together on a common denominator.

5. References

- [1] Dudley, N. (ed.). *Guidelines for Protected Area Management Categories: Part II The Management Categories*, IUCN Publication Services. Norwich, UK. Available at <http://data.iucn.org/dbtw-wpd/edocs/paps-016.pdf> (December 20, 2013). 2008.
- [2] IUCN Official Website. “What is a Protected Area”. last updated Number 4, 2013. Available at: http://www.iucn.org/about/work/programmes/gpap_home/pas_gpap/ (August 7, 2014).
- [3] Dudley, N. and Stolton, S. (eds). *Protected Areas for a New Millenium: The Implications of IUCN's Protected Area Categories for Forest Conservation*. A Joint IUCN/WWF Discussion Paper. Gland, Switzerland. 1998.
- [4] IUCN/UNEP-WCMC. *Protected Planet Report 2012: Tracking Progress Towards Global Targets for Protected Areas*, Gland, Switzerland. Available at: http://www.unep-wcmc.org/medialibrary/2012/09/14/eb3bb854/PPR2012_en.pdf (December 15, 2012).
- [5] Fancy, S.G., Gross, J.E., Carter, S.L. “Monitoring the Condition of Natural Resources in US National Parks”, *Environmental Monitoring Assessment*. 2009, **151** (1-4): 161-174, p.162.
- [6] Soukup, M. “Integrating Science and Management: Becoming Who We Thought We Were”. *George Wrigh Forum 24*, 2007. pp. 26-29.
- [7] UNEP/IUCN *World Database on Protected Areas* (November 2013), Cambridge (UK): UNEP World Conservation Monitoring Centre. Available at: www.protectedplanet.net (November 15, 2013).
- [8] NPS (National Park Service) MP (Management Policies). “Chapter.1: The Foundation”, Available at: <http://www.nps.gov/refdesk/mp/chapter1.pdf> (August 20, 2013). 2001
- [9] NPS MP (Management Policies). “Chapter.1: The Foundation”, Available at: <http://www.nps.gov/policy/mp2006.pdf> (August 20, 2013), 2006.
- [10] IAIA (International Association for Impact Assessment). Available at: <http://www.iaia.org/> (June 7, 2010).
- [11] MEF (Turkish Ministry of Environment and Forestry). *The National Biodiversity Strategy and Action Plan-2007*. Ankara. Available at: <http://www2.milliparklar.gov.tr/DKMP/AnaSayfa/dogaKorumaHaber> (December 15, 2012).
- [12] *GDNCNP (General Directorate of Nature Conservation and National Parks) Official Website*. “Department of National Parks”, Available at: <http://www.milliparklar.gov.tr> (May15, 2014).

- [13] Anonymous. “*The Environmental Impact Assessment Directive of Turkey*” Date and of the Official Gazette of the Republic of the Turkey. October 3, 2013/28784.
- [14] Anonymous. “*The Environmental Impact Assessment Directive of Turkey*” Date and of the Official Gazette of the Republic of the Turkey. July 17, 2008/26939.
- [15] Yucel, M. and Babus, D. “The History of Nature Conservation and Developments of Nature Conservation in Turkey”, *Journal of DOA* (Eastern Mediterranean Forestry Research Institute), 2005 (1):151-175, p.151.
- [16] Colak, H.A.. *Nature Conservation and Forestry* (Concepts-Principles-Strategies and Precautions), GDNCNP. Ankara. 2001.
- [17] Ozdonmez, M. and et all. *Forestry Policy*, Istanbul University Press. Publication No. 3968/435. Istanbul. 1996.
- [18] Anonymous. *Turkish Ministry of Forestry and Water Affairs National Parks Information System*, Available at <http://www.milliparklar.gov.tr/mp/index.htm> (December 22, 2013). 2013.
- [19] RAPPAM 2009 Final Report. *Korunan Alanlarda Hızlı Değerlendirme ve Önceliklendirme*, (Report prepared by) Erica Stanciu, Başak Avcıoğlu Cokcaliskan and Yıldırım Lise. Istanbul. Available at: <http://www.kdmp.gov.tr/RAPPAM2009SonucRaporu.pdf> (August 15, 2014), p.6-12.
- [20] Manning, R. E. *Parks and Carrying Capacity Commons Without Tragedy*. Island Press. Washington, USA. 2007.
- [21] Anonymous. *The Regulation on National Parks of Turkey*. Date and Number of the Official Gazette of the Republic of the Turkey. March 18, 2014/288888.
- [22] Anonymous. *The National Parks Regulation of 1986*. Date and Number of the Official Gazette of the Republic of the Turkey. December 12, 1986/19309.
- [23] General Directorate of EIA. “*EIA Decisions*”. Available at: <http://www.csb.gov.tr/gm/ced/index.php?Sayfa=sayfaicerikhtml&IcId=673&detId=674&ustId=673> (August 7, 2014), 2010.
- [24] Glasston, J., Therivel, R. And Chadwick, A. *Introduction To Environmental Impact Assessment*. England, Routledge. 2005.