

National sectoral plans aiming to control land based sources of pollution for the Mediterranean Sea coast in Turkey

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Abstract

The “convention for the protection of the Mediterranean Sea against pollution” (Barcelona Convention), which was adopted in 1976, entered into force in 1978. Turkey is one of the contracting parties of the Barcelona Convention. In this study, the sectoral plans as a part of the preparation of “national action plan (NAP) for land based sources of pollution” for Mediterranean Region has been presented. Water catchments basin approach is taken into consideration instead of Administrative Region in this study, since it is believed that it would be better to define the problems in water catchments basin level. The scope of the study covers five basins (Kuzey Ege, Gediz, Küçük Menderes, Büyük Menderes, Meriç-Ergene) along the Aegean Sea Coast and six basins (Bati Akdeniz, Antalya, Doğu Akdeniz, Ceyhan, Seyhan, and Asi) along the Mediterranean Sea Coast in Turkey. In these basins, it is described how to reach “strategic action plan (SAP)” targets in terms of emission loads from different industries by 2010. For this purpose, major sources and pollutant quantities in the basins are gathered from Baseline Budget Study, ongoing and planned projects and mitigation measures are presented. Hot spots and sensitive areas are also identified and taken into account. Moreover, some recommendations regarding the necessary economic instruments in order to implement strategic action plans are described and discussed.

Keywords: National sectoral plans; Land based sources of pollution; Mediterranean Sea; Hot spots; Sensitive areas; Economic instruments

1. Introduction

Mediterranean Countries has initiated and applied several environment programmes aiming

the protection of Mediterranean Sea within the scope of regional and international organisations. Similarly, UNEP is coordinating the Mediterranean action plan (MAP) since 1975 and applying the scientific, socio-economic and legal programmes towards the protection of Mediterranean Sea.

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The “convention for the protection of the Mediterranean Sea against pollution” (Barcelona Convention), which was adopted in 1976, entered into force in 1978. Turkey is one of the contracting parties of the Barcelona Convention. It was amended by the Contracting Parties in 1995 and recorded as the “convention for the protection of the marine environment and the coastal region of the Mediterranean”. It entered into force on July 9, 2004. The Convention and six Protocols constitute what is known as the Barcelona System, the MAP’s Legal Framework. It is in the process of being ratified.

Protocol for the protection of the Mediterranean Sea against pollution from land based sources of pollution; the Barcelona Convention entered into force in 1983 [1].

Republic of Turkey Ministry of Environment and Forestry (MoEF) has coordinated the studies of the preparation of the “NAP for land based sources of pollution” on behalf of Turkey which is a contracting party of Barcelona and Bucharest Conventions. Within this framework a comprehensive national sectoral plans report was prepared by the authors with coordination of MoEF [2].

In order to implement these national action plans, it is inevitable that necessary economic instruments (EIs) should also be developed and discussed in detail.

One definition of the term “economic instruments” is “Any instrument that aims to induce a change in behavior of economic agents by internalising environmental or depletion cost through a change in the incentive structure that these agents face (rather than mandating a standard or a technology) qualifies as an economic instrument [3].” The most widely used classification of economic instruments for pollution control and natural resources management is the one developed by OECD and given below [4]:

- Emission charges/taxes;
- User charges/taxes;
- Product charges/taxes;
- Non-compliance fees;

- Deposit-refund systems;
- Marketable (tradable, transferable) permits, rights or quotas, also referred to as “emissions trading”;
- Performance bonds;
- Liability payments;
- Subsidies.

The gap between free market economy and determining optimum environment quality can be filled only with EIs. Therefore, a suggestion regarding to the EIs also included in this study. The development, environmental and financial objectives of the selected EIs are determined for the 2005–2010 period, while presenting of log frame table for the implementation of the EIs. The performance indicators and critical assumptions about these EIs are presented and how to monitor and evaluate them are explained.

2. Methodology

The national diagnostic analysis (NDA) and baseline budget (BB) for Turkey had been prepared by The Scientific and Technological Research Council of Turkey (TUBITAK) in 2002 and 2003, respectively. NDA and BB are revised according to TUBITAK Reports 2005 [5,6]. These studies served as the basis for the preparation of Sectoral Plans as a part of the preparation of “national action plan (NAP) for land based sources of pollution” for Mediterranean Region. The steps in the preparation of sectoral plans can be defined as follows and are given in Figs. 1 and 2.

- (1) For each sectoral plan use the NDA and the BB to find information and data on the sources and quantities of the relevant pollutants at Water Catchments Basins Level.
- (2) Define the target of reduction in each sector (percentage of pollutant’s reduction in specific time table according to the SAP).
- (3) For each sector describe the major sources (i.e. industries) that contribute to the pollutant’s load.

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