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**MINISTRY OF ENVIRONMENT AND FORESTRY**



**ENVIRONMENT  
OPERATIONAL PROGRAM**  
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## ABBREVIATIONS

AA	Audit Authority
Barcelona Convention	The Convention on the Protection of the Marine Environment and the Coastal Region of the Mediterranean
Basel Convention	The Convention on the Control of Trans boundary Movements of Hazardous Wastes and Their Disposal
Bucharest Convention	Convention on the Protection of the Black Sea Against Pollution
CAO	Competent Accreditation Officer
CAP	Communication Action Plan
CARDS	Community Assistance for Reconstruction Development and Stability in the Balkans
CBA	Cost Benefit Analysis
CF	EU Cohesion Fund
CFGU	The Central Finance and Contracts Unit
CIF	Cost Insurance Freight
CIO 1992 Convention	International Convention on Civil Liability for Oil Pollution Damage, 1992
CSF	Community Strategic Framework, 2007 -2013: Council Regulations 1080/2006/EC; 1081/2006/EC; 1082/2006/EC; 1083/2006/EC and 1084/2006/EC
CSG	Community Strategic Guidelines on Cohesion , 2007-2013 (Directive 2006/702/EC)
GEYKO	Environmental Protection and Packaging Waste Recovery and Recycling Trust
DABLAS	Danube and Black Sea Region Task Force, set up in November 2001
DGs	Directors General
DG ELARG	General Directorate for Enlargement

DG EMPL	General Directorate for Employment
DG ENV	General Directorate for Environment
DG REGIO	General Directorate for Regional Development
dWTP	Drinking Water Treatment Plant
DS	General Directorate of State Hydraulic Works
DSIP	Directive-Specific Investment Plan (also referred to as EHCIP)
EC	European Commission
ECD	European Commission Delegation
EEA	European Environmental Agency
EHCIP	Environmental Heavy -Cost Investment Planning
EIA	Environmental Impact Assessment (EU Directive 85/337/EEC amended by Directive 97/11/E EC)
EOP	Environment Operational Programme for 2007 -2009
ERDF	European Regional Development Fund
ESC	Economic and Social Cohesion
ESF	European Structural Funds
EU	European Union
EUR	Euro
EUROSTAT	European Statistical Institution
EUSG	Ministry of Foreign Affairs Secretariat General for European Union Affairs
FCB	Financial Co-operation Board
FCC	Financial Co-operation Committee
FIDIC	The International Federation of Consulting Engineers
FUND 92 Convention	International Oil Pollution Compensation Fund, 1992

GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IA	Implementation Agreement
ICPRR	International Commission for the Protection of the Danube River
IFI	International Financing Institutions
IPA	Instrument for Pre-Accession
IPPC Directive	Integrated Pollution Prevention and Control Directive
ISPA	Instrument for Structural Policies for Pre -Accession
İSTAC	İstanbul Metropolitan Municipality Environmental Protection and Waste Materials Valuation Industry and Trade Company
İZAYDA	İzmit Metropolitan Municipality Waste and Residue Treatment, Incineration and Recycling Company Incorporated
MARA	Ministry of Agriculture and Rural Affairs
MARPOL 73/78 Convention	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
MIF	Multi-annual Indicative Financial Framework, 2008-2010
MIPD	Multi-annual Indicative Planning Document, 2007 -2009
MIS	Management Information System
MoE	Ministry of Environment and Forestry
MoH	Ministry of Health
MR	Material Recovery Facility
9 <sup>th</sup> NDP	9 <sup>th</sup> National Development Plan, 2007 -2013
NAO	National Authorising Officer
NEF	National Environmental Fund
NF	National Fund



NGOs	Non-governmental Organisations
NIPAC	National IPA Co-ordinator
NSRF	National Strategic Reference Framework
NUTS	Nomenclature of Territorial Units for Statistics
O&M	Operations & Maintenance
OP	Operational Programme
OPRC Convention	International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990
OS	Operating Structure (of the EOP)
pdf	Portable Document Format
p.e	Population Equivalent
PEPA	Priority Environmental Projects for Accession
PET	Polyethylene Three Phthalate
PHARE	Poland Hungary: Action for Restructuring of Economies
PIU	Project Implementation Unit
PPP	Public Private Partnership
PRAG	Practical Guide to Contract Procedures for EC External Actions
PSC	Project Selection Committee
PSP	Private Sector Participation
REC	Regional Environmental Centre
SAPARD	Special Accession Programme for Agriculture and Rural Development
SC	Steering Committee
SCF	Strategic Coherence Frame work, 2007-2013 (prepared by the SPO)
SKI	Directorates for Water and Sewerage

SME	Sectoral Monitoring Committee
SPO	Prime Ministry Under-Secretariat of the State Planning Organisation, Republic of Turkey
SWOT Analysis	Strengths, Weaknesses, Opportunities and Threats Analysis
TA	Technical Assistance
The Bank of Provinces	Mer Bank
TIU	Technical Implementation Unit
TOR	Terms of Reference
TURKSTAT	Prime Ministry Turkish Statistical Institute
TUBITAK	Scientific & Technological Research Council of Turkey
UCES	Turkish abbreviation for the 'EU Integrated Environmental Approximation Strategy, 2007 -2023' prepared by the MoEF, 2006.
WWTP	Wastewater Treatment Plant

## EXECUTIVE SUMMARY

1. The Environment Operational Programme for 2007 -2009 (EOP) is one of the basic planning and action documents which will help Turkey to enhance the performance of the environmental sector, in line with European Union (EU) principles and policies. It has been formulated and developed by the Ministry of Environment and Forestry (MoEF) in close consultation with the European Commission (EC) for final approval by way of a Commission Decision under Article 8(1) of the Instrument for Pre-Accession (IPA) Regulation. It is also one of four (4) programmes from the Strategic Coherence Framework, 2007-2013 (SCF)<sup>1</sup> which are being elaborated with the aim of utilising EU funds for the period 2007-2013 in line with the Multi-annual Indicative Planning Document, 2007-2009 (MIPD)<sup>2</sup>. In addition, it is defined as a document for approval by the EC indicating the priority areas for the country in regard to the environmental sector, including medium-term measures.
2. The overall objectives of the EOP are **(a)** to improve environmental protection, **(b)** to improve living standards for the population, **(c)** to improve access to drinking water, wastewater treatment and integrated solid waste services, **(d)** to strengthen capacity and governance.
3. The EOP is divided into five (5) Chapters :
  - **Chapter A.** - gives an overview of the consultation process followed by a review of the current environmental situation regarding water and wastewater as well as solid waste management;
  - **Chapter B.** - highlights the strengths, weaknesses, opportunities and threats identified in the environmental sector, and then describes the chosen strategic priorities and overall programme implementation;
  - **Chapter C.** - gives information on the priority axes, the related measures and their specific targets, with an account of the coherence and consistency of the EOP in relative to national and EU perspectives;

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<sup>1</sup> General Directorate for Regional Development (DG REGIO) Letter of 28 June 2007 (Ref: 06473) confirming the acceptance of the SCF in meeting Article 154 of the Implementation Requirements.

<sup>2</sup> EC General Directorate for Enlargement (DG ENLARG) Letter of 4 October 2006, Ref ENLARG B/jor/PM/D(2006) 105600.

- **Chapter D.** - develops a financing schedule for each year covered by the applicable Multi-annual Indicative Financial Framework, 2008 -2010 (MIFF) and for each priority axes with its related measure, - the total contributions being allocated between national and EC sources;
  - **Chapter E.** - provides a description of the relevant structures and authorities for the management of the EOP. It further provides implementation timetables including monitoring and evaluation indicators and modalities as well as indicative evaluation activities and timing.
4. The EOP focuses on improving and developing basic environmental infrastructure especially for water, wastewater and solid waste management. It will be implemented by reference to priorities and measures as follows:
- Priority 1: Improved water supply, sewerage and wastewater treatment services.
    - Measure 1.1: Improving the quality of the drinking water supply;
    - Measure 1.2: Improving the quality of receiving water bodies.
  - Priority 2: Improved integrated solid waste management.
    - Measure 2.1: Increasing the quantity of recycled waste and improving final disposal.
  - Priority 3: Technical Assistance (TA).
    - Measure 3.1: Enhancing management of the EOP;
    - Measure 3.2: Enhancing beneficiary planning capacity.
5. The EOP accords with the environmental priorities of the EU as described in the 6<sup>th</sup> Community Environment Action Programme. Moreover, its implementation fully supports:
- The achievement of the general strategic objective of the country in the environmental sector, which is 'to create a healthy living environment considering the economic and social conditions of the country, implementing projects according to the EU Environmental Acquis' and SCF, 2007-2013;
  - The strategic vision for Turkey as set by the 9<sup>th</sup> National Development Plan, 2007-2013 (NDP) namely 'a country which grows in stability, shares its income equitably, has global competitiveness, has transformed into an information society and completed its harmonisation process for EU membership'.

6. This EOP is one of four (4) Operational Programmes (OPs) under the IPA Components III & IV for the period 2007 -2009. The other OPs are OP Regional Competitiveness, OP Transport and OP Human Resources Development.
7. The implementation of the EOP will be financed by IPA resources totalling EUR 204.1 million and also by national resources to a total of EUR 68.033 million.
8. The contribution from the IPA was calculated on the basis of the maximum standard rate of 75% of the total public eligible cost for environmental infrastructure and the TA priority axes activities. The national co-financing concerns, therefore, investment operations provided under priority axes and the measures. All national co-financing will be provided in accordance with the IPA Financial Agreement.
9. The main beneficiaries of the EOP are the MoEF, municipalities, regional associations, water supply and sewerage companies, and non-governmental organisations. Implementation of the EOP will also contribute to improving the quality of life for the entire population of Turkey.
10. The Operating Structure (OS) under the MoEF is the key authority responsible for the planning, implementation and management of the EOP in accord with Article 21 of IPA Implementing Regulation 718/2007<sup>3</sup>. Implementation will be monitored by the Sectoral Monitoring Committee (SMC) established for this purpose, in compliance with Article 59 of IPA Implementing Regulation 718/2007. A Project Selection Committee (PSC) will be set up by the OS for (a) ensuring that projects are selected for funding and approved in accordance with the criteria and mechanisms applicable to the programme, (b) assessing the projects from the point of view of territorial and sectoral co-ordination.
11. The SMC will consist of representatives from the National IPA Co-ordinator (NIPAC), Prime Ministry Under-Secretariat of the State Planning Organisation (SPO) (Strategic Co-ordinator for Components III & IV), The Bank of Provinces (İller Bank), representatives from civil society and socio-economic partners, regional or national organisations of relevance for the EOP, National Authorising Officer (NAO) and a representative of the National Fund (NF).

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<sup>3</sup> Commission Regulation (EC) No. 718/2007 of 12 June 2007 Implementing Council Regulation (EC) No. 1085/2006 establishing an instrument for pre-accession assistance (IPA).

12. The following authorities also play an important role in the overall co-ordination, management and audit of the EOP:
  - NIPAC, Ministry of Foreign Affairs Secretariat General for EU Affairs, will ensure the overall co-ordination of assistance under the IPA Regulation;
  - The Sectoral Co-ordinator for Regional Development (and the Human Resources Development) is the SPO which is responsible for the overall co-ordination and co-operation with NIPAC;
  - The Audit Authority (AA) which has the overall responsibility for verifying the effective and sound functioning of the management and control systems (according to Article 29 of IPA Implementing Regulation 718/2007).
13. This EOP has been prepared in compliance with the partnership principle, actively involving all the relevant administrative socio-economic partners and NGOs. It has been framed as a 'stand-alone' document and thus contains more background information and statistical data than would normally be expected from an OP. However, it is hoped that this document will contribute to a greater understanding of the complex aspects of environmental protection that urgently need to be addressed in Turkey within both a national and regional context .
14. Implementation of this EOP will also stimulate economic activities in the regions and promote new employment opportunities like recycling, innovative energy production, tourism and recreation. In this way crucial, environmental protection goes as going hand-in-hand with sustainable development in addition to creating a healthier and safer future.

## INTRODUCTION

In order to improve the delivery of EC External Aid, a new 'Instrument Programme' has been designed. It covers co-operation between developing and industrialised countries with the EU, the EU neighbourhood policy, enlargement and other specific themes. Amongst the new legislation, the IPA has been designed as a 'simple, clear and concise regulation' replacing the previous Poland Hungary: Action for Restructuring of Economies (PHARE), Instrument for Structural Policies for Pre-Accession (ISPA), Special Accession Programme for Agriculture and Rural Development (SAPARD), Turkey Instrument and Community Assistance for Reconstruction Development and Stability in the Balkans (CARDS) Programmes. The new Instrument Programme was presented by the EC to the European Parliament and Council Regulation 1085/2006/EC establishing an IPA was adopted on 17<sup>th</sup> July 2006.

The IPA is thus one of the general instruments directly supporting external aid policies. The need to facilitate coherence and improve consistency with the EU, as well as achieving better results and a higher impact with the resources available, led the EC to propose a simplified framework for external actions over the 2007 -2013 period. At the junction between external assistance and internal policies, the IPA Regulation aims at providing targeted assistance to candidate and potential candidate countries for membership to the EU.

Moreover, this IPA constitutes a framework defining the objectives and main principles for pre-accession assistance under five (5) components. The purpose of the EOP is to meet the requirements of Component III which is specifically targeted for 'Regional Development'. It supports countries in policy development and prepares them for implementation and management of the EC's cohesion policy and in particular, their access to the European Regional Development Fund (ERDF) and Cohesion Fund (CF).

Assistance will be implemented through the EOP. This has been formulated and developed by the MoEF in close consultation with the EC for final approval through a Commission Decision in accordance with Article 8(1) of the IPA Regulation. The main emphasis for the environmental measures relates to **(1)** water supply, urban wastewater and integrated solid waste management, **(2)** rehabilitation and closure of old dumpsites and **(3)** areas related to sustainable development which generate environmental benefits.

The EOP is the basic planning and scheduling document which will help Turkey to enhance performance in the environmental sector, in line with EU principles and policies. It is based upon documentation drafted by the relevant Turkish authorities and the EC. It is also one of four (4) programmes from the SCF<sup>1</sup> which is being elaborated with the aim of utilising EU funds for the period 2007 -2013 in accord with the MIPD<sup>2</sup>.

In addition, it is defined as a document for approval by the EC indicating the priority areas for the country with regard to the environmental sector, including medium-term measures.

The EOP also specifies the objectives, fields of intervention, expected results, management procedures and total financing planned for the environmental sector over the period 2007-2009. It contains a summary of the type of operations to be financed, an indication of the amounts allocated for each type of operation and an overall proposed implementation timetable.

It should be noted that this EOP deals only with the environmental sector and is presented in five (5) chapters:

**Chapter A.** - gives an overview of the consultation process and the relevant documentation used for the preparation of the EOP. This is followed by a review of the current environmental situation regarding water and wastewater as well as solid waste management. There then follows a summary of the recommendations from the ex-ante evaluation<sup>4</sup> which, among others, identifies and appraises the disparities, gaps and potential for development, the goals to be achieved, and the coherence of the strategy proposed. The recommendations from this ex -ante evaluation have since been reviewed and incorporated into the present EOP.

**Chapter B.** - highlights the strengths, weaknesses, opportunities and threats identified in the environmental sector. There is then a description of the chosen strategic priorities and overall programme implementation with regard to the SCF, MIPD and sectoral mechanisms.

**Chapter C.** - gives information on the priority axes, the related measures and their specific targets. These targets have been quantified, where appropriate, using a limited but realistic number of output and result indicators. These indicators will determine the progress in implementing the selected measures, including the effectiveness of the identified selected targets. There is also an identification for each proposed measure of the final beneficiaries, the expected modalities and the specific criteria for the selection of projects. There then follows a discussion of the coherence and consistency of the EOP defined through an analysis of both national and EU perspectives.

**Chapter D.** - provides a financing table for each year covered by the applicable MIFF and for each priority axes with its related measure. The total contributions from both national and EC sources have also been defined.

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<sup>4</sup> Referred to in Article 57(4) and 166 of the IPA Regulation.



**Chapter E.** - provides a description of the relevant structures and authorities for the management of the EOP in accordance with Articles 21-26, 28, 29 and 31 of the IPA Regulation. It also details implementation timetables including monitoring and evaluation indicators and modalities as well as indicative evaluation activities and timing.

In summary, the EOP has been prepared in compliance with the partnership principle, actively involving all the relevant administrative and socio-economic partners. The entire programming process has been organised by the OS under the MoEF and includes the Department of Foreign Relations and the EU. It has been drawn up as a 'stand-alone' document and, thus, contains more background information and statistical data than would normally be expected from an OP. In this way, it is hoped that this document will contribute to a realistic understanding of the complex aspects of environmental protection that are urgently in need of remedy in Turkey within both a national and regional context .

## **A. CONTEXT, CONSULTATION AND COORDINATION**

This EOP has been prepared after extensive discussions, meetings and consultations involving several dedicated working groups representing relevant stakeholders as well as senior management and staff of the MoEF. These included representatives of line Ministries, Prime Ministry Under-Secretariat of the State Planning Organisation (SPO), Ministry of Foreign Affairs Secretariat General for EU Affairs (EUSG), The Bank of Provinces (İller Bank), the Turkish Statistical Institute (TURKSTAT), the National Association of Turkish Municipalities, as well as representatives from the Chamber of Commerce, Non-governmental Organisations (NGOs), Universities and relevant institutes. It also took into account the following key documents as directional references:

- 9<sup>th</sup> National Development Plan (NDP), 2007 -2013;
- EU Integrated Environmental Approximation Strategy (UÇES), 2007 -2023;
- Strategic Coherence Framework (SCF), 2007 -2013 prepared by the SPO;
- Law on Environment No. 5491 dated 26 April 2006;
- 6<sup>th</sup> EU Environmental Action Programme, 2001 -2010;
- IPA Multi-annual Indicative Planning Document (MIPD), 2007 -2009;
- IPA Multi-annual Indicative Financial Framework (MIFF), 2008-2010;
- Council Regulation (EC) No. 1085/2006 establishing an IPA ;
- Council Decision of 23 January 2006 on the principles, priorities and conditions contained in the Accession Partnership with Turkey (2006/35/EC);
- Community Strategic Guide lines on Cohesion (CSG) , 2007-2013 (Directive 2006/702/EC);
- Community Strategic Framework (CSF), 2007 -2013: Council Regulations 1080/2006/EC ; 1081/2006/EC ; 1082/2006/EC ; 1083/2006/EC and 1084/2006/EC .

Several working documents as well as EC Directives and guidance documents were also used as references including "Directive-Specific Investment Plans (DSIPs)"<sup>5</sup>, "Integrated Pollution Prevention and Control (IPPC) Directive"<sup>6</sup> as well as the "Water Framework Directive"<sup>7</sup> and "Landfill Directive"<sup>8</sup>.

It is important to note that, while the EOP centres on what can realistically be achieved through the direct projected investment in the period 2007 -2009 concentrated on the identified environmental priorities of the drinking water, wastewater and solid waste sectors, important horizontal and cross-cutting issues, e.g., bio-diversity, equal rights and civil society will also benefit from the implementation of the EOP.

## **A.1. NATIONAL POLICY AND SOCIO-ECONOMIC CONTEXT**

The data used are taken from the latest available statistics provided by the Turkish Statistical Institute (TURKSTAT)<sup>9</sup> and European Statistical Institution (EUROSTAT). They make a distinction between the three broad sectors of municipalities, manufacturing industries and energy production. Statistics given below are based upon municipal populations. The total municipal population in 2005 was in the order of 54 million whereas the national population amounted to some 73.9 million (TURKSTAT 2005).

### **A.1.1. WATER SECTOR**

#### **(a) Water resources**

Turkey as a whole is not plentiful in water resources. Some catchment areas are also located far from population centres and, thus, accessibility requires heavy investment. Because precipitation and snowfall is limited to 5 or 6 months per year and most of the land mass is situated in a semi-arid region, it is predicted that Turkey is at risk of becoming a 'water-stressed' country by 2030 (1954-2005, General Directorate of State Hydraulic Works-DS, 2005). Thus, in order to draw on water resources on a year round basis, Turkey must have storage facilities such as dams and reservoirs. The dams built over the last 50 years regulate river flow, prevent flooding and provide safe drinking

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<sup>5</sup> Also referred to as Environmental Heavy-Cost Investment Planning (EHCIP) documents.

<sup>6</sup> Council Directive 96/61/EC of 24 September 1996 concerning Integrated Pollution Prevention and Control

<sup>7</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for the Community action in the field of water policy.

<sup>8</sup> Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, as amended by Regulation (EC) 1882/2003.

<sup>9</sup> This means that the Turkish data quoted is up to 2004 unless otherwise mentioned.

water. Coupled to hydro-power generation plants, water resources have significantly contributed to the overall socio-economic development of the country<sup>10</sup>.

The effective management of surface and groundwater, however, represents a constant challenge, particularly in terms of effective protection. Factors which contribute to the deterioration of surface and groundwater quality include:

- discharge of untreated domestic and industrial wastewater at source;
- urban wastewater discharged into surface waters with or without partial treatment;
- leakages from sewerage systems and run off from uncontrolled solid waste dumpsites;
- excessive groundwater abstraction;
- extensive use of pesticides and fertilisers in agriculture;
- deforestation and inadequate agricultural practices accelerating erosion, and creating accumulation of sediment in natural lakes and artificial dams.

The balanced use of surface and groundwater also needs to be managed in a more sustainable manner. Turkey should improve planning and reduce system leakages whilst ensuring all investments are appropriate and implemented in a timely fashion. The water resources also need to be more efficiently used.

#### **(b) Water supply and water consumption**

A total amount of 8.76 billion m<sup>3</sup> of water was extracted by municipalities, manufacturing industry and energy production facilities in 2004. Some 4.96 billion m<sup>3</sup> (57%) of this was used by municipalities for distribution through their network systems. Of this volume, 40% was abstracted from dams, 28% from wells, 27% from springs, 3% from rivers and 2% from lakes and artificial lakes (**see Table A.1.**).

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<sup>10</sup> These are the overall conclusions of Environmental Impact Assessment (EIA) Reports which have been prepared since 7 February 1993 when the By-Law on EIA was enacted. Since then 44 dam projects have been evaluated in the scope of Annex 1 of the By-Law (Source, MoEF).

Table A.1. Municipal water abstraction by resources for 2004 (1000 m<sup>3</sup>/year)

Water resources	(Municipalities, manufacturing industry and energy producers)	Municipalities
Sea	3 153 096	---
Dam	2 115 362	1 986 882
Spring	1 393 813	1 363 360
Well	1 650 601	1 375 737
River	218 640	143 064
Lakes & artificial lakes	111 385	87 394
Others	118 365	---
<b>Total</b>	<b>8 761 262</b>	<b>4 956 437</b>

Source TURKSTAT, 2004

In 2004, out of the total of 3213 municipalities surveyed, 3159 municipalities replied that they had drinking water supply systems. This is 67 additional municipalities compared with 2001 (3092). They also serve 99% of the population compared with 95% in 2001 (see Table A.2.).

Again, in 2004, the number of municipalities with drinking water treatment plants was 304, compared with 236 in 2001. During 2001, only 1.66 billion m<sup>3</sup> of water was treated whilst in 2004, the volume increased by 25% to 2.08 billion m<sup>3</sup>. There was also a corresponding increase in population served by drinking water treatment plants, rising from 35% to 42% between 2001 and 2004. The number of treatment plants amounted to 140 in 2004 (chlorination and filtration or coagulation, flocculation, sedimentation, filtration, chlorination), compared to 113 in 2001. (see also Table A.2.). Where there are no plants, chlorination systems along the networks have been put in place. Raw water collected from springs, mainly in rural areas, is mostly distributed without treatment.

Table A.2. Comparison of water supply data of 2001 & 2004

Statistics on water supply	Year	
	2001	2004
Number of municipalities responding	3215	3213
Number of municipalities served by drinking water supply systems	3092	3159
Number of municipalities served by dWTP*	236	304
Number of dWTPs	113	140
Rate of population served by drinking water supply networks in total municipal population (%)	95	99
Rate of population served by dWTP in total municipal population (%)	35	42
Municipal water abstraction (billion m <sup>3</sup> /year)	4.66	4.96
Amount of drinking water treated (billion m <sup>3</sup> /year)	1.66	2.08

\* : Drinking Water Treatment Plant

Source TURKSTAT, 2001& 2004

The water supply systems are characterised by high losses which have been estimated at around 55% of the available supply. There are two main reasons for this (1) water losses during transportation to the final consumers due to pipe leakages; the volume lost being a function of the age and the type of pipes as well as the pressure in the network, and (2) non-payments of bills, illegal connections and deficient meters.

The water quality varies from city to city and region to region. According to water quality data obtained from the Ministry of Health (MoH) (latest 2002 data), (1) in those provincial centres where 80% of the population are served by drinking water services, some 13% of the samples do not comply with national standards <sup>11</sup>, (2) where 60% of the population have such services, only 5% of the samples fail to comply, but (3) where 90% of the population are served, 14% of the samples do not comply. The data for non-compliance are given as 23% due to microbiological parameters (total faecal coliforms), 21% to chemical parameters and 10% to physical parameters. As these values demonstrate,

<sup>11</sup> Particularly relating to Turkish Standard (TS) 266.

the issues related to water quality are primarily caused by microbiological and chemical pollution.

In Turkey, water consumption is increasing due to population growth, urbanisation and industrialisation. These trends continue to lead to a reduction in renewable water resources. As mentioned in the water resources section, the quality of these resources is also decreasing.

However, in most of Turkey, water volume and quality can be substantially improved if networks were rehabilitated.

Environmental infrastructure investments will thus be targeted towards remediation:

### **(c) Wastewater**

There have been important developments regarding the control and management of wastewater discharge within the larger municipalities in Turkey during recent years. However, a lack of financial and technical resources for the smaller but nevertheless important regions means that this is not the case nationwide.

In 2004, a total of 6.03 billion m<sup>3</sup> of wastewater were discharged to the environment from municipalities (48%), manufacturing industry (11%) and energy production (41%). Of this total volume, 92% was discharged into the sea and the rivers (66% to the sea and 26% to the rivers, respectively).

Only 2.92 billion m<sup>3</sup> (48%) of this wastewater was discharged through network systems either into rivers (47%), into the sea (40%), into dams (3%), into lakes and artificial lakes (2%), to land (2%) and 6% into other receiving bodies (see Table A.3.).

Table A.3. Sectoral wastewater discharge according to receiving bodies for 2004 (1000 m<sup>3</sup>/year)

Receiving body	(Municipalities, manufacturing industry and energy producers)	Municipalities
Sea	3 997 960	1 178 001
Rivers	1 549 283	1 380 519
Lake, artificial lake	46 805	43 006
Dams	103 107	99 550
Land	63 418	40 007
Others	272 398	181 701
<b>Total</b>	<b>6 032 971</b>	<b>2 922 784</b>

Source TURKSTAT, 2004

Out of the total of 3213 municipalities surveyed in 2004, 2226 municipalities had sewerage networks, an increase of 10% compared with the year 2001 figure of just 2003. Also in 2004, 86% of the population was connected to sewerage networks, which is an increase of 5% compared with 2001 which was just 81% (see Table A.4.).

For EU comparison purposes, the figure for Bulgaria is 69% (EUROSTAT, 2002) and for Poland 57% (EUROSTAT, 2003).

The number of municipalities with wastewater treatment facilities increased from 238 in 2001 to 319 in 2004. This means that in 2004, 45% of households were connected to a wastewater treatment facility, an increase of 10% compared with 2001 (35%) (see Table A.4.).

In 2004, 65% of wastewater collected was directed to wastewater treatment facilities corresponding to 1.90 billion m<sup>3</sup> out of 2.92 billion m<sup>3</sup> collected by sewerage systems. This is an increase of 13% compared with the 2001 situation when 52% of the wastewater collected was treated (1.19 billion m<sup>3</sup> out of 2.30 billion m<sup>3</sup>) - see Table A.4.



In addition, in 2004 there were 172 wastewater treatment plants which is an increase of 37% compared with 2001 (126 plants), with 133 plants having secondary (biological) treatment facilities and 4 having both secondary (biological) and tertiary treatment facilities. The remaining 35 plants had only a preliminary treatment facility (see also Table A.4.).

**Table A.4. Comparison of wastewater data of 2001 & 2004**

Statistics on wastewater		Year	
		2001	2004
Number of municipalities responding		3215	3213
Number of municipalities served by sewerage networks		2003	2226
Number of municipalities served by WWTP*		238	319
Number of WWTPs		126	172
Primary Treatment		25	35
Secondary Treatment		98	133
Tertiary Treatment		3	4
Rate of population served by sewerage network in total municipal population (%)		81	86
Rate of population served by WWTP in total municipal population (%)		35	45
Sewerage network ended with a WWTP	Percentage (%)	52	65
	Volume (billion m <sup>3</sup> /year)	1.19	1.90

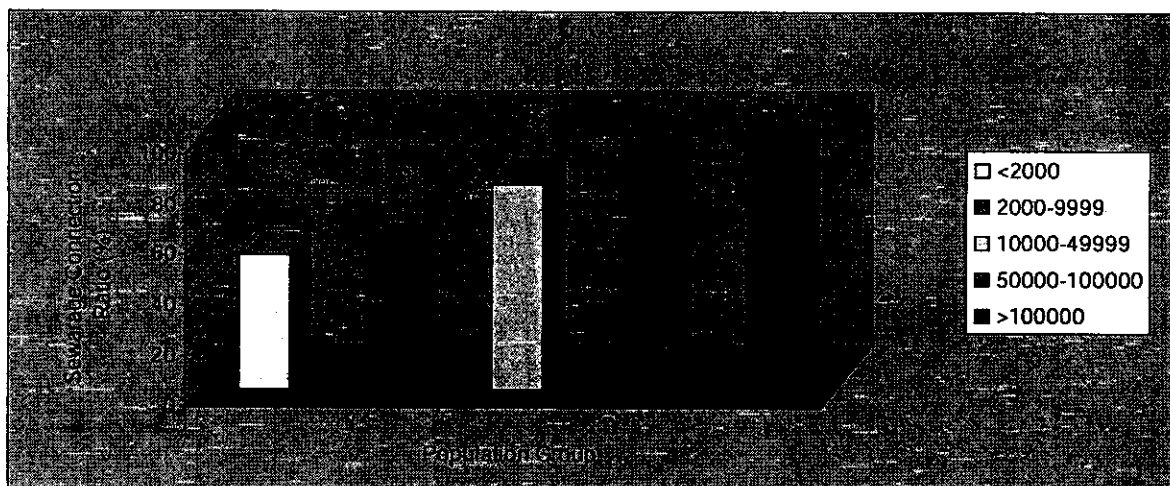
\* : Wastewater Treatment Plant

Source TURKSTAT, 2001 & 2004

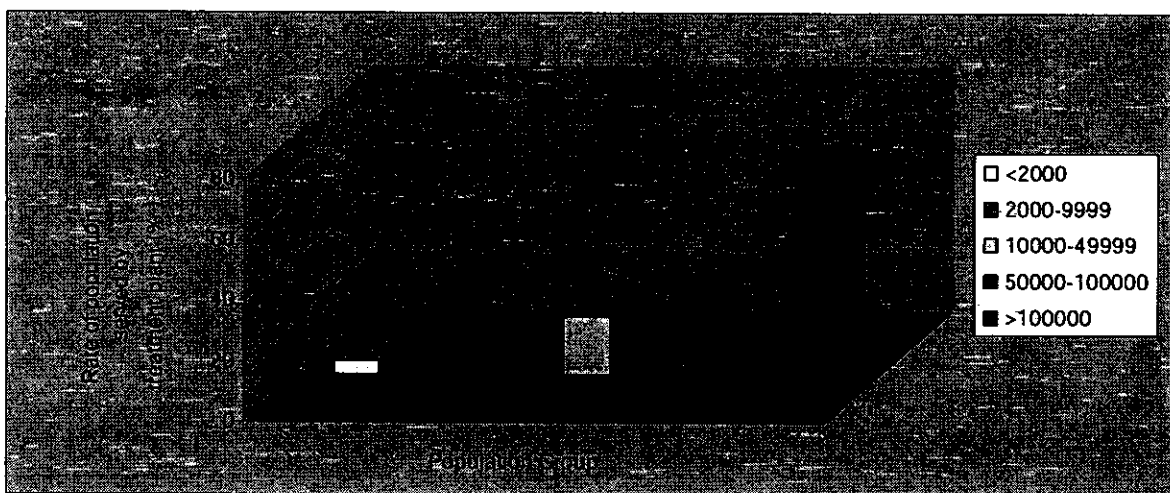
The sewerage systems are, for the most part, characterised by a high proportion of low quality pipe work. This means that **(1)** during the dry season, only part of the wastewater collected is directed to the treatment plant, the rest leaking and creating groundwater pollution, and **(2)** during the wet season, rainwater overflows the sewerage systems which causes problems for plant operations and is responsible for reduced performance and pollution of the receiving bodies.

The distribution regarding (1) the connection percentage, and (2) the population percentage served by a treatment plant according to settlement areas and based upon population groups in 2004 were as follows:

**Graph A.1. Sewerage connection ratio according to settlements size for 2004**



**Graph A.2. Rate of population served by treatment plant according to settlements size for 2004**



Source TURKSTAT, 2004

Technical studies (Scientific & Technological Research Council of Turkey/ TÜB-TAK and İstanbul Technical University) are in progress for the delineation of agglomerations in line with EU requirements and for the eventual publication of a detailed list based upon population equivalent (p.e.).

In order to protect the water resources, greater effort is needed for the treatment of industrial and domestic wastewater, taking into account the relevant E C Directives. This means a rational wastewater management implementation system is required to include collection, treatment, discharge from domestic and industrial sources and disposal of the treatment sludge according to the legislation and utilisation of the treated water in accordance with the sustainability principles.

Environmental infrastructure investments will thus be targeted towards remediation:

**(d) Management of sludge from wastewater treatment plants**

Currently, more than 80% of sludge from municipal wastewater treatment plants is produced by facilities owned by the metropolitan municipalities. The percentage used for agriculture is about 3-4% which represents around 30 000-40 000 tonnes per annum.

The use of sludge in agriculture is encouraged using 'best practices' and applying the "Sewage Sludge Directive"<sup>12</sup>. This holds out immediate benefits for farmers but important investments are necessary in order to construct adequate storage and transportation facilities.

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<sup>12</sup> Council Directive 86/278/EEC of 12 June 1986 on the protection of the environment and in particular of the soil, when sewage sludge is used in agriculture.

(e) Regional disparities

Table A.5. Statistics on water supply at Statistical Regions Level II, for 2004

STATISTICAL REGIONS LEVEL II	PROVINCES IN THE REGION	Rate of population served by drinking water supply systems in total municipal population (%)	Rate of population served by dWTP in total municipal population (%)
TRA2	A. r., Kars, I. dır, Ardahan	100	0
TRB2	Van, Mu., Bitlis, Hakkari	97	0
TRC3	Mardin, Batman, . rnak, Siirt	97	0.8
TRA1	Erzurum, Erzincan, Bayburt	100	0
TRC2	. anlıurfa, Diyarbakır	99	48
TRC1	Gaziantep, Adıyaman, Kilis	100	22
TR72	Kayseri, Sivas, Yozgat	99	0.8
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	86	26
TRB1	Malatya, Elazır, Bingöl, Tunceli	99	0.5
TR82	Kastamonu, Çankır, Sinop	98	8
TR83	Samsun, Tokat, Çorum, Amasya	99	32
TR63	Hatay, Kahramanmara, Osmaniye	99	0
TR52	Konya, Karaman	99	17
TR71	Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	98	27
TR33	Manisa, Afyon, Kütahya, Uşak	99	2
TR61	Antalya, Isparta, Burdur	100	7
TR22	Balıkesir, Çanakkale	98	42
TR81	Zonguldak, Karabük, Bartın	98	42
TR82	Adana, Mersin	99	48
TR32	Aydın, Denizli, Muğla	98	7
TR41	Bursa, Eskişehir, Bilecik	100	53
TR21	Tekirdağ, Edirne, Kırklareli	100	19
TR51	Ankara	100	85
TR10	İstanbul	100	98
TR31	İzmir	99	26
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova	100	71

EUROSTAT format, Data source: TURKSTAT

Table A.6. Statistics on wastewater at Statistical Regions Level II, for 2004

STATISTICAL REGIONS LEVEL II	PROVINCES IN THE REGION	Rate of population served by sewerage network in total municipal population (%)	Rate of population served by WWTP in total municipal population (%)
TRA2	Ardahan, Ardahan	68	9
TRB2	Van, Muş, Bitlis, Hakkari	52	22
TRC3	Mardin, Batman, Şırnak, Siirt	81	0
TRA1	Erzurum, Erzincan, Bayburt	89	12
TRC2	Artvin, Diyarbakır	89	55
TRC1	Gaziantep, Adıyaman, Kilis	94	61
TR72	Kayseri, Sivas, Yozgat	86	31
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	71	18
TRB1	Malatya, Elazığ, Bingöl, Tunceli	88	54
TR82	Kastamonu, Çankırı, Sinop	89	2
TR83	Samsun, Tokat, Çorum, Amasya	92	13
TR63	Hatay, Kahramanmaraş, Osmaniye	61	15
TR52	Konya, Karaman	73	8
TR71	Kırıkkale, Aksearay, Niğde, Nevşehir, Kırşehir	71	10
TR33	Manisa, Afyon, Kütahya, Uşak	92	28
TR61	Antalya, Isparta, Burdur	54	31
TR22	Bahçeşehir, Çanakkale	90	9
TR81	Zonguldak, Karabük, Bartın	88	33
TR62	Adana, Mersin	82	44
TR32	Aydın, Denizli, Muğla	70	28
TR41	Bursa, Eskişehir, Bilecik	89	62
TR21	Tekirdağ, Edirne, Kırklareli	91	11
TR51	Ankara	98	87
TR10	İstanbul	97	72
TR31	İzmir	95	76
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova	93	71

EUROSTAT format, Data source: TURKSTAT

## **A.1.2. WASTE MANAGEMENT**

### **(a) Municipal solid waste generation**

Solid Waste Management plays a crucial role in terms of community health and protecting the environment and is vitally important for the country. Increasing solid waste volumes due to population growth, technological development, industrialisation and urbanisation have become a major environmental problem.

In 2004, the amount of municipal solid waste per capita was 1.30 kg/day, equivalent to 474.5 kg/capita/year.

By comparison the EU average for 25 countries was 525 kg/capita/year (EUROSTAT, 2004).

Since separate collection is only implemented in a limited number of pilot urban centres, only a small proportion of waste is recycled and most of the wastes generated are landfilled.

### **(b) Municipal solid waste collection (including separate collection)**

In 2004, out of the total of 3213 municipalities surveyed, 3028 municipalities were identified as providing solid waste management services. This represents an increase of 113 municipalities compared with 2001 (2915 municipalities).

The percentage of the total population receiving solid waste services was 97% in 2004, compared with 95% in 2001. Proper collection, transfer and disposal of solid waste to appropriate facilities and its destruction without threat to the environment are priorities especially for residential zones and neighbourhoods.

From the total municipal solid waste generated, around 25% -30% is estimated to be recyclable and recoverable as it is non-hazardous. Currently, separate collection is being implemented by several municipalities in 18 provinces.

In 2004, 578 municipalities, out of 3213 municipalities, provided separate collection services for medical waste. This represented a total of 146 additional municipalities over the number in 2001 (420 municipalities) - **see Table A.7.**

**Table A.7. Comparison of municipal solid waste data for 2001 & 2004**

Statistics on waste	Year	
	2001	2004
Number of municipalities responding	3215	3213
Number of municipalities receiving SWM* services	2915	3028
Number of municipalities receiving separate collection service for medical waste	420	578
Rate of population receiving SWM services in total municipal population (%)	95	97

\* : Solid Waste Management

Source TURKSTAT, 2001 & 2004

### **(c) Municipal solid waste recovery, treatment and disposal**

#### **General**

In Turkey, uncontrolled and unsafe dumping of solid waste tends to be common practice. Existing dump sites generate even greater risks for the environment and public health because they are often located close to residential areas. Consequently, the implementation of integrated waste management services at regional level is considered to be a major priority on which urgent remedial action is required. Necessary actions includes the planning of waste services, collection, transfer, recycling and biological treatment (composting), possible interim storage and disposal of waste as well as the operation of handling and treatment facilities, in both industrialised and highly populated areas, as required by law.

It is also a priority to re-assess existing dump sites in terms of location, design, monitoring and maintenance. Those not meeting the national or EU standards should be closed or ameliorated, and investments will be needed for their reformation as landfill sites and in compliance with applicable legislation. In this way, the risks to the environment and public health will be either eliminated or significantly minimised.

In 2001, out of 25.13 million tonnes of solid waste collected by municipalities, 58% was disposed in municipal dump sites, 33% was landfilled in 12 controlled landfill sites, 1.9% was disposed by burial, 0.87% was composted in 3 composting facilities, 0.40% was disposed of into lakes and rivers, 1.37% was disposed by burning in an open area and 4.45% was disposed by 'other' methods.

For comparison, in 2004 out of 25.01 million tonnes of solid waste collected by municipalities, 65.7% was disposed in municipal dump sites, 28% was landfilled in 16 controlled landfill sites, 1.7% was disposed by burial, 1.4% was composted in 5 composting plants, 0.4% was disposed of into lakes and rivers, 0.3% was disposed of by burning in an open area and 2.25% was disposed of by 'other' methods (see Table A.8.)

Table A.8. Comparison of treatment and disposal of municipal solid waste data, 2001 & 2004 (1000 tonnes/year)

Statistics on treatment and disposal of solid waste	Year	
	2001	2004
Number of composting facilities in operation	3	5
Number of controlled landfill sites	12	16
Total treatment or recovery operations	218	351
Composting	218	351
Total final disposal	24 916	24 663
Landfill	24 471	24 407
Of which: controlled landfill	8 304	7 002
Of which: uncontrolled landfill	16 167	17 405
Disposal in lakes and rivers	101	155
Disposal/burnt in open areas	344	101
Total	25 134	25 014

\* Disposed of in municipal dump sites, by burial or by 'other' methods

Source TURKSTAT, 2001 & 2004

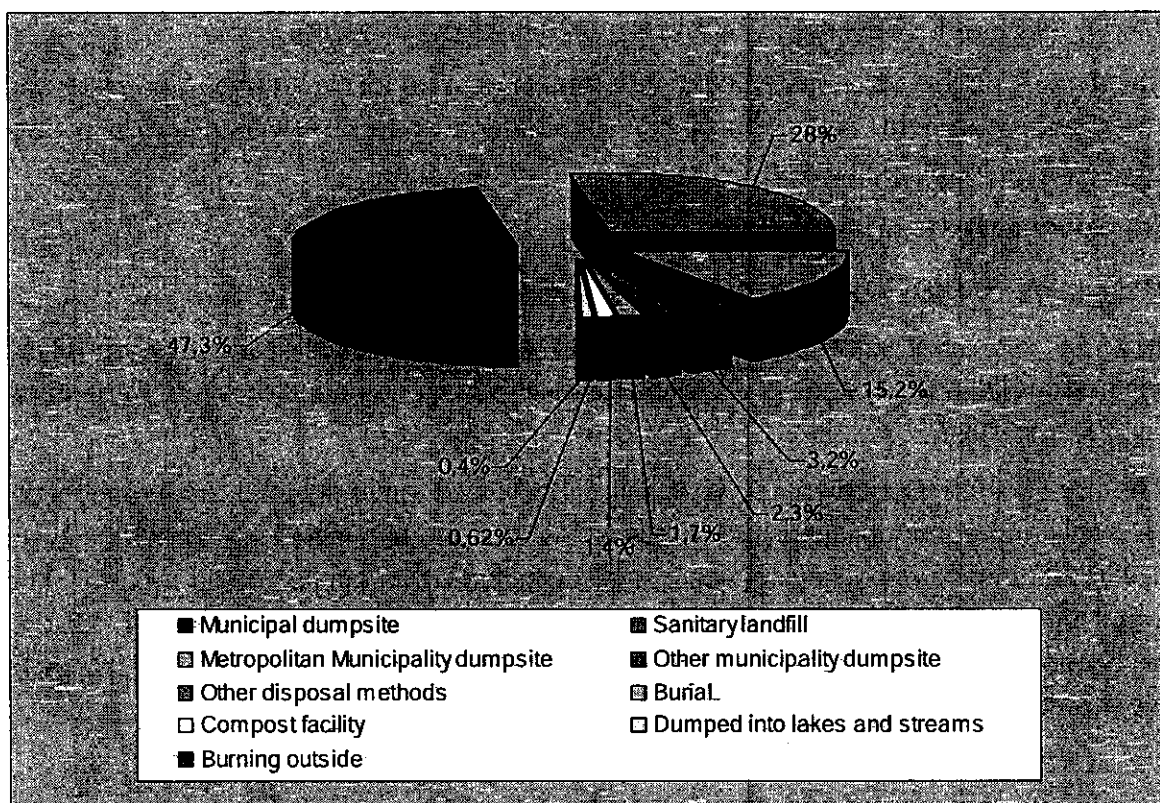


It is noted that there is an increase in the waste disposal in uncontrolled landfills. There are several reasons for this:

- Burning is prohibited and its control has been more effective, i.e., it is more visible to the authorities so they can apply controls, so the waste tends to be dumped in municipal sites;
- Disposal in controlled landfills carries a cost levy which the disposer is reluctant to pay;
- Enforcement of the law and the application of penalties and sanctions need to be strengthened and more strictly enforced.

In percentage terms, relevant data are shown graphically for 2004 below.

**Graph A.3. Disposal methods of municipal solid waste, 2004**



Source TURKSTAT, 2004

In 2004, there were 5 composting facilities in operation which were located in İstanbul, İzmir, Kemer-Antalya, Denizli and Mersin Regions (compared with 3 in 2001). They treated 1.4% of the total amount of waste generated (351 000 tonnes). However, according to data obtained by MoEF, only 4 composting facilities were operated in 2006. The reason for the reduction is that there is a reluctance on the part of the public to purchase compost originating from the se facilities. Enhanced public relations and product promotion are required to overcome these prejudices.

In 2004, the number of sanitary landfill sites was 16 (compared with 12 in 2001). Currently, 21 landfill sites are in operation and 25 sites are under construction based upon data obtained by MoEF.

Environmental infrastructure investments will thus be targeted towards remediation. Regarding synergies with other sectors it should be underlined that it is foreseen that construction and operation of regional solid waste landfill sites including gas recycling units, gas collection systems and pre-treatment facilities for leachates<sup>13</sup>; Furthermore agricultural activities will be supported by composting .

Investments in the solid waste sector will thus lead to an efficient nationwide solid waste management system, protection of the soil, surface and groundwater and to a better quality of life for the population.

#### **(d) Special waste management**

##### **Packaging and packaging waste management**

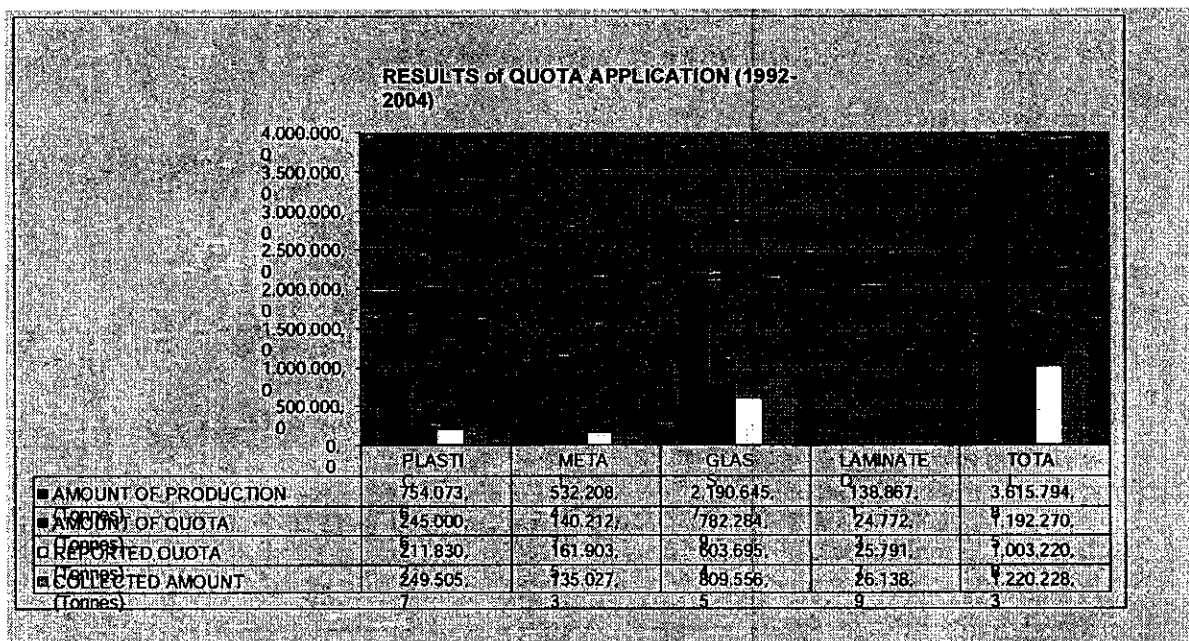
It is estimated that some 9.5 million tonnes (38%) of municipal solid waste consists of materials related to packaging. Activities for their management and recovery were started by MoEF in 1992.

The By-Law on Control of Solid Waste (1991 and amendments), enforced specific recovery and quota obligations on industry. As a result, between 1992 and 2004, some 1 220 228 tonnes of packaging waste were collected by an applied quota system. In this way, the environmental pollution resulting from these wastes was reduced and also an economic contribution was made by recycling the materials. The amount of packaging wastes that are collected and have to be collected by law is given below.

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<sup>13</sup> It should be noted that at present İstanbul and Bursa Metropolitan Municipalities are utilising gas recycling units and the technologies and 'lessons learnt' are presently being evaluated by the MoEF for possible introduction into other municipalities.

Graph A.4. Amount of packages produced, collected and have to be collected according to the By-Law on Control of Solid Waste, 1992-2004 (tonnes)



Source TURKSTAT, 2004

In 2004, within the framework of harmonisation with the EU Environmental Acquis, the By-Law on Control of Packaging and Packaging Wastes came into force which aims to separate waste collection at source.

This By-Law covers all packaging materials which are available on the market inside the country without taking into account the materials used (plastics, metal, glass, paper-carton, composites and similar materials) or source (domestic, industrial, commercial and work place). Miscellaneous obligations and responsibilities are stipulated for packaging manufacturers, marketers, importers, municipalities, sales points and consumers for the various stages of collecting, recycling, and disposal.

The package manufacturers are responsible for designing, producing and marketing their packaging materials in such a way that they can be re-used, recycled and/or recovered as well as placing the sign 'recyclable package' onto the packaging itself. They must also apply to the MoEF stating type, production and amount of packaging produced in the previous year for each sales year, as well as preparing an effective packaging waste management plan.

The responsible enterprises can establish an 'authorised organisation' in order to achieve their recovery objectives, meet the costs incurred, perform educational tasks and other related activities. This organisation makes contracts with both the municipalities and the recovery units. The MoEF has designated Environmental Protection and Packaging Waste Recovery and Recycling Trust (ÇEVKO) as the 'Authorised Recovery Foundation' accordingly.

The planned recovery rates for the responsible enterprises or their authorised foundation partners are given below.

**Table A.9. Planned packaging waste recovery objectives for 2005-2014**

Type	Recovery rate (%)									
	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Glass	32	35	37	40	43	45	48	52	56	60
Plastic	32	35	37	40	43	45	48	52	56	60
Metal	30	33	35	38	42	45	48	52	56	60
Paper/carton	20	30	35	38	42	45	48	52	56	60
Composite										

(\*) In the recovery of the composite packages; the rate that relates to the material constituting the most part of the amount by weight is used.

Source TURKSTAT, 2004

The collected packaging wastes are categorised and then sold to recycling firms. As an indication, the polyethylene terephthalate (PET) packaging wastes are collected and used in the fiber manufacturing process at recycling facilities. Other types of plastics are converted to granules, sewage drainage pipes, buckets etc. A customised web-based computer programme has been prepared in order to monitor the packaging and packaging wastes process and related activities. This is available at the [www.atikyonetimi.cevreorman.gov.tr](http://www.atikyonetimi.cevreorman.gov.tr) website.

However, since this By-Law on Control of Packaging and Packaging Wastes came into force in 2004, certain limitations in implementation have been encountered mostly concerned with separate collection at source, the determination of liability of the parties, labelling of packages, the format and filling process for notification forms as well as the licensing procedure itself.

In essence, this By-law was recently amended (2007). Liabilities of parties on collection and recycling are stated clearly without causing any conflict of authority. Additionally, provisions on collection were revised to enable the separate collection at source. Currently, 43 sorting facilities and 37 recycling facilities have been granted an operating licence by MoEF.

### **Medical waste management**

The two incineration facilities are the Izmit Metropolitan Municipality Waste and Residue Treatment Incineration and the Recycling Company Incorporated (ZAYDA) and Istanbul Metropolitan Municipality Environmental Protection and Waste Materials Valuation Industry and Trade Company (STAÇ) Medical Waste and Destruction Facility.

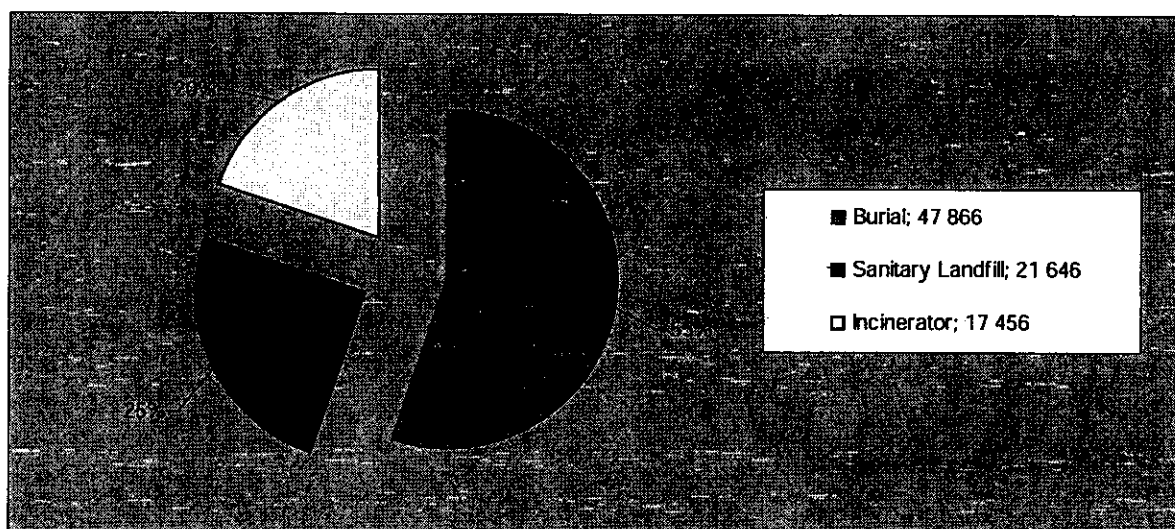
According to MoEF data (2006), medical waste disposed by incineration was 17 456 tonnes per year which represents 20% of the total medical waste generated. Old technology and low-capacity incineration units which were established within various hospitals have been closed due to both legislative and operating problems.

The present position is that medical wastes should be stored at special hazardous waste storage areas or dedicated medical waste disposal areas if they cannot be disposed by incineration. The technical criteria concerning storage are included in the By-Law on the Control of Medical Wastes (2005).

The number of sanitary landfills in Turkey containing these features is limited. According to the MoEF data (2006), in total, some 21 646 tonnes of medical waste was disposed of annually in sanitary landfills and in conformity with the legislation. This volume related to Ankara, Bursa, Denizli, Erzincan, Gaziantep, Izmir and Malatya provinces.

However, this represented only 25% of the total medical waste generated in Turkey. This means that some 47 866 tonnes of medical wastes (55% of the total) are buried within municipal dumpsites using quicklime (**Graph A.5.**).

Graph A.5. Amount of medical waste with respect to disposal methods, 2004 (tonnes)



Source MoEF, 2004

In the wake of administrative, technical and financial limitations in the municipalities, implementation of the relevant legislation needs strengthening and the installation of disposal facilities clearly need to be expedited. Another evident cause for concern is the training of staff. A training programme for both staff in health care institutions and in the municipalities was started on a country wide basis by MoEF in 2006.

#### **Management of waste batteries and accumulators**

The By-Law of Waste Battery and Accumulator Control (2004) prohibits, limits, prescribes, audits and stipulates legal responsibilities and penal implications in respect of battery and accumulator products with the aim of decreasing the use of hazardous substances in their production, their separate collection from domestic waste and other wastes after use, transportation and disposal, as well as their import and export.

The By-Law further states that disposing of waste batteries and accumulators either directly or indirectly in such a way that may pose a threat to the environment is prohibited. Moreover, in the context of the 'manufacturer's responsibility principle', legal obligations have been imposed on the importers of waste batteries and accumulators.

The rate of disposal for 2006 is specified in the By -Law as 80%. Licences have been granted by the MoEF for 13 facilities at present.

### **Vegetable oil waste management**

The management of vegetable oil waste is governed by the By-Law of Vegetable Waste Oil Control (2005). It is estimated that in Turkey, 1.5 million tonnes of vegetable oil is used for cooking purposes annually, and approximately 150 000 -300 000 tonnes of waste oil are produced. When these oils are disposed directly into sewerage systems, they cause considerable pollution problems.

From the date this By-Law entered into force (April 2005) until the end of 2005, some 65 000 tonnes of vegetable waste oil were collected. About 2 000 tonnes consisted of spent cooking oil collected from hotels, restaurants and food processors. Moreover, in order to collect these waste oils in a more efficient manner, the number of temporary storage sites increased from one in 2005 to eleven in 2007. Over the same period, the number of licensed vegetable waste oil transportation vehicles increased to 51. Currently, 37 collection facilities have been granted an operating license by MoEF.

In addition, audits were conducted by the MoEF under the supervision of the Ministry of Culture and Tourism at hotels and restaurants. As a result, some 6 385 facilities were contacted and 6 940 tonnes of waste oil were registered on an annual basis. In accordance with the By-Law, more comprehensive studies concerning the collection of domestic cooking vegetable waste oil will get underway by 2008.

It is also of interest that several recycling facilities have started to produce bio -diesel from vegetable waste oil which will make a significant positive net economic contribution in the future.

### **End-of-life-tyres**

The management of end-of-life tyres (excluding bicycle tyres) is governed by the By-Law on Control of End-of-Life Tyres (2006) and entered into force in 1 January 2007. A 'quota obligation' is applied to tyre manufacturers and importers for the collection of end-of-life tyres again within the framework of the 'manufacturing responsibility principle'.

As a result, from 1 January 2007, a quota is imposed on manufacturers based on projected internal market tyre tonnage, i.e., 30% for the first year, 35% for the second year, 40% for the third year, 45% for the fourth year, and 50% for the fifth year.

The MoEF is responsible for issuing the required licences. Currently, 4 recovery facilities have been granted operating licences.

(e) Regional disparities

Table A.10. Statistics on municipal solid waste at Statistical Regions Level II, for 2004

STATISTICAL REGIONS LEVEL II	PROVINCES IN THE REGION	Rate of population receiving SWM services in total municipal population (%)	Rate of collected waste disposed in sanitary landfill (%)
TRA2	Ardahan, Ardahan	95	0
TRB2	Van, Muş, Bitlis, Hakkari	90	0
TRC3	Mardin, Batman, Şırnak, Siirt	93	0
TRA1	Erzurum, Erzincan, Bayburt	98	0
TRC2	Artvin, Artvin, Diyarbakır	98	0
TRC1	Gaziantep, Adıyaman, Kilis	98	45.56
TR72	Kayseri, Sivas, Yozgat	95	39.17
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	76	0
TR81	Malatya, Elazığ, Bingöl, Tunceli	93	0
TR82	Kastamonu, Çankırı, Sinop	95	0
TR83	Samsun, Tokat, Çorum, Amasya	96	0
TR63	Hatay, Kahramanmaraş, Osmaniye	96	0
TR52	Konya, Karaman	96	0
TR71	Kırkkale, Aksaray, Niğde, Nevşehir, Kırşehir	90	0
TR33	Manisa, Afyon, Kütahya, Uşak	98	0
TR61	Antalya, Isparta, Burdur	99	26.53
TR22	Bakırköy, Çanakkale	99	19.78
TR81	Zonguldak, Karabük, Bartın	98	0
TR62	Adana, Mersin	99	0
TR32	Aydın, Denizli, Muğla	100	13.96
TR41	Bursa, Eskişehir, Bilecik	100	47.02
TR21	Tekirdağ, Edirne, Kırklareli	99	0
TR51	Ankara	100	0
TR10	İstanbul	100	92.97
TR31	İzmir	100	59.22
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova	99	22.39

EUROSTAT format, Data source: TURKSTAT



### **A.1.3. STRATEGIC COHERENCE FRAMEWORK**

The SCF is a strategic document which provides a "frame of reference" for the OPs under regional development and human resources development components of the IPA.

In line with the Council Regulation (EC) No . 1085/2006 of 17 July 2006 establishing an Instrument for Pre-Accession Assistance, the SCF has been prepared by Turkish authorities in close cooperation with the Commission. Management, implementation and monitoring mechanisms for the SCF will be finalized after the enactment of Prime Ministry Circular.

The SCF, as a major strategic document, takes into account the priorities of the Republic of Turkey and those of the EU as stated in major policy documents, especially in MIPD adopted by the Commission on April 30, 2007.

EOP will be in compliance with the objectives of "Turkey's EU Integrated Environmental Approximation Strategy (UÇES), 2007-2023". During the implementation of EOP, projects will respect to sustainable development principles and will meet EU Environmental Acquis. Due to their significant benefits and the nature of requiring heavy -cost investment, water, wastewater and solid waste services are given priority in EOP. The following broader criteria set will be considered to guide in establishing project selection criteria set of EOP:

1. Relevance to environmental plans and sectoral strategies and policies ;
2. Population (Municipalities having higher population will be given higher priority) ;
3. Shortage of financing capacity of municipalities (Municipalities having capacity of co-financing and meeting operational costs will be given priority) ;
4. Financial sustainability (cost recovery principles, user and polluter pays principles);
5. Environmental priorities (The infrastructure projects contributing to the following factors will be prioritised) ;
  - Improvement in public health ,
  - Protection of sensitive areas ,
  - Protection of natural resources .

#### **A.1.4. LEGAL FRAMEWORK**

In 2003, Turkey adopted a National Programme for Adoption and Transposition of the EU Environmental Acquis and, since then, a substantial body of corresponding legislation has been transposed. In 2006, good progress was made by transposing legislation on urban waste treatment and the quality of bathing water. Some aspects of the EC Directives are already covered by Turkish legislation, although in practice, in the water sector, both transposition and implementation of the Acquis remains at an initial stage.

Transposition of the Acquis on solid waste management is well advanced and in good accord with the "Waste Framework Directive"<sup>14</sup>. Further alignment is needed, e.g., on legislation regarding polychlorinated biphenyls, end-of-life vehicles, waste from electrical/electronic equipment, restriction of certain hazardous substances in electrical and electronic equipment, landfills and waste incineration.

##### **(a) Water supply and wastewater**

The legal framework is based upon the Law on Environment No. 2872 (1983) amended by Law No. 5491 (2006) together with the Law on Fisheries No. 1380 (1971) amended by Laws No. 3288 (1986) and No. 4950 (2003) laying down rules for controlling and protecting the quality of inland and sea water including controlling the discharge of all wastewater, the Groundwater Law (1960), Law No. 6200 for Establishment and Duties of General Directorate of State Hydraulic Works (1953) and the Law on Waters (1926).

These laws are complemented by a number of more specific regulations, including:

- By-Law on Bathing Water Quality (2006);
- By-Law on Urban Wastewater Treatment (2006);
- By-Law on Water Intended for Human Consumption (2005);
- By-law on the Quality of Surface Water Intended for the Abstraction of Drinking Water (2005);
- By-Law on Control of Pollution by Dangerous Substances in Water and its Environment (2005);
- By-Law on Water Pollution Control (2004);
- By-Law on Aquaculture (2004);
- By-Law on Protection of Waters against Nitrate Pollution from Agriculture (2004);
- By-Law on Discharges of Wastewater to Sewerage Systems (1984);

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<sup>14</sup> Council Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste.

- By-Law on Fisheries (1971 and amended in 1986 and 2003);
- By-Law on Disinfection of Drinking Water (1967).

The management of sludge for agricultural purposes is specified in the By-Law on Control of Soil Pollution (2005). This is encouraged using 'best practices' and also in the application of the "Sewage-Sludge Directive"<sup>12</sup>.

Turkey is a signatory to the Barcelona Convention (Convention on the Protection of the Marine Environment and the Coastal Region of the Mediterranean), the Bucharest Convention (Convention on the Protection of the Black Sea Against Pollution), the MARPOL 73/78 Convention and its Appendices (I, II, V) (International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978), OPRC Convention (International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990), CLC' 92 Convention (International Convention on Civil Liability for Oil Pollution Damage, 1992) and FUND' 92 Convention (International Oil Pollution Compensation Fund, 1992).

To give effect to Decision No. 2850/2000/EC of the European Parliament and of the Council dated 20 December 2000 setting up a Community framework for co-operation in the field of accidental or deliberate marine pollution, Turkey has passed the Law Pertaining to Principles of Emergency Response and Compensation for Damages in Pollution of Marine Environment by Petroleum and Other Noxious Substances (2005 ) and its implementation By-laws.

In order to prevent ships discharging their waste, the By -Law on Taking Waste from the Ships and Waste Control (2004) has been prepared according to the Port Waste Directive<sup>15</sup>.

With respect to the Barcelona Convention, monitoring in seawater has been carried out in the Mediterranean and Aegean Seas for more than one decade under the title of 'MED POL Pollution Monitoring Activities'. In addition and within the Bucharest Convention, monitoring activities have been carried out in the Black Sea since 2004 under the 'Black Sea Pollution-Monitoring Project'.

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<sup>15</sup> Directive 2000/59/EC of the European Parliament and of the Council of 27 November 2000 on port reception facilities for ship-generated waste and cargo residues.

### **(b) Waste management**

Again, the legal framework is based upon the Law on Environment No. 2872 (1983) amended by Law No. 5491 (2006). This, together with the regulation on Control of Solid Waste Management (1991), was further revised in 1991, 1992, 1994, 1998, 1999, 2000 and 2002 and 2005.

These laws are also complemented by a number of more specific regulations, including:

- By-Law on Packaging and Packaging Waste Control (2004 and amended in 2007);
- By-Law on the Control of the Tyres which have completed their life -cycle (2006);
- By-Law on Control of Hazardous Waste (1995 and amended in 2005);
- By-Law on Control of Solid Waste (1991 with several amendments between 1992 and 2005);
- By-Law on the Control of Medical Wastes ( 1993 and amended in 2005);
- By-Law on Waste Vegetable Oil Control (2005);
- By-Law on Soil Pollution Control ( 2001 and amended in 2005);
- By-Law on Excavation Soil, Construction and Demolition Waste Control (2004);
- By-Law on Waste Oil Control (2004);
- By-Law on Control of Used Batteries and Accumulators (2004);
- Communiqué on General Rules to be Obeyed on Wastes used as Additional Fuel (2005).

The Convention on the Control of Trans boundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) was signed in 1989, for the purpose of preventing the illegal export of waste from developed countries to Turkey, and was ratified in 1994.

Tendering procedure for the project "Technical Assistance for the Preparation of National Waste Management Plan in Turkey" is going on. The project will be financed by the national sources. This project aims to prepare "National Waste Management Plan" and "Regional Waste Management Plans" including all kinds of waste streams (household, hazardous and special waste as well as medical waste, etc.) in accordance with national and EU legislation.

The National Waste Management Plan is planned to be completed in 2008. Regional Waste Management Plans will be developed based on the results of the National Waste Management Plan.

### **(c) Horizontal issues**

Equal opportunities for men and women are fundamentally guaranteed in the Constitution (Article 10) as well as prohibiting all forms of discrimination based upon language, race, colour, sex, political opinion, philosophical belief or religion. The Labour Law No. 4857 (2003) as well as the Civil Servant Law No. 657 (1965) ensures all citizens the right to work, as well as equal conditions for both men and women as regards, for example, work load and remuneration.

The Law on Environment No. 2872 (1983) as amended by Law No. 5491 (2006) is a major environmental milestone and provides the legal basis for the responsibility of the municipalities to deliver environmental services. It defines a clearer role for the MoEF and allows for recruitment of additional staff, as well as for additional financial resources in the environmental sector. It also introduces sustainable development principles as a cross-cutting policy, in particular for energy, transport and agriculture. Moreover, it embodies protection of the natural resources, polluter liability, the principles of user and polluter pays, sectoral integration, public awareness and public involvement. These also constitute key EU environmental policy objectives.

The National Environmental Strategy & Action Plan and EIA requirements (part of Environmental Law No. 5491) integrate the principles of sustainable development into all policy sectors. Furthermore, sustainable development is addressed by the project entitled 'Integration of Sustainable Development into Sectoral Policies'<sup>16</sup>. This facilitates the integration of these principles into national and regional development planning, both at the micro-economic and sectoral levels.

However, sustainable development is still not applied systematically and certain shortcomings are apparent in relation to **(1)** understanding the general principles and concepts, **(2)** co-ordination both between the policy making authorities (i.e. Ministries and their affiliated organisations) and implementation at central and local levels, and **(3)** at Government and social level (including the private sector) with accepting individual ownership and responsibility for the goals.

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<sup>16</sup> Financed under the 2004 EU Pre-Accession Financial Assistance and which started in 2006.

Harmonisation of the Acquis related to the Birds and Habitat Directives<sup>17</sup> and the establishment of NATURA 2000 networks is currently partially transposed through the following laws: the Law on Environment No. 2872 (1983) as amended by Law No. 5491 (2006), the Law on Fisheries No. 1380 (1971) amended by Law No. 3288 (1986) and amended by Law No. 4950 (2003), the Law on Terrestrial Hunting No. 4915 (2003), the Law on National Parks No. 2873 (1983), the Law on the Protection of Cultural and Natural Heritage No. 2863 (1983), the Law on Forests No. 6831 (1956) and Statutory Decree on the Establishment of the Authority for the Specially Protected Areas No. 383 (1989). These laws apply various conditions regarding the conservation of sites and species to support biodiversity by taking economic, social, cultural and regional needs into consideration, e.g., nature conservation activities being regulated in national parks, nature parks, nature reserve areas, natural monuments, special protection areas, natural and archaeological protected areas, conservation forests, seed pools, gene forests and agricultural areas.

Some provisions of the "Birds Directive"<sup>17</sup> are also covered within the context of the national environmental legislation. For example, in the Law on Terrestrial Hunting No. 4915 (2003), there are rules for the protection of wildlife. In Article 4, protection areas and wildlife improvement areas have been defined with the aim of protecting the wild bird habitats. Also, in the By-law on Wildlife Protection and Improvement Areas, there are provisions for the classification, management and inspection of these areas, and with decisions regarding activities which are allowed or prohibited.

The second part of the Draft Law on the Conservation of Nature and Biodiversity contains provisions relevant to NATURA 2000 sites. It also includes the methodology for determining NATURA 2000 sites, their management, and a schedule of banned activities.

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<sup>17</sup> Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (the Birds Directive) and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive).

## A.1.5. INSTITUTIONAL FRAMEWORK

### (a) Water and wastewater sector

There are a number of institutions in Turkey which have duties and responsibilities in water and wastewater management. These are defined in their respective establishment laws and are summarised as follows:

- **The Municipalities** are responsible for constructing and operating the required infrastructure for water and urban wastewater management. In 2004, there were 3 225 municipalities in Turkey of which 16 were metropolitan municipalities. The Directorates for Water and Sewerage ('SKIs' in Turkish) in metropolitan municipalities (or their equivalent in other municipalities) and service unions of local authorities are in charge of the construction, operation and maintenance of water supply and urban wastewater infrastructure.
- There are 35 106 villages with a population of less than 2 000 inhabitants (TURKSTAT 2004) outside the municipal boundaries. Constructing and operating environmental infrastructure in these locations is the responsibility of the **Provincial Administrations**.
- **The Ministry of Environment and Forestry (MoEF)** has responsibility for the overall co-ordination of the development and implementation of drinking and wastewater policies in Turkey, as well co-ordinating coherence with the EU Environmental Acquis. In particular, they are responsible for the preparation and implementation of environmental plans, pollution prevention of water resources, as well as monitoring, authorising, inspection and preparing EIAs.
- **The Ministry of Health (MoH)** is responsible for determining the quality standards for drinking water, monitoring these standards and for the appropriate legislation concerning these areas.
- **The Ministry of Agriculture and Rural Affairs (MARA)** is responsible for developing research studies, plans, programmes and projects for protecting and improving soil, water, flora and fauna, fisheries and similar resources; adopting necessary measures for protecting the agricultural environment; controlling and protecting the quality of inland and sea water including the control of all wastewater; monitoring nitrate pollution in freshwater and groundwater.
- **The Ministry of Culture and Tourism** is supporting public investment including environmental infrastructure in tourist areas (mainly along the shoreline). This includes municipalities and villages as well as hotels, resorts and holiday villages.

- **The General Directorate of State Hydraulic Works ( DS• )** is responsible for water development, management and allocation (surface and groundwater), monitoring water quantity and quality. The DS• is also responsible for the construction of irrigation schemes and dams as well as developing and constructing water supplies for settlements having a municipal administration (Master Plans, design, construction, including technical and financial assistance). Furthermore, DS• is responsible for wastewater treatment systems in situations where urgent action is required for the protection of public health and the environment.
- **The Bank of Provinces ( İller Bank )** is affiliated with the Ministry of Public Works and Settlements. The Bank provides services at the request of the municipalities and also technical and financial assistance to local administrations for their drinking water and wastewater projects. The municipalities are the shareholders of the Bank and, in effect, act as loan guarantors. The restructuring process of İller Bank has been initiated in order to strengthen its role as an investment and development bank but the process has not been fully completed pending the passage of enabling legislation.
- **The Former General Directorate for Rural Services (2002 reform)** were responsible for water supply and sanitation in villages with a population of less than 3 000 inhabitants. Their responsibilities have since been transferred to the Special Provincial Administration (except for İstanbul and İzmit Metropolitan Municipalities where responsibility remains with the municipalities).
- **Prime Ministry Under-Secretariat of the State Planning Organisation (SPO)** has responsibility for co-ordinating the preparation and realisation of annual investment programmes. They have the function of approving all investment projects requiring public finance from both internal and external sources.
- **Prime Ministry Turkish Statistical Institute (TURKSTAT)** is responsible for collecting, evaluating and distributing the relevant data and statistics.
- **Ministry of Foreign Affairs** has international responsibilities for determining and co-ordinating foreign policy regarding the environment and waters within a trans-boundary context.



## **(b) Solid waste management**

There are a number of institutions in Turkey which have duties and responsibilities for solid waste management. These are also defined in their respective establishment laws, summarised as follows:

- **In the Municipalities** , a dedicated municipal or service unions of local authorities is responsible for constructing and operating the required infrastructure.
- **In the villages outside the municipalities** , construction and operation of solid waste infrastructure is the responsibility of the **Provincial Administrations** .
- **The Ministry of Environment and Forestry (MoEF)** is responsible for the overall co-ordination of the development and implementation of solid waste policies in Turkey as well as co-ordinating the approximation of the EU Environmental Acquis. The main responsibility of MoEF on waste management is -
  - Publishing waste management plans and updating them, thus, defining specific duties for solid waste management;
  - Regulating approvals sought for waste import and hazardous waste export and its transportation through Turkey.
- **The Ministry of Finance** is responsible for the regulation and administration of the 'environmental cleaning tax' (see also Section A.1.6.(c)).
- **The Ministry of Health (MoH)** is responsible for licensing, monitoring, and enforcement of laws regarding disposal facilities.
- **The Ministry of Culture and Tourism** supports solid waste management in tourist areas.
- **The Bank of Provinces (İller Bank)** provides technical and financial assistance in solid waste management to local administrations.
- **Prime Ministry Under-Secretariat of the State Planning Organisation (SPO)** has responsibility for co-ordinating the preparation and realisation of annual investment programmes. Their approval is required for all investment projects requiring public finance from both internal and external sources.
- **Prime Ministry Turkish Statistical Institute (TURKSTAT)** is responsible for collecting, evaluating and distributing relevant data and statistics.

## A.1.6. PRESENT ECONOMIC INSTRUMENTS

### (a) Investment needs in compliance with the EU Acquis, 2007 -2023

According to the UÇES, 2007 -2023, the preliminary estimate for investment costs in order to comply with the EU Environmental Acquis including industrial, agricultural and urban infrastructure is in the order of EUR 59.006 billion.

The projections for distribution of the needs per sector for the period 2007 -2023 are as follows:

Table A.11. Investment needs per sector, 2007-2023.

Sectors	Investment needs		
	(Million YTL)	(EUR Million)	Rate
Water sector total	63 124	33 969	0.58
Solid waste sector total	17 766	9 560	0.16
Air sector total	796	428	0.007
Noise sector total	0	0	0.00
Chemicals sector total	0	0	0.00
Industrial pollution prevention sector total	27 474	14 785	0.25
Nature protection sector total	490	264	0.004
<b>Total</b>	<b>109 650</b>	<b>59 006</b>	<b>1.00</b>

Source, UÇES 2004

The sectoral distribution of environmental investments between 2007 -2023 is estimated at EUR 34 billion for the water sector (including wastewater) and EUR 10 billion for the solid waste sector.

**Drinking Water:** Local administrations are responsible for financing drinking water services (on a 'user pays principle'). However, central government will continue to support those projects which are considered to have the greater economic impact. In this respect, at least 55% of financial resources from the central budget for the environment sector will be used in drinking water projects of DS. In addition, 30% of EU Funds (i.e., IPA, up to 2013) will be allocated for projects between 2007 -2010 but this will decrease to 20% after 2011<sup>18</sup>. Co-financing of the EC-funded environmental infrastructure projects related with EOP will be provided by İller Bank.

**Wastewater:** Local administrations are responsible for financing wastewater services. Some 40% of EU Funds (i.e., IPA, up to 2013) will be allocated to wastewater projects and this will increase to around 50% after 2011<sup>18</sup>. Co-financing of the EC-funded environmental infrastructure projects related with EOP will be provided by İller Bank.

**Solid Waste:** Local administrations are responsible for financing waste services ('polluter pays principle'). Some 30% of EU Funds (namely IPA, up to 2013) will be allocated to solid waste projects<sup>18</sup>. Co-financing of the EC-funded environmental infrastructure projects related with EOP will be provided by İller Bank.

Current expectation is that some 80% of the environmental expenditure will be financed by the public sector and remaining 20% by the private sector<sup>18</sup>.

#### **(b) National Environmental Fund (NEF)**

Central administration resources include the National Environmental Fund (NEF) managed by the MoEF.

The NEF was established by the Law on Environment No. 2872 (1983) as amended by the Law No. 5491 (2006). Revenue sources are given in the By-Law on Follow-up and Collection of Environmental Revenues and Utilisation of Allowances Foreseen In Return for their Collection, No. 26482, dated 3 April 2007. Besides detailing the procedures and collection of environmental income (**see next Section**), this By-law also stipulates the terms and rate of interest when these funds are allocated for environmental expenditures, grants and loans.

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<sup>18</sup> These percentages are provisional and may be changed at a later date depending upon agreement by the relevant parties.

The categories of projects eligible for financing from the NEF are established through an annual plan adopted by the fund investigation committee <sup>19</sup>. Fund resources are intensively used for wastewater treatment, waste management, recycling, EIA studies, protection of biological diversity, environmental monitoring and measurement projects.

**(c) Environmental revenues from tariffs, fees and administrative fines**

Currently the basis for tariff policy is provided in the following legislation:

- (1) Law on Environment No. 2872 (1983) as amended by the Law No. 5491 (2006), specifically Articles 8, 11 and 16;
- (2) Municipal Law, No. 5393 (2005);
- (3) Metropolitan Municipalities Law No. 5216 (2004);
- (4) Municipal Revenue Law, No. 2464 (1981) as amended by Law No. 5035 (2003);
- (5) Law on Establishment and Duties of General Directorate of Istanbul Water and Sewage System Administration No. 2560 (1981);
- (6) Law No. 6200 for Establishment and Duties of General Directorate of State Hydraulic Works (1953).

According to the By-Law No. 26482 dated 3 April 2007 environmental revenues can be raised by way of:

- Payments from 1% of Cost Insurance Freight (CIF) costs for imported fuel and 0.05% of CIF costs of scrap;
- 1% of the fees for water and wastewater collected by the Water and Sewerage Administrations of Metropolitan Municipalities;
- Interest from loans;
- Grants, donations and aid sources;

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<sup>19</sup> (1) For project preparation and construction of wastewater treatment plants, solid waste disposal plants, recycling plants, in which rehabilitation of environment and prevention of environmental pollution are aimed, a credit can be granted up to the 45% of the project value to natural and legal persons and paid in full or in installments in accordance with the articles of the contract. (2) The maturity of credit to be given for the project preparation and construction can be 10 years as maximum, and a grace period can be given up to 3 years. (3) The maturity of the credit to be given for the project preparation and construction for other facilities and plants related to prevention of environmental pollution and environmental rehabilitation can be 5 years as maximum, and a grace period can be given up to 2 years. Back payments can be made in equal installments as from the year following grace period.

- Administrative fines imposed according to the Law on Environment No. 2872 (1983) as amended by the Law No. 5491 (2006).

These revenues are being used **(1)** as loan or grant for feasibility and preliminary water, wastewater and solid waste studies, **(2)** project preparation and construction works of wastewater treatment plants, **(3)** waste disposal and solid waste recovery facilities, **(4)** expenses concerning the 'elimination of environmental pollution'.

Pursuant to the By-Law on Tariffs<sup>20</sup> which is published by each metropolitan municipality based upon the authority delegated by the Law on Establishment and Duties of General Directorate of Istanbul Water and Sewage System Administration No. 2560 (1981), fees are collected for wastewater discharge (but subject to a limit of 50% of the fees charged for water supply).

Tariffs for industrial facilities are laid down in the By-Law on Discharge of Wastewater into Sewerage Networks<sup>21</sup> and if the discharge parameters are not met then a fine is imposed according to the pollution load and volume.

According to the By-Law on Determination of Tariffs for Wastewater Infrastructure Facilities and Domestic Solid Waste Disposal Facilities which is in the course of publication, tariffs are set according to each municipal council on an annual basis. The wastewater infrastructure administrations and municipalities must fully recover their costs arising from the establishment, operation, maintenance and rehabilitation of wastewater infrastructure. In addition, solid waste disposal administrations will set tariffs and fees for the full cost recovery of collection, transfer, upgrading, monitoring and maintenance of the facilities after closure.

The Municipal Revenues Law No. 2464 (1981) as amended by Law No. 5035 (2003) establishes the (literally translated) 'environmental cleaning tax' (Turkish: Çevre Temizlik Vergisi) and its implementation. This tax is updated and published in the 'Communiqué on Municipality Revenue' every year by the Ministry of Finance. According to the Communiqué for 2006, this tax will be based upon water consumption and charged to households in 2007 as YTL 0.17/m<sup>3</sup> for metropolitan municipalities and YTL 0.14/m<sup>3</sup> for other municipalities. The amount to be paid will be clearly stipulated on the water bill and collected by the appropriate authority.

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<sup>20</sup> Published by each Metropolitan Municipality so the numbers and dates of enforcement are different.

<sup>21</sup> Again, some Metropolitan Municipality sets their own by-Laws, so the number and dates of enforcement are different.

The level of tax varies for different commercial entities depending on their legal basis (incorporated companies, limited liability, joint venture, private ownership). This tax is also updated and published in the 'Communiqué on Municipality Revenue' on an annual basis by the Ministry of Finance.

As mentioned in **Section A.1.4.**, the Law on Environment No. 2872 (1983) as amended by the Law No. 5491 (2006) is considered a major milestone in setting environmental tariffs, fees and administrative fines. For example, Article 11 stipulates 'the parties which are using and/or will be using wastewater infrastructure systems, shall contribute to all the expenses that will be incurred by the administrations responsible for the treatment systems; concerning investments, operation, maintenance, repair works, rehabilitation and cleaning works, in proportion to pollution load and amount of wastewater regardless of whether or not having a connection system. Those who benefit from these services are subject to a fee for collection, treatment and disposal of wastewater at the rate determined by the municipal commission and the other administrations that are authorised in this Article. The fees that are collected in accordance with the provisions of this paragraph cannot be used for services other than wastewater related services.'

Article 11 states that 'the modalities and principles related to the contribution share of the expenditures and establishment, maintenance, rehabilitation and operation of all kinds of disposal systems and treatment systems, wastewater treatment systems, pre-treatment systems and wastewater infrastructure systems that will be installed in authorised regions of the Water and Sewerage Administrations of the Metropolitan Municipalities and the Municipalities, the Industrial Zone Administrations, the Co-operatives of Small Industrial Estates, the Ministry of Culture and Tourism or its accredited units and wastewater infrastructure administrations will be determined and implemented by the MoEF'.

In addition, until January 2007, the revenues from administrative fines were being used, among other purposes, for sewerage systems and the rehabilitation of rivers. After this date, and as stated in Article 24 of the Law on Environment No. 2872 (1983), 50% of administrative fines are used to compensate the expenses for audits made according to the Law and other environmental services. The remaining 50% is recorded in the general budget as revenue.

**Table A.12. Administrative fines (YTL)**

Year	2004	2005	2006
Total (YTL)	3 511 131	1 363 367	461 754

Annex-1 was added to the Law on Environment No. 2872 (1983) as amended by the Law No. 5491 (2006) with a decision stating that the Cabinet is authorised to increase fines, which are determined in Articles 20, 21 and 22, up to an amount of ten times the value. Although there have been debates about the actual ratio of fine increase to be applied in various cases, nevertheless this legislation demonstrates the determination of the administration to ensure that environmental protection is a priority and heavy sanctions will be applied for infringements, including possible imprisonment in severe cases.

**(d) Other economic instruments**

- The metropolitan municipalities, municipalities and/or the water and sewerage management units include an 'environmental cleaning tax' in their 'Water Consumption Bill' that they are obliged to apply to residential properties from 1 Jan 2004;
- The tax for business premises is discounted by 50% in municipalities which have a development priority and where the population is less than 5 000 excluding those within the boundaries of the metropolitan municipalities;
- The new By-Law on Determination of Tariffs for Wastewater Infrastructure Facilities and Domestic Solid Waste Disposal Facilities is under preparation and expected to come into force by the end of the 2007;
- Guidelines have already been drafted to assist municipalities in setting their tariffs for solid waste services. They include provisions for 'full-costing' and 'polluter pays' principles. The 'Cost Plus Method' is provided in order to calculate a 'total system cost' which includes the service costs plus the yield on capital;
- The DS• has constructed irrigation projects and transferred operational rights to the Water User Organisations. These organisations do not receive ownership rights from DS•. Law No. 6200 (1953) states that all of the actual operations and maintenance (O&M) costs incurred by DS• for irrigation investments are subject to repayment by the beneficiaries. The charges are determined each year by Decree from the Council of Ministers. This law also authorises the Council of Ministers to make discounts for O&M costs.

Both the By-law and the guidelines which are under preparation enable the municipalities to set their own tariff taking into account such parameters as the population served, number of staff employed in the sector and equipment costs in such a way that the sustainability of environmental infrastructure services will be ensured.

It should be noted that most of the key legislation for environmental tariffs, fees and administrative fines has only been in force for, at most, the last two years. For this reason it is not possible to provide definitive details of whether the laws are being applied equally throughout the country, nor to assess the effectiveness of the collection process, how the revenues are being used, nor whether the tariffs are sufficient to cover costs (e.g. O&M) including whether or not affordability levels have been properly taken into account. While full evidential data are not yet available, several studies are proceeding at present both at national and regional level. However, it can be stated that the MoEF are satisfied that the environmental fees are collected efficiently by the Water and Sewerage Administrations of the Metropolitan Municipalities.

## **A.2. COMMUNITY STRATEGIC FRAMEWORK**

In July 2006 the EU adopted a number of Regulations<sup>22</sup> and the CSG, 2007-2013, completed the legislative framework which incorporated the principles and priorities of the EU Cohesion Policy. They act as an indicative framework for Member States to put forward their National Strategic Reference Framework (NSRF) for 2007 -2013 defining their own specific development needs and responding strategies. This national strategy (SCF) forms the basis for the OPs developed by each individual sector.

Danube and Black Sea Region Task Force, set up in November 2001 (DABLAS)<sup>23</sup> Initiative and Barcelona Convention will be taken into account in investment plans as mentioned in the Turkish SCF.

The CSF so comprehends the Lisbon Strategy<sup>24</sup> of March 2000 which introduced long term economic and social development goals in order for 'Europe to become the most competitive and dynamic knowledge -based economy in the world, capable of sustainable economic growth with more and better jobs, and greater social cohesion' .

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<sup>22</sup> Regulations 1083/2006/EC laying down the general provisions on the European Regional Development Fund (ERDF), European Structural Fund (ESF) and Cohesion Fund (CF); 1080/2006/EC on the ERDF; 1081/2006/EC on the ESF; 1082/2006/EC on the EU grouping of territorial cooperation; 1084/2006/EC on the CF.

<sup>23</sup> The DABLAS Task Force comprises a number of representatives from the countries in the region, the International Commission for the Protection of the River Danube (ICPDR), the Black Sea Commission, International Financing Institutions (IFIs), the EC, interested EU Member States, other bilateral donors and other regional/international organisations with relevant functions. The EC General Directorate for Environment (DG ENV) holds the Secretariat of the Task Force.

<sup>24</sup> Also known as the Lisbon Agenda or Lisbon Process.



Another important priority for the Community framework is EU competitiveness. In this context, 'growth centres' are perceived as a major dynamic both for competitiveness and convergence. For this reason, Turkey particularly has a special interest in establishing and supporting such growth centres primarily in the relatively poorer regions and in accordance with socio economic convergence priority.

The CSF thus combines the competitive objectives of the Lisbon Strategy with convergence objectives of social and economic cohesion. It also provides important inputs and benchmarks for key Turkish strategic policy documents such as the 9<sup>th</sup> NDP, SCF, MIPD and, indeed, for this EOP. Although the guidelines are more binding for Member States, nevertheless Turkey foresees the need for policy harmonisation in order to achieve effective adoption of the systems and implementation structures.

This EOP contributes strongly 'to strengthen the synergies between environmental protection and growth' which is a pillar of one of the three priorities of the CSF, namely, 'improving the attractiveness of Member States, regions and cities by improving accessibility, ensuring adequate quality and level of services, and preserving their environment potential'. In particular, developing environmental infrastructure will contribute to reducing external environmental costs for the economy such as health costs, clean-up costs and damage recovery. Developing prevention and implementing recycling in the solid waste sector will contribute to maximising economic benefits and minimising costs. These activities which stimulate innovation are cost effective and stimulate productive job creation.

Among the several ways identified by the CSF in which cohesion policy can continue to make a significant contribution to the achievement of the Lisbon priorities, the EOP emphasises:

- investing in areas of high growth potential: further business development is envisaged by providing sustainable water and wastewater services and adequate and reliable solid waste management where domestic funds are insufficient;
- supporting the implementation of coherent strategies over the medium to longer term: by using the opportunity to apply a stable seven -year investment programme (initially for three years for the EOP, 2007-2009) as the basis for long term, sustainable development;
- developing synergies and complementarities with other Community policies : is strongly supported, in particular, with activities related to approximating the EU Environmental Acquis and the broader aims of sustainable development promoted under other sectors;

- assistance provided in the framework of the SCF must fully respect compliance with sustainable development principles and meet relevant environmental norms, and the relevant Environmental Acquis such as directives on EIA, Habitats and Birds (in order to avoid negative impacts on areas to be determined as NATURA 2000 sites) as appropriate;
- investments in the environment sector will be planned in line with the river basin approach and waste management planning;
- the projects to be financed must be appraised case by case to ensure consistency with the relevant obligations of the Environmental Acquis.
- mobilising additional resources : activities supported by the EOP leverage additional national resources, both public and private, for use in coherent national and regional strategies;
- improving governance : activities supported by the EOP are designed to favour multi improvements of governance including **(1)** implementation of institutional governance activities (integrated at the earliest stage of project preparation i.e. during preparatory and feasibility studies), **(2)** developing transparency in policy making decisions, **(3)** promoting an evaluation culture by developing benchmarking performance tools for service delivery and monitoring, and **(4)** promoting best management practices;
- promoting an integrated approach to territorial cohesion : the EOP contributes to sustainable development actions by ensuring that social, economic, and environmental factors are integrated into regional strategies and plans.

In line with the priorities of practicality and feasibility of implementation over the period of 2007-2009, the EOP will concentrate upon two sectors namely **(1)** water and wastewater, and **(2)** solid waste.

### **A.3. PARTNERSHIP CONSULTATION**

#### **A.3.1. 'PRINCIPLES OF PARTNERSHIP' IN MANAGEMENT OF EU FUNDS**

The 'Principles of Partnership' have an important role in the management of the EU Structural Funds (CFs, ERDFs and ESFs) and are described as a legal requirement in EC Directives. In addition, the management of IPA Funds and indeed the IPA Common Provisions mention that during the planning of grants incorporating civil society and other stakeholders, the implementation of these principles is mandatory <sup>25</sup>.

The partners to be included in the process are **(1)** local administrations and other public authorities, **(2)** economic and social partners, **(3)** NGOs (including environmental and gender organisations), **(4)** citizens or consumer institutions demanding participation in the process of the OP, **(5)** parties that could be directly or indirectly affected by the programme strategy (e.g. agencies providing co-financing, final beneficiaries of projects, expert/research institutions, Chambers, syndicates).

These principles contribute to the process in the following ways:

**They support the preparation of more qualified programmes in line with EU principles:** Whilst programming the use of EU funds, partners can contribute by being afforded information about the programme content during the early stages and effect the relevant changes. In this way, it is ensured that accurate environmental, social and economic targets are identified and projects are selected that are in line with these targets. In addition, through discussions with local people, their knowledge and expertise can be utilised, thus enhancing programme relevance.

**They increase the performance of the programme:** Applying the principles in the implementation stage allows an open forum to discuss and thus, as much as possible, reduce possible areas of conflict and enhancing the cost effectiveness of eventual programme expenditures. Transparency also counteracts possible funding irregularities while ensuring that funds are properly targeted towards those priorities and measures identified in the EOP.

**They increase the positive impact of the programme:** making it easier to develop projects that are in line with the real needs of local stakeholders and also facilitate monitoring of the environmental, social and economic impacts of the projects and the EOP.

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<sup>25</sup> Council Regulation (EC) No. 1085/2006 dated 17 July 2006 establishing an Instrument for Pre-accession Assistance - the IPA Regulation, especially Part I, Common Provisions, Title II, Common Rules for Implementation, Chapters II and IV.

The IPA Regulation gives each beneficiary country the discretion to determine their own programme partners and to co-ordinate their participation under the framework of its national regulations and implementation policies. However, during implementation, the following principles must be taken into consideration;

- Equality of partners;
- Transparency of process with due regard to the needs of different partners;
- Clearly stating the structure, content and responsibilities of the process from the outset;
- Sharing information in a timely manner;
- Ensuring the process is within the capacity of the partners;
- Ensuring consistency of document control e.g. all partners are working on the same version of documents;
- If possible, ensuring decision-making is by consensus or by agreement with a large majority;
- Sharing information transparently with the public and all partners as to selection procedure.

The MoEF is conducting all activities of the EOP in line with these principles and in co-operation with its partners. More details are given **in the next Section**.

### **A.3.2 PARTNERSHIP CONSULTATION FOR THE EOP**

The MoEF organised the elaboration of the EOP, 2007 -2009, in compliance with the partnership principle.

Following the issue of the IPA Regulation dated 17 July 2006, the preparation of the EOP was launched by the MoEF under the overall co-ordination of the SPO. During the preparation process, importance was attached to ensuring coherence and consistency with Turkish strategic frameworks including the Accession Partnership and the SCF .

Consultations were carried out with public institutions and NGOs at national and local level and in accordance with operational national rules and practices. Partners and actors including other Ministries, other Government institutions, the private sector, other civil society organisations as well as academics were actively involved. A list of all participating stakeholders as well as events and meetings held is given **in Annex 1-2**.

The MoEF co-operated with the Regional Environmental Centre - REC Turkey<sup>26</sup> - to reach the environmental NGOs active in the country, inform them about the programming process and effectively involve them in the complete procedure. REC Turkey also prepared a short guidebook<sup>27</sup> to assist the consultation process. The guidebook was specially designed as an information base to inform NGOs and other relevant stakeholders on the structure, content and strategy of the EOP, and to foster and facilitate their involvement in the management of the IPA for the environmental sector.

A first draft version of the EOP was completed in March 2007. This was distributed to NGOs in May 2007 for collecting their initial comments, but it did not yet include a list of selected projects. Response observations and opinions were taken into consideration for the final version of the EOP by August 2007 which included a list of proposed selected projects. This was distributed to NGOs who were again requested to express views. The final draft emerged after the response comments were taken into account.

Participating partners in the formulation of the EOP will have continuing involvement in monitoring its implementation along with other representatives within the EOP Monitoring Committee.

Sequentially, the consultation process proceeded as follows:

- A first meeting was organised in July 2006 at the MoEF in order to present the basics of the IPA and to plan the different stages of the EOP preparation, including the establishment of working groups;
- Stakeholders were updated about the preparation process and training was organised under the co-ordination of the SPO;

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<sup>26</sup> Regional Environmental Centre - REC Turkey ([http://www.rec.org.tr/index\\_en.asp](http://www.rec.org.tr/index_en.asp)) is the country office of the Regional Environmental Centre for Central and Eastern Europe ([www.rec.org](http://www.rec.org)). The not-for-profit, non-advocacy, international organisation acts as a catalyst by bringing together all relevant stakeholders to address common problems and to foster effective dialogue across the environmental spectrum.

<sup>27</sup> Under the current financial support from the EC (Strengthening Civil Society in the Pre-Accession Process: NGO Grant Facility - Sub-project A5: Protection of the Environment; Contract TR0501.02), REC Turkey aims to contribute to the consolidation and broadening of political reforms and EU alignment efforts through strengthening the civil society in Turkey in the pre-accession process. REC Turkey provides technical support services such as topic-oriented training on priority environmental issues and organises dialogue between governmental institutions and NGOs on the current EU accession process; offers information exchange services to support public access to environmental information such as publications on civil society involvement in the EU accession process.

- Working Groups prepared situation analyses, socio -economic analyses including Strengths, Weaknesses, Opportunities and Threats Analysis (SWOT Analysis), intervention areas and priorities as well as financing strategy;
- A seminar was organised by REC Turkey in co-operation with MoEF on 5 March 2007 in Ankara for NGOs. This focused upon the objective, structure and steps of the IPA, the EOP programming process and 'partnership principle' targeting to disseminate relevant information to the environmental partners to foster and facilitate their involvement in the management of IPA for the environmental sector. A total of 40 representatives from 25 different NGOs participated;
- A prioritisation was carried out with the aim of preparing a 'pipeline of projects'. This process included three stages namely **(1)** the identification and updating of criteria for project prioritisation (in line with the Priority Environmental Projects for Accession-PEPA criteria<sup>28</sup>), **(2)** the preparation, updating, and circulation of questionnaires to municipalities, and **(3)** evaluation of data received from municipalities and prioritisation of projects by applying criteria using a database management system. As a result of this process, a prioritised project list was agreed. A sufficient number of projects were selected for preparation of feasibility studies including technical preliminary studies, EIAs, detailed design and technical specifications and tender dossiers for submission to the selection committee **(see Section C.4)**.

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<sup>28</sup> These are: 1) Accession, 2) Environmental, 3) Financial, 4) Economic, 5) Technical, 6) Social & Political, 7) Commercial & Institutional.

#### **A.4. EX-ANTE EVALUATION**

The full text of the ex-ante evaluation report is readily available upon request. The recommendations given were mostly concerned with management issues during EOP implementation, summary of the main ones being as follows:

1. The further elaboration of River Basin Management Plans and implementation of integrated river basin management to address the problem of water resources not being uniformly allocated along the territory of the country with the population in some regions being disadvantaged as a consequence. The response would also meet the need for improving the water balance and provide an increase in accessible water resources.
2. The realistic and credible quantification of baseline and target values of the indicators as a key task for the successful planning and implementation of the EOP. That was regarded as particularly critical for the output indicators, since the result indicators are usually estimated by reference to the output indicators.
3. Taking into account that the procurement workload of the OS will be increased considerably during the next two years, the following actions were recommended by the consultant:
  - Acceleration of the procedures for acquiring the first group of additional staff, with particular emphasis to staff with extensive experience in public procurement and project preparation;
  - Acceleration of the procedures for elaboration of standard tender documents, including as far as possible technical specifications and standard drawings. Standard documents should rely on The International Federation of Consulting Engineers (FIDIC) contracts and take into account relevant standard documents of other EU countries.
4. In order to assure an acceptable trade-off between transport and tourism infrastructure on the one hand, and environmental protection on the other, especially in regard to potential NATURA 2000 areas, a close and constructive co-operation should be maintained between the responsible Ministries for the EOP and OPs Transport and Regional Competitiveness. It was proposed to establish and maintain co-operation through the PSC of the EOP or by joint efforts of the SPO and responsible OS. This co-operation was regarded as of crucial importance by the elaboration and approval of the EIAs for major transport and tourism infrastructure works.

All the recommendations of the ex -ante evaluation have been accepted and incorporated into this EOP.



## **B. ASSESSMENT OF MEDIUM TERM NEEDS, OBJECTIVES AND STRATEGIC PRIORITIES**

### **B.1. SOCIO-ECONOMIC ANALYSIS**

#### **B.1.1. ANALYSIS OF THE ECONOMIC AND SOCIAL SITUATION**

In recent years, Turkey has made significant progress in implementing structural reforms and achieving macro-economic stability, and developments have been observed in socio-economic indicators. These developments have made remarkable contributions to the EU accession process as well. However, further efforts are needed in many areas to ensure long-term economic growth, full employment, social cohesion and sustainable development.

#### **B.1.2. SOCIO-ECONOMIC DEVELOPMENTS IN MAIN AREAS**

In order to converge to European countries in terms of economic and social indicators and narrow the inter-regional disparities for sustainable and balanced development two complementary sets of conditions need to be satisfied in Turkey. The first is that Turkey must have sufficient infrastructure especially in areas of transportation and environment and the capacity to innovate and to use both existing know-how and new technologies effectively. The second condition is to develop human resources and especially to have a labor force with appropriate skills that is necessary for a knowledge society.

##### **Environment**

Economical and technological development, population growth, rapid urbanisation and uncontrolled consumption of natural resources have increased pressures upon the environment. In order to mitigate these problems, several measures have been implemented in recent years. In the context of the EU environmental approximation process, significant progress has been made, especially in urban wastewater management, waste management, nature protection, noise and EIA.

Further legislative arrangements and investments are needed for EU harmonisation. Transposition and implementation of the EU Environmental Acquis need to be planned with an integrated approach that should be supported with a financing plan. For this purpose, Turkey's EU Integrated Environmental Approximation Strategy (UÇES), 2007-2023 has been prepared. The main objective of this strategy is to create a healthy living environment considering the economic and social conditions of the country and to approximate national legislation to the EU Environmental Acquis. The right of living in healthy and balanced environment, protection of the natural resources, taking measures for environmental protection, user and polluter pay, sectoral integration,

sustainable development, public awareness, public involvement and public-private partnership are the main principles taken into account in this strategy.

According to TURKSTAT's 2004 statistics, 85.6% and 45.2% of the municipal population are served with sewerage systems and wastewater treatment plants, respectively. The rate of connection to sewerage system and wastewater treatment plants in north-western Europe is above 90%. This rate is around 60% among the new 10 Member States (The European Environment State and Outlook 2005, EEA). The data related to the wastewater treatment are presented hereby.

## **B.2. SWOT ANALYSIS**

The following analysis addresses the internal strengths and weaknesses as well as the external opportunities and threats (SWOT Analysis) for the EOP. The key areas for consideration were legal (subdivided into EU and national legislation) and institutional (sub-divided into human resources and infrastructure).

During the analysis exercises, the current situation was assessed in detail and also took into account the aspirations of the various stake holders as well as relevant inputs from numerous surveys and reports. A similar robust process was applied in determining strengths and weaknesses as well opportunities and threats. All these findings were brought together to form an accurate assessment of both internal and external operating environments in which the EOP could be safely and realistically set. Process outcomes are presented in tabular form as follows:

**SWOT Analysis - Turkish Environmental Sector**  
**Sub Group: Environment Operational Program me**

**Table B.1. SWOT Analysis - Turkish Environmental Sector**

Key Area	Sub-areas	Strengths	Weaknesses
Environment	Regional	<ul style="list-style-type: none"> <li>On-going transposition and compliance with EU Acquis.</li> <li>EU Integrated Environmental Approximation Strategy (2007-2023) (Turkish UÇES) has been ratified by the High Planning Council.</li> <li>Working documents such as several environmental DSIPs (18) have been prepared (<a href="http://www.cowiprojects.com/envest/">http://www.cowiprojects.com/envest/</a>). These are Directive-Specific documents detailing the investment planning for environmental heavy-cost investment projects for, amongst others, the water, wastewater and solid waste sectors in compliance with relevant EC Directives.</li> </ul>	<ul style="list-style-type: none"> <li>Many laws still to be approximated but the 'gap' is closing.</li> <li>High resource costs for approximating EU environmental legislation (nearly 300 environmental Directives need to be transposed).</li> </ul>
	National	<ul style="list-style-type: none"> <li>The new Environmental Law (No: 5491) lays down the legal basis for: <ul style="list-style-type: none"> <li>the responsibility of the municipalities, settlements and industrial zones for the delivery of environmental services;</li> <li>the principles of 'producer liability' and 'the polluter pays';</li> <li>use of environmental revenues (fees, fines) for environmental protection, prevention of pollution and rehabilitation and closure of old dumpsites;</li> <li>incentive for creation of representative local authority union bodies.</li> </ul> </li> <li>9<sup>th</sup> NDP for 2007-2013 has been ratified.</li> </ul>	<ul style="list-style-type: none"> <li>Still some duty and responsibility conflicts to be settled between the institutions, especially with environmental monitoring, inspection and enforcement activities.</li> <li>Insufficient monitoring, inspection and enforcement and lack of reliable data (e.g. for monitoring performance of service providers).</li> </ul>

Key Area	Sub-areas	Strengths	Weaknesses
Environmental	Human Resources	<ul style="list-style-type: none"> <li>Increasing awareness and sensitivity about the environment in all segments of society, especially among the youth.</li> <li>Open policy of MoEF to employ highly qualified and dynamic personnel. Additional TA already in place for preparation of projects/supervision and conducting capacity building activities.</li> </ul>	<ul style="list-style-type: none"> <li>Certain divisions of the central and local (municipal and regional) administration involved in the process of implementing environmental policies need strengthening in administrative, financial and technical capabilities required for the measurement, monitoring, planning, supervision, inspection, reporting as well as project development and implementation.</li> <li>Apart from metropolitan municipalities, a limited number of municipalities have established (semi) independent bodies for the management of environmental services staffed with suitably qualified personnel.</li> <li>Administrative capacity needs strengthening.</li> <li>Procedures for obtaining national co-financing aligned with the EU need strengthening.</li> <li>Lack of guidelines for the donor's contribution in order to maximise the impact and effectiveness of EU funds (leverage effects).</li> </ul>
	Infrastructure	<ul style="list-style-type: none"> <li>Local funding is made available for EOP requirements.</li> <li>Facilities used for the management of water, wastewater and solid waste disposal have been substantially completed in the metropolitan municipalities so "lessons learnt" can be applied.</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient financial resources dedicated to infrastructure investments and operations aimed at environmental protection which are heavy-cost investments.</li> <li>Small and medium municipalities face difficulties in the sustainability of their investment in infrastructure projects.</li> <li>Relatively weak infrastructure for waste management, wastewater and overall canalisation management, except in metropolitan municipalities.</li> <li>Procedures need strengthening for obtaining national co-financing aligned with EU procedures and timetables.</li> <li>Support needed to prepare tender documents to standards in line with EU requirements, capacity building needed in tendering processes in line with EU rules.</li> <li>Lack of procedures and guidelines for the donors' contribution in order to maximise the impact and effectiveness of the EU funds (leverage effect).</li> </ul>

Key Area	Sub-areas	Strengths	Weaknesses
Institutional		<ul style="list-style-type: none"> <li>There is an existing well-developed construction industry capable of undertaking requisite capital works.</li> <li>Modern technology and international standards have been already applied in several existing drinking water, wastewater treatment and solid waste disposal facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Absence of an easily accessible, transparent and traceable database to help management as well as an efficient 'real time' updating system.</li> </ul>
	Infrastructure		<p><u>Water</u></p> <ul style="list-style-type: none"> <li>Water management is not fully integrated and is based on the river basin approach.</li> <li>Insufficient and outdated infrastructure of water cycle management resulting in ineffective drinking water supply and ineffective collection and treatment of wastewater.</li> <li>Losses and leakages in existing water supply need urgent remedy allied to good Operations &amp; Maintenance (O&amp;M) procedures.</li> </ul> <p><u>Waste</u></p> <ul style="list-style-type: none"> <li>Insufficiently developed systems for waste collection including separate waste collection, waste transportation and environmental-friendly waste treatment facilities.</li> <li>Insufficient measures for waste minimisation, reuse, recycling and recovery.</li> <li>The role of 'street scavengers' in solid waste recycling must be addressed in a targeted OP.</li> <li>Insufficient secondary markets for re-cycled products especially from composting.</li> <li>Large number of risky municipal landfills, illegal dumpsites, past contamination, micro-dumping sites, due to solid waste uncontrolled discharge practices.</li> </ul>
	Operations		

Key Area	Sub-areas	Opportunities	Threats
		<ul style="list-style-type: none"> <li>• Availability of EU financial and technical support.</li> <li>• Continue to transpose and implement the Acquis related to the framework legislation, international environmental conventions, and legislation on nature protection, water quality, IPPC and waste management plus implementation and enforcement of the amended "EIA Directive".<sup>29</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Insufficient implementation of legislation.</li> </ul>
		<ul style="list-style-type: none"> <li>• More environmental organisations including NGOs are becoming involved in decision-making and legal enforcement in environmental protection.</li> <li>• On-going implementation of a decentralisation agenda.</li> </ul>	<ul style="list-style-type: none"> <li>• Comparatively low level of integration of environmental requirements into sectoral policies e.g. agriculture, energy, tourism.</li> <li>• Limited incentive to encourage Private Public Partnership (PPP) or Private Sector Participation (PSP) in environmental investment as well as in operations according to modern environmental management principles (situation known as a 'legal gap').</li> </ul>

<sup>29</sup> Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment.

Key Area	Sub-areas	Opportunities	Threats
Institutional	Human Resources	<ul style="list-style-type: none"> <li>• EU supports for capacity building and Twinning projects.</li> <li>• National scientific and research institutes can develop their (commercial) expertise in this sector.</li> <li>• All line Ministries open to encouragement to include environmental issues in their planning process as a priority, as well as being involved with horizontal issues (e.g. EIAs, planning programmes and civil society participation).</li> <li>• By improving environmental infrastructure, public health benefit and economic benefit are expected for all segments of the society.</li> </ul>	<ul style="list-style-type: none"> <li>• Employment opportunities in the private sector may attract key staff away from Government services.</li> <li>• An increase in the rate of migration from rural areas to the cities may necessitate additional investments in infrastructure to a greater level than planned.</li> </ul>
	Infrastructure	<ul style="list-style-type: none"> <li>• Municipalities are acquiring more information and becoming more aware of environmental issues and the need for up-dating and improving their infrastructure.</li> <li>• Opportunity to develop realistic environmental tariffs, taxes and fees enabling long term planning, operations, maintenance, investment in infrastructure, especially DSPs.</li> <li>• Infrastructure investments are attractive to external (International Financing Institutions) (IFIs).</li> <li>• Law allows for additional financial resources in the environmental sector.</li> <li>• Potential for greater inclusion of the business community in environment-protection efforts.</li> <li>• Increase of financial capacity for environment projects due to alternative financing of environmental protection activities through participation of Turkey in various global funds/projects.</li> <li>• Realisation of accelerated economic growth and increase of national financial resources for investments in the environmental sector especially in the utilities infrastructure field.</li> <li>• Potential for a certain degree of self-financing for utilities projects through adequate development of PPP opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Risk of price escalations (e.g. inflation) impacting upon present and future investments.</li> <li>• Financing institutions may not adequately service environmental issues due to unexpected economic crisis.</li> <li>• The banking sector and other financial intermediaries need to be persuaded to treat environmental infrastructure as an investment.</li> <li>• Delayed project preparation and implementation of projects may lead to loss of IPA funds ('N+3' commitment).</li> </ul>
	Operation	<ul style="list-style-type: none"> <li>• Well-developed electronic information and satellite systems in the country for the project areas.</li> <li>• Presence of existing strong communication and publicity and information dissemination outlets (newspapers, radio, TV) in Turkey.</li> <li>• Introduction of effective and contemporary techniques applied in relation to the environmental sector in other countries.</li> </ul>	<ul style="list-style-type: none"> <li>• Water and coastal zone pollution from many sources (e.g. Danube - the Black Sea, Sea of Marmara and Mediterranean) are out of control of the Turkish authorities.</li> </ul>

## **B.2.1. ISSUES HIGHLIGHTED IN THE SWOT ANALYSIS**

### **(a) Strengths**

It is important to note that significant steps have already been taken to approximate the Turkish environmental legislation to that of the EU <sup>30</sup>. This is an on-going process and, although there is still considerable work to be carried out, nevertheless the gap between Turkish and EU legislation is closing. Several new/modified laws have been drafted which will further serve to bridge the gap. In addition, the UÇES, 2007-2023 has been prepared and ratified. Further transposition and implementation of the EU Environmental Acquis is planned and this document includes an investment strategy based upon 18 DSIPs developed (under the EHCIP) including for the important "Water Framework Directive"<sup>7</sup> and "Air Quality Framework Directive"<sup>31</sup> through to the "Landfill Directive"<sup>8</sup> and "Sewage Sludge Directive"<sup>12</sup>.

Another important milestone is the ratification of the newly published Environmental Law No. 5491 (2006) amending the Environmental Law No. 2872 (1983). This law will make a major contribution for improving national environmental protection as well as a change in depth towards meeting international requirements. It lays down the legal basis for:

- the responsibility of the municipalities, settlements and industrial zones for the delivery of environmental services;
- the principles of 'producer liability' and 'the polluter pays';
- use of economic tools for environmental protection; prevention of pollution and rehabilitation and closure of old dumpsites.

All the above are in line with the 9<sup>th</sup> NDP for 2007-2013 which has been ratified by the Government.

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<sup>30</sup> The document 'Harmonisation programme to the EU Acquis, 2007-2013, dated 17 April 2007' presented by the Minister of Economy and Chief Negotiator for EC negotiations, Mr. Ali BABACAN gives a 'road map' for future Turkish legislation.

<sup>31</sup> Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management.



### **(b) Weaknesses**

The need to strengthen capacity is required in various environmental areas and at all levels of the Turkish administration namely the central administration, decentralised branches of the central institutions (provincial directorates or regional offices) as well as in the municipalities. In the past, bottlenecks have arisen in such areas as the preparation of tender documents, the capacity to carry through the tender process, overcoming the novelty of the multi-annual planning process and similar weaknesses. These will all be addressed in the priority measures especially in the TA component.

Although Turkey has successfully effected important economic and social changes over the last decade, significant efforts and resources are still needed in order to reduce the social and economic development gap between the 16 metropolitan municipalities and the other municipalities.

The environmental quality in some regions is far below EU standards, mainly due to long-term under-investment in water, wastewater and solid waste infrastructure and also due to inadequate environmental planning and management systems. This is compounded by limited management and administrative capacity for implementing upgraded environmental infrastructure and managing services in an efficient and sustainable way, including the capacity to deal with bottlenecks and weaknesses in the preparation of tender documents, the capacity to carry through tender processes, and also the limitations resulting from the novelty of the multi -annual planning process itself.

Mitigation and elimination of these weaknesses is a challenge for the EOP during 2007-2009 and will form a major part of the priorities and measures **(see Sections C1. to C.3.)**.

The investment strategy is suffering from a lack of procedures and guidelines for **(1)** obtaining national co-financing aligned with EU procedures and timetables, and **(2)** for the donors' contribution in order to maximise the impact and effectiveness of the EU funds (the leverage effect).

### **(c) Opportunities**

Currently, the municipal budgets are not sufficient to finance EHCIP projects. Municipal taxes and fees are low and in most cases, tariffs are not sufficient to build up the large scale funds needed to accelerate the investments in response to national legislation and EU requirements. Against this background, the EOP represents an extremely important intervention that will result in improving the delivery of drinking water, wastewater treatment and solid waste services throughout Turkey. This opportunity, coupled with other initiatives such as transport links and increased competitiveness will

be a driving force in generating regional development, improving living standards for all sectors of the population and for economic development in Turkey as a whole.

Coupled with this, as mentioned in **Section A.1.6.** an important opportunity is being afforded to the relevant authorities to develop the by-laws and guidelines for setting realistic and affordable environmental tariffs, fees and administrative fines. This will enable operations, maintenance and re-investment possibilities in the longer-term.

The access to IPA funds also represents a strong incentive for municipalities to develop their own implementation programmes for general environmental protection. This can be readily accommodated within the framework of the present national decentralisation reform process.

These opportunities will also be supported by the MoEF at both central and provincial level. Capacity building and TA for the preparation and management of the EOP and related projects will offer the opportunity to integrate environmental aspects into all components of the IPA Programme in Turkey. This also constitutes an added incentive to address other important horizontal issues such as **(1)** equal opportunities for men and women, **(2)** national environmental protection, **(3)** participation of civil society, and **(4)** geographic and sectoral concentration.

Above all, the high level of standards for improved environmental infrastructure will contribute to improvement of the general health of the population and a reduction in water-related health expenses.

#### **(d) Threats**

The main threats are identified as:

- the possibility that environmental issues will not be given the political priority that is needed to effect significant changes over the medium term;
- limited capacity of small and medium size municipalities to manage internationally co-financed projects, and to sustain their environmental services.

Emphasis will thus be given to developing communication tools as well as capacity building for the municipalities.

A note should be made concerning PPP. In the public utility sector, the situation is known as a 'legal gap'. The banking sector and other financial intermediaries need to strengthen their capacity to understand and commercially transact with environmental infrastructure projects. It should also be added that the enabling legal framework needs to become more transparent including the rules and practices relating to the use of environmental infrastructure as loan funds collateral.

Given the complexity of the planning and management process required, ensuring the absorption of EC funds is new to many stakeholders. This carries the risk that the monies will not be utilised within the tight payment schedule of 'N+3'; leading to loss of funds for key infrastructure projects.

Overall, despite the recognised risks, the analyses confirm that future developments in the sector have the realistic potential of making a significant impact on improving living standards and the quality of environment. The aim is to combine project practicality in achieving realistic achievable goals in the medium term. Although the SWOT Analysis reviews centres mainly on the infrastructure requirements for environmental protection, it should also be remembered that horizontal issues and cross-cutting issues are also of importance for the EOP. Other critical environmental issues such as air quality, noise and nature protection will be addressed in other MoEF initiatives.

The next chapters highlight specific environmental objectives and targets and indicate the strategic priorities and implementation policies for intervention.

### **B.2.2. LESSONS LEARNT**

The final reports of each completed project mentioned in **Section C.4. (b)** has a list of lessons learnt and these are available upon request.

In summary, the main lessons learnt (interim evaluation of EU pre-accession assistance, PHARE, 1999-2002) highlights the absence of adequate planning documents resulted in weaknesses in the 'needs analysis'.

Furthermore, past performance of large infrastructure projects exhibited considerable delays, particularly regarding design and tender preparation. In this context, particular care must be taken to strengthen the technical capacity of the beneficiaries.

In addition, preventing/mitigation measures during the construction stage have to be examined and included in the EIAs of the specific projects. Compliance of the construction works with permit requirements, including integrated pollution and prevention control aspects, have to be regularly controlled by the responsible authorities (construction supervision authorities and inspectorates).

More lessons learnt will be incorporated into the implementation stage of the EOP once they have been submitted and agreed during their final project reporting procedures.

### **B.3. OBJECTIVES**

The above analysis confirms that future developments in the sector have the potential to make a significant impact upon improving living standards and the quality of environment. The aim is to combine practicality along with setting realistic achievable goals in the medium term. Although the SWOT Analysis reviews mostly the infrastructure requirements for environmental protection, it should be remembered that horizontal issues and cross-cutting issues are also of prime importance for the EOP. However, other issues such as air quality, noise and nature protection will be dealt with in other MoEF initiatives.

The next chapters highlight specific environmental objectives and targets and indicate the strategic priorities and implementation policies for intervention.

### **B.4. STRATEGIC PRIORITIES**

Environmental protection should be an integral part of national and regional social and economic development. In order to protect the rich natural resources and environmentally sensitive areas, and improve public health and the state of the environment, the priority must clearly focus on sustainable development for the future.

Amongst the first priorities for Turkey is to provide sustainable and long-term solutions for international, national and local environmental challenges.

Taking into consideration the limited financial resources allocated for the environmental sector combined with insufficient environmental information and planning systems, it is difficult for local administrations in Turkey to make environmental management a priority. Therefore, within the framework of the environmental policy, strengthening institutional and financial capacity of local authorities is a key task, with particular focus on environmental services such as improving the drinking and potable water and wastewater systems, and developing effective solid waste management and infrastructure. It is also important that environmental management at local level includes other related fields with an integrated and multi-disciplinary approach. This will ensure that policies and strategies are reflected in realistic action plans and investments, to solve the problems that may be encountered during the EU approximation process, and on a nationwide basis.

The fundamental policy document setting out Turkey's approach for the solution of its main social and economic problems for 2007-2013 is the 9<sup>th</sup> NDP. More specifically, the EOP will contribute to meeting the environmental priorities envisaged under 'Improving Competitiveness' which is one of the five (5) development axes identified in the 9<sup>th</sup> NDP. It will thus 'meet basic needs of current and future generations, along with

increasing the quality of life, protecting biological diversity, managing natural resources with a sustainable development approach, and guarantee the right for everybody of living in an healthy and balanced environment.'

The EOP is also consistent with the main areas of intervention stated in the MIPD, 2007-2009 which are:

- Environment measures related to water supply and urban wastewater treatment;
- Environment measures related to integrated waste management, including introduction of segregation and recycling and including the rehabilitation and the closure of old dumpsites.

Another important strategic priority for the EOP is consistent with those of SCF, 2007-2013, namely:

- Overall: to participate to the economic and social development of Turkey both at national and regional level by diminishing regional disparities and improving human resources;
- Environment specific: to reach a higher level in environment protection by meeting infrastructure needs in line with both EU Environmental Acquis and domestic conditions.

The EOP is consistent with the investment and financing strategy developed under the UÇES, 2007-2023 in particular with:

- Water sector: goals 2, 5 and 8 will be met which means sewage systems and treatment plants will be installed according to the By -Law on Urban Wastewater Treatment (Goal 2); drinking water will be provided in sanitary conditions to more people (Goal 5); and treatment and controlled usage in the soil and final disposal of the sludge from treatment plants through appropriate technologies (Goal 8);
- Waste sector: goals 1 and 2 will be met which means solid waste production will be decreased (Goal 1); and by using the appropriate methods, necessary measures are going to be taken to ensure proper recycling and the landfill disposal of solid waste (Goal 2).

In order to achieve these priorities, as identified in national strategic and planning documents, the lead priorities for the EOP can be defined as:

- **To improve living standards and the environment;**
- **Improved access to drinking water, wastewater treatment and integrated solid waste services;**
- **Strengthening capacity and governance;**
- **Improvements in environmental protection .**

#### **B.4.1. GENERAL IMPLEMENTATION STRATEGY**

The general implementation strategy for the EOP is focused upon practicality and achievability over the period from 2007 -2009 with due regard to an integrated approach between all relevant institutions and in accordance with national, regional and local programming documents.

Implementation of the EOP is further based upon **(1)** the situation analysis for the environmental sector as identified in the SWOT Analysis, **(2)** national environmental strategies and implementation plans for compliance with the EU Environmental Acquis, and **(3)** the analysis of other investment programmes funded from national and external sources by IFIs. **(see SWOT Analysis - Section B.2. above)**. The key national environmental strategy for implementation of the EOP is fully consistent with achieving the strategic objectives of the 9<sup>th</sup> NDP which states that 'Turkey will grow in stability, will share income equitably, will have global competitiveness, will move into a knowledge society and will complete the harmonisation process for EU membership'.

Water projects will respect the principles of integration and sustainability as well as the basin approach. Related plans may be elaborated.

The solid waste projects will respect national and regional master plans whose elaboration will be supported by the EOP.

All projects will be implemented respecting the sustainable development principles and meeting environmental norms within the context of EIA as well as being in line with the MIPD, 2007 -2009. They have been chosen using the following guide criteria:

1. Relevance to environmental plans and sectoral strategies and policies;
2. Population (municipalities having higher populations will be given higher priority for Programme maximising impact);
3. Maturity and readiness for implementation;

4. Shortage of financing capacity;
5. Financial sustainability ('polluter pays' and 'cost recovery' principles);
6. Environmental priorities (infrastructure projects contributing to the following factors will be prioritised);
  - Improvement in public health ,
  - Protection of sensitive areas ,
  - Protection of natural resources.

All projects will also be implemented according to the investment and financing strategy developed under the UÇES, 2007-2023.

EOP implementation will spearhead the improvement in the standard of living for all the population, improve the environment and expand possibilities for further investment in the regions. The gradual reduction of regional disparities requires both approximation of environmental legislation to that of the EU and also capacity building and strengthening to ensure the investments are effectively managed.

More specific implementation terms are described below **(see Section C.)**. A number of priority axes are defined, each of which comprises measures which identify the type of actions to be taken.

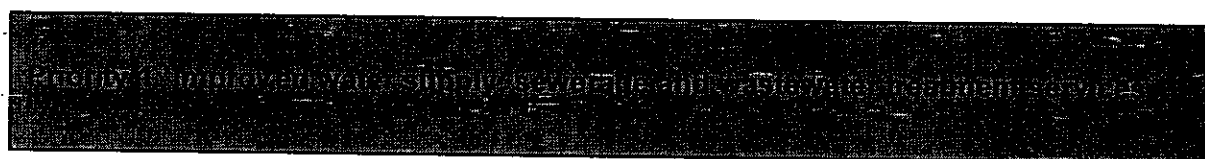
It should be noted regarding the number of projects that the MoEF do not consider the targets to be over ambitious. On the contrary, they are regarded as positive interventions and initiatives that can - and will - be achieved as important nationwide environmental protection measures that should be applied in a sustainable manner, and as quickly as possible. There is an over-arching need and demand for a country with the size, regional disparities, diversity and population of Turkey to achieve rapid environmental mitigation. Assistance from the EC represents a valuable stimulus in responding to these needs and demands.

It must be emphasised that this EOP will form the basis for future environmental initiatives and intervention measures for Turkey and, as such, merits implementation priority in its own right.

## C. PROGRAMME STRATEGY

### C.1. PRIORITY AXES AND MEASURES

With reference to the SCF, this EOP identifies three priority axes and related measures for co-financing by IPA funds under Component III, 'Regional Development'. The implementation of these priorities will contribute to achieving compliance with the requirements of both national and EU environmental legislation.



#### Aim

To develop environmental infrastructure in line with EU standards managed in an efficient and sustainable manner.

#### Community legislation

Table C.1. Community legislation

Abbreviated title of legislation	Full title of legislation
Water Framework Directive	Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for the Community action in the field of water policy.
Drinking Water Directive	Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption.
Urban Wastewater Treatment Directive	Council Directive 91/271/EC of 21 May 1991 concerning urban wastewater treatment.
Sewage Sludge Directive	Council Directive of 86/278/EEC of 12 June 1986 on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture.
Drinking Water Measurement Directive	Council Directive 79/869/EEC of 9 October 1979 concerning the methods of measurement and frequencies of sampling and analysis of surface water intended for the abstraction of drinking water in the Member States as amended by Council Directive 81/855/EEC, 91/692/EEC.



Abbreviated title of legislation	Full title of legislation
Dangerous Substances Directive	Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.
Bathing Water Directive	Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water.
Drinking Water Abstraction Directive	Council Directive 75/440/EEC of 16 June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in the Member States as amended by Council Directive 79/869/EEC.

### Specific objectives

- To provide efficient and sustainable water and wastewater services to the population;
- To provide affordable water and wastewater services to the population;
- To improve environmental protection.

### Rationale

This priority focuses upon achieving and maintaining a good status of surface and groundwater as well as securing sufficient supplies of potable water. It will promote efficiency and higher quality of service delivery through the establishment of independent, well-managed bodies which are financially sustainable. The proposed activities will also have a direct positive impact upon the quality of coastal waters by contributing to a reduction in land-based pollution. They are part of the National Action Plan for Land Based Pollution prepared under the Barcelona and Bucharest Conventions and Annex 1 Protocols in order to control sea and coastal pollution with compliance dates targeted for 2010 and 2025.

Moreover, this priority will address the high level of drinking water losses from water abstraction to final consumer.

The Law on Environment No. 2872 (1983) as amended by the Law No. 5491 (2006) obliges municipalities to establish wastewater collection and disposal facilities. The deadline for submitting a Work Schedule was May 2007. The schedule must include detailed descriptions and implementation charts in regard to planning and implementation activities. It should make reference to all preliminary studies such as specific technical studies, master plans, feasibility studies, Cost Benefit Analyses, (CBA), EIA(s), detailed design, technical specifications and tender dossiers. Implementation should start from the

date of submission of the timetable, and as follows **(1)** for more than 100 000 population: not later than 3 years, **(2)** between 50 000 and 100 000 population: not later than 5 years, **(3)** between 10 000 and 50 000 population: not later than 7 years and, **(4)** between 2 000 and 10 000 population: not later than 10 years. The EOP will support prioritised municipalities for initiating the implementation of their work plans by supporting the preparation of their wastewater master plans on which technical and feasibility studies can later be based upon (**see Section C.2., Measure 3.2**).

Approximately 66% of the total budget of the EOP is allocated to this priority.

### **Description**

The priority will provide water and wastewater infrastructure as well as reducing pollution caused by storm overflows. It will meet the needs of urban centres where the environmental impact is usually higher and the beneficiary population is also more numerous. Special emphasis will be given to separate rain water from wastewater i.e. separate sewerage systems.

At the planning stage and in the scope of preliminary and feasibility studies, municipalities are encouraged to take the opportunity of implementing an investment project under the IPA Programme to include in-depth analyses on organisation, operations and diagnostics. This will enable the design of comprehensive institutional governance building packages, which will be incorporated in the project co-financed by the EOP.

Alternative operational modalities including PPP will be also studied, where appropriate.

### **Targeting**

This priority is targeted towards rehabilitation, upgrading and construction of urban water and wastewater environmental infrastructure for selected final beneficiaries.

It targets administrative and technical departments (or public utility companies) of the municipalities or local authority unions in charge of water and wastewater management in the selected regions, as well as elected officials as decision-makers. Capacity building activities will possibly also involve staff from the environmental provincial directorates as well as from regional directorates of relevant institutions such as DSİ and İller Bank. Involvement of the general public will be strongly encouraged in all stages of project implementation.

## Measures

The priority measures are designed to support both rehabilitation and restructuring of existing infrastructure and the establishment of new infrastructure. Assistance will be also provided for enhancing capacities at local level. In summary, they are:

**Measure 1.1:** Improving the quality of the water supply; to support improvements in the drinking water distribution network, water intake and treatment plants in order to provide sufficient and healthy drinking water to the population and to reduce water losses from leakages and other sources.

**Measure 1.2:** Improving the quality of receiving bodies; to support improvements in wastewater and rainwater collection as well as improving treatment facilities in order to reduce the pollution load in underground waters and to protect water distribution systems from potential contamination.

## Delivery of the priority

Delivery principles include:

- Assisting Local Authorities;
- Implementing a phased approach and building facilities from pilot to full scale;
- Maximising benefit investment by associated dedicated capacity building activities;
- Maximising benefit investment by associated systematic public awareness campaigns;
- Project pipeline preparation for identified projects.

The operations/projects that will be financed under Priority axes 1 will be selected from the indicative project list provided in **Annex 3** of the EOP (and respective project identification cards attached as **Annex 4**) in accordance with the general and sub-sector/measure specific selection criteria provided in the EOP.

The selected operations will then be submitted to the EC for approval. If a project is sanctioned, the EC will issue a decision of approval for each project which will define the physical object and the eligible expenditure to which the co-financing rate for the priority axes applies. On the completion of the approval stage, a Financing Agreement between the EC and Turkey will be concluded which will specify approval terms and conditions. Complementary funding for these investments will be ensured from national funding.

In the case where projects do not fall under the 'major projects' criteria (i.e. those under the EUR 10 million threshold), decisions about competing tenders will be made by the Selection Committee, based upon the selection criteria laid down in the EOP and confirmed by the SMC.

**Targets and indicators**

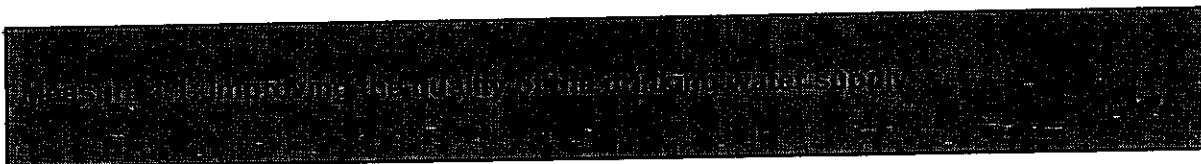
The table below outlines the core indicators and targets for this priority.

## Indicators

Table C.2. Core indicators and targets for Priority 1

Type of Indicator	Indicator	Baseline value (2004)	Target (2012)	Source of verification
<b>Outputs</b>				
	Number of municipalities served by drinking water treatment facilities	304	308	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Number of drinking water treatment plants	140	142	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Number of existing wastewater treatment plants	172	177	TURKSTAT, MoEF, final beneficiary, project/programme reports
<b>Results</b>				
	Number of municipalities benefiting from drinking water network services	3159	3163	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Number of municipalities benefiting from improved wastewater services*	319	328	TURKSTAT, MoEF, final beneficiary, project/programme reports

\* Improved wastewater services include systems connected to a WWTP.



### **Specific objectives**

- To provide drinking water to the population according to national and EU standards;
- To optimise the use of natural resources and to improve the efficiency of the water distribution system.

### **Rationale**

This measure will focus on promoting co -financing that will ensure enhanced supply of drinking water according to national and EU standards, and to achieving water savings.

International and regional cooperation initiatives will be taken into account.

### **Description**

It will support the construction, rehabilitation or modernisation of the existing drinking water distribution system as well as establishing adequate water treatment plants. All beneficiary institutions will also be provided with institutional support designed to sustain the benefit of the investment. Institutional strengthening can target elected officials as decision-makers, municipal/union administrative staff and staff of the 'municipal/union water department'. It can also target staff from the environmental provincial directorates as well as from regional directorates of relevant institutions such as DS and İller Bank. This latter activity will be provided through service contracts (both supervision of the works as well providing capacity building services, including public procurement assistance and advice).

### **Eligible actions**

Actions which will be funded are:

- Construction and rehabilitation of drinking water networks;
- Restructuring and modernising of existing mains water and distribution systems (pipes, pumping stations, storage tanks);
- Rehabilitation, upgrading and construction of drinking water treatment facilities;
- Metering, laboratory equipment, leakage detection equipment;
- Supervision/supervisory engineering, institutional governance improvement, capacity building, public awareness, education initiatives and other communication tools;

- TA<sup>32</sup>: technical preparatory studies, feasibility studies, CBA, EIA, detailed design, technical specifications and tender dossiers.

### **Selection criteria**

Evaluation and selection of projects is the responsibility of the PSC established by the OS (see also C.5. and E.1). The criteria for selecting projects to be financed will comply with the following principles:

- Project maturity and readiness for implementation;
- Compliance with relevant EU environmental legislation and standards;
- Linkage to implementation of environmental plans and sectoral strategies;
- Environmental priorities, namely improvements to public health, protection of environmentally sensitive areas, protection of natural resources;
- An integrated approach;
- Major positive impact on the population;
- Shortage of financing capacity;
- Financial sustainability ('polluter pays' and 'cost recovery' principles) ;
- Complementarity and availability of other financial resources;
- Long-term optimal maintenance (affordability criteria);
- Cost-effectiveness of investment and operation (cost -efficiency criteria).

### **Final beneficiaries**

- Selected municipalities;
- Selected local authorities, where appropriate.

### **Monitoring indicators/targets/definitions**

The table below outlines the core indicators and targets for this measure.

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<sup>32</sup> Technical assistance for maintaining a pipeline of projects has been (will be) provided also through the Development Programme in TRA2, TR72, TR52, TRB1 Nomenclature of Territorial Units for Statistics II Regions, (NUTS II) the 2003, 2005 and 2006 EC funded projects - TR 03 06.01, TR 05 04.03 and TR 06 03.13. It includes as well preparation of (pre) feasibility studies (see also Section C.4. (b) for more details).

## Indicators

Table C.3. Core indicators and targets for Priority 1 - Measure 1.1

Type of Indicator	Indicator	Baseline value (2004)	Target (2012)	Source of verification
<b>Outputs</b>				
	Amount of water treated by drinking water treatment capacity (billion m <sup>3</sup> /year)*	2.08	2.10	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Amount of water supplied (billion m <sup>3</sup> /year)	4.96	5.04	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Number of new or rehabilitated drinking water supply distribution systems	0	4	MoEF, final beneficiary, project/programme reports
	Rehabilitated or new storage capacity (m <sup>3</sup> )	0	52 300	MoEF, final beneficiary, project/programme reports
<b>Results</b>				
	Percentage of municipal population served by drinking water treatment plants increased	0	1,81	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Percentage of municipal population benefiting from improved water distribution facilities increased	0	1,00	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Percentage of water supply system leakage ratio decreased	0	2,45	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Additional population served by drinking water projects	0	387 500	TURKSTAT, MoEF, final beneficiary, project/programme reports

Since the feasibility studies for the majority of the projects have not yet been completed, the figures stated in the tables represent the estimated values.



## Measure 1.2: Improving quality of receiving water bodies

### Specific objectives

- To reduce the pollution load in receiving water bodies ( surface and groundwater) and to protect drinking water systems from contamination;
- To secure efficiency of wastewater treatment plants and to reduce operating costs;
- To improve sewage sludge management.

### Rationale

This measure will focus upon promoting co-financing in all actions that will contribute to reducing the pollution load in receiving bodies and preserve drinking water supply systems from potential contamination.

The amended Environment Law No. 5491 (2006) assigns responsibilities in the following areas: Free Zones, Organised Industrial Zones, Tourist Areas, Small Industrial Zones and Holiday Villages. In addition, it assigns responsibility for urban wastewater management to Municipalities and to Provincial Administrations for settlements with a population of below 2000 inhabitants.

Cooperation between responsible institutions is not excluded as a realistic option and might be investigated during feasibility studies. In principle, with regard to industrial wastewater, facilities producing wastewater with characteristics different from urban wastewater should not be connected to the municipal wastewater treatment plant and the owners should be obliged to construct their own facilities.

### Description

This measure will support rehabilitation, upgrading and construction of urban wastewater treatment facilities. It will also support the rehabilitation and extension of the sewerage systems as well as rain water facilities. All beneficiary institutions will be provided with institutional support designed to sustain the benefit of the investment. Institutional strengthening can target both elected officials as decision-makers, municipal/union administrative staff and staff from the 'municipal/union water department'. It can also target staff from environmental provincial directorates as well as from regional directorates of relevant institutions namely İller Bank and DSİ. This latter activity will be provided through service contracts (both supervision of the works as well providing capacity building services, including public procurement assistance and advice).

### **Eligible actions**

The actions that will be funded are:

- Extension of sewerage networks;
- Rehabilitation of existing sewerage networks suffering from significant permeability;
- Rehabilitation, upgrading and construction of wastewater treatment plants (where appropriate, a phased approach for secondary and tertiary wastewater treatment facilities to be implemented independently);
- Sludge management equipment and facilities (stabilisation, thickeners, storage tanks) based upon a comprehensive scenario analysis (landfilled, (co)incineration and utilisation in agriculture) carried out during feasibility studies;
- Improvement of sludge management in agriculture;
- Rehabilitation and construction of systems for limiting pollution of receiving waters due to storm water overflows;
- Metering, laboratory equipment;
- Supervision/supervisory engineer, institutional governance improvement, capacity building, public awareness, education initiatives and other communication tools;
- TA<sup>32</sup>: technical preparatory studies, feasibility studies, CBA, EIA, detailed design, technical specifications and tender dossiers.

### **Selection criteria**

Evaluation and selection of projects is the responsibility of the selection committee established by the OS (**see also C.5. and E.1**). The criteria for selecting projects to be financed under this measure will comply with the following principles:

- Project maturity and readiness for implementation;
- Compliance with relevant EU environmental legislation and standards;
- Link to implementation of environmental plans and sectoral strategies;
- Environmental priorities namely improvement in public health, protection of environmentally sensitive areas, protection of natural resources;
- An integrated approach;
- Major impact on the population;
- Shortage of financing capacity;

- Financial sustainability (polluter pays and cost recovery principles);
- Complementarity and availability of other financial resources;
- Long-term optimal maintenance (affordability criteria);
- Cost-effectiveness of investment and operation (cost -efficiency criteria).

**Final beneficiaries**

- Selected municipalities;
- Selected local authorities, where appropriate.

**Monitoring indicators/targets/definitions**

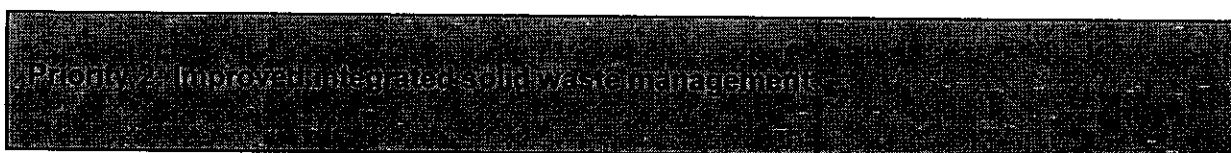
The table below outlines the core indicators and targets for this measure.

## Indicators

Table C.4. Core indicators and targets for Priority 1 - Measure 1.2

Type of Indicator	Indicator	Baseline value (2004)	Target (2012)	Source of verification
<b>Outputs</b>				
	Number of new or rehabilitated wastewater systems	0	7	MoEF, final beneficiary, project/programme reports
	Amount of wastewater treated by WWTP (billion m <sup>3</sup> /year)*	1.90	2.00	TURKSTAT, MoEF, final beneficiary, project/programme reports
<b>Results</b>				
	Percentage of the municipal population benefiting from improved wastewater services (%)	45	47	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Percentage of the treated wastewater (of the total wastewater volume generated) (%)	65	70	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Additional municipal population benefiting from improved wastewater services	0	1 000 000	TURKSTAT, MoEF, final beneficiary, project/programme reports

Since the feasibility studies for the majority of the projects have not yet been completed, the figures stated in the tables represent the estimated values.



## Aim

To develop environmental infrastructure in line with EU standards managed in an efficient and sustainable manner.

## Community legislation

Table C.5. Community legislation

Abbreviated title of legislation	Full title of legislation
Directive on Waste	Council Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste.
Waste Incineration Directive	Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste.
Landfill Directive	Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, as amended by Regulation (EC) 1882/2003.
Packaging and Packaging of Waste Directive	European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.
Hazardous Wastes Directive	Council Directive 91/EEC of 12 December 1991 on hazardous waste.

## Specific objectives

- To provide efficient, affordable and sustainable solid waste management services to the population;
- To establish environmentally friendly integrated solid waste management models, including separate collection;
- To reduce amount of waste disposed in uncontrolled landfill;
- To rehabilitate / close old dumpsites.

## Rationale

This priority addresses another weakness identified in the SWOT Analysis which reflected inadequate waste management practices leading to limited collection of waste as well as the operation of a large number of non-compliant landfills. Since separate collection is only implemented in a few pilot urban centres, a small proportion of materials are recycled and most of the wastes are landfilled. This priority will focus upon promoting an efficient and improved quality of service delivery through the establishment of well-managed bodies which are financially sustainable.

The Law on Environment No. 2872 (1983) as amended by the Law No. 5491 (2006) obliges municipalities to establish wastewater collection and disposal facilities. The deadline for submitting a Work Schedule was May 2007. Schedules had to include detailed descriptions and implementation charts regarding planning and implementation activities. It was also necessary to include all preliminary studies such as specific technical studies, master plans, feasibility studies, CBA, EIA(s), detailed design, technical specifications and tender dossiers. Implementation should start from the date of submission of the timetable, and as follows **(1)** for more than 100 000 population, not later than 3 years, **(2)** between 50 000 and 100 000 population, not later than 5 years, **(3)** between 10 000 and 50 000 population, not later than 7 years and, **(4)** between 2 000 and 10 000 population: not later than 10 years. The EOP will support prioritised municipalities for initiating the implementation of their work plans by supporting the preparation of their wastewater master plans on which technical and feasibility studies can later be based **(see Section C.2., Measure 3.2).**

The MoEF is preparing a National Waste Management Plan which will specify the main features of waste prevention and waste management policies. It will specify how these will be elaborated for individual waste substances, the capacity, and disposal and management options for specific types of waste (including household, hazardous and special waste) and policy on the international transfer of waste. This plan is scheduled for completion by 2008, and will be the basis for developing regional waste management plans. These regional plans will be developed during the following years. The EOP will support the development of regional waste management plans in prioritised regions **(see Section C.2., Measure 3.2).**

Approximately 28% of the total budget of the EOP is allocated to this priority axis.

### **Description**

This priority promotes integrated waste management systems consistent with EU policy and principles. At the planning stage and within the scope of preliminary and feasibility studies, municipalities are encouraged to take the opportunity of implementing an investment project under the IPA Programme to include in depth analyses on organisation and operations, diagnostics, etc. This will enable the design of comprehensive institutional governance building packages, which will be incorporated in the project co -financed by the EOP.

Alternative operational modalities including PPP will also be studied, where appropriate.

### **Targeting**

This priority is targeted towards the rehabilitation, upgrading and construction of integrated solid waste management systems for the selected final beneficiaries.

It targets administrative and technical departments (or public utility companies) of the municipalities or local authority unions in charge of solid waste management in the targeted regions as well as elected officials as decision -makers. Capacity building activities foreseen under the measure will possibly involve staff from environmental provincial directorates as well as from regional directorates of relevant institutions such as İller Bank. Again, the general public will be strongly encouraged to be involved at all stages of project implementation.

### **Measures**

The priority measure is designed to support all actions which contribute to achieving the integrated waste management objectives.

**Measure 2.1:** To support actions increasing the quantity of recycled waste and reducing the final quantity of waste disposed including the development of separate collection operations and construction of related facilities. This measure will also provide financial resources for establishing safe final disposal as well as for the rehabilitation and the closure of old dumpsites.

### **Delivery of the priority**

Delivery principles include:

- Assisting Local Authorities;
- Implementing a phased approach and building facilities from pilot to full scale;
- Maximising benefit investment by associated dedicated capacity building activities;
- Maximising benefit investment by a ssociated systematic public awareness campaigns ;

- At the feasibility study stage, social, geographical and economic conditions of the region will guide the selection of the appropriate sub -components of the projects ;
- Project pipeline preparation for previously identified projects .

The operations/ projects that will be financed under Priority axes 2 will be selected from the indicative project list provided in **Annex 3** of the EOP (and respective project identification cards attached as **Annex 4**) in accordance with the general and sub-sector measure-specific selection criteria provided in the EOP.

The selected operations will then be submitted to the EC for approval. If a project is accepted, the EC will issue a decision of approval for each project which will define the physical object and the eligible expenditure to which the co -financing rate for the priority axes will apply. On the completion of the approval stage a Financing Agreement between the EC and Turkey will be concluded which will specify approval terms and conditions. Complementary funding for these investments will be ensured from co -financing national funds.

In the case where projects do not fall under the 'major projects' criteria (i.e. those under the EUR 10 million threshold), a decision about competing tenders will be made by the Selection Committee, based upon the selection criteria described in the EOP and confirmed by the SMC.

### **Targets and indicators**

The table below outlines the core indicators and targets for this priority.



## Indicators

Table C.6. Core Indicators for Priority 2

Type of Indicator	Indicator	Baseline value (2004)	Target (2012)	Source of verification
<b>Outputs</b>				
	Number of existing sanitary landfills	16	20	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Number of closed or rehabilitated illegal dumpsites <sup>1</sup>	0	38	MoEF, final beneficiary, project/programme reports
	Number of additional recycling programme implemented	0	4	MoEF, final beneficiary, project/programme reports, ÇEVKO reports
<b>Results</b>				
	Number of municipalities benefiting from a sanitary landfill	120	184	TURKSTAT, MoEF, final beneficiary, project/programme reports,
	Number of additional municipality benefiting from integrated waste management system	0	4	MoEF, final beneficiary, project/programme reports, ÇEVKO reports

Including both major and minor scale dumpsite rehabilitations and closures.



### **Specific objectives**

- To reduce the final quantities of waste disposed;
- To establish safe final disposal for solid waste.

### **Rationale**

This measure will focus upon regional landfills in line with the national strategy (which gives priority to landfills), and optimisation of the collection of solid waste by using all means for reducing the quantity of waste to be landfilled.

### **Description**

Integrated solid waste management should focus on prevention/reduction, separate collection, waste recovery and recycling as well as environmentally friendly final disposal including (1) evaluation and continuous monitoring (efficiency, reclaim rate) and flexibility for responding to changes in patterns of waste and housing characteristics, (2) environmental concerns, and, (3) public communication and awareness. Also, under this measure, it is proposed to co-finance heavy-cost investments which will contribute to the rehabilitation and/or closure of old dumpsites. All beneficiary institutions will be provided with institutional support designed to sustain the benefit of the investment. Institutional strengthening will target elected officials as decision-makers as well as municipal/union administrative staff and staff of the 'municipal/union solid waste department'. It can also target staff from environmental provincial directorates as well as from regional directorates of relevant institutions such as Çiller Bank. This activity will be provided through service contracts (covering the supervision of the works as well providing capacity building services, including public procurement assistance and advice as appropriate).

### **Eligible actions**

Extension, rehabilitation, increasing recycling and improving collection systems and separation methods including:

- Introduction or development of separate collection including introduction of separate 'green' and other organic waste collection;
- Development of the collection services: provision of collection vehicles, containers;

- Improvement of sorting and recycling facilities including construction of civic amenity centres (e.g., disposal of packaging waste, batteries, oils);
- Rehabilitation of existing landfills, including biological treatment (composting), from pilot to full scale, construction of gas and leachate management systems, adequate facilities for construction debris;
- Development of transfer facilities such as the construction of transfer/transit (bulk) station, provision of vehicles;
- Subject to justification at the design stage, provision of equipment for landfills such as compactors, bulldozers, wheel loaders, trucks, pickups, tractors and trailers;
- Subject to justification at the design stage, improving operating conditions through the construction of offices, maintenance workshops;

New constructions and increasing recycling and improving collection systems and separation methods including:

- Introduction of separated collections including introduction of separated 'green' and other organic waste collection;
- Development of the collection services: provision of collection vehicles, containers;
- Establishment of sorting and recycling facilities including construction of civic amenity centres (e.g., disposal of packaging waste, batteries, oils);
- Construction of sanitary landfills, including biological treatment (composting), from pilot to full scale, construction of gas and leachate management systems, adequate facilities for construction debris;
- Development of transfer facilities such as the construction of transfer/transit (bulk) station, provision of vehicles;
- Subject to justification at the design stage, provision of equipment for landfills such as compactors, bulldozers, wheel loaders, trucks, pickups, tractors and trailers;
- Subject to justification at the design stage, improving operating conditions through the construction of offices, maintenance workshops;

Closure of old dumpsites, including gas recovery and utilisation systems, where appropriate:

- Rehabilitation of non-compliant landfills including the closure of old dumpsites;
- Subject to justification at the design stage, improving operating conditions through the construction of offices, maintenance workshops;

and TA as follows:

- Supervision/supervisory engineering, institutional governance improvement, capacity building, public awareness, education initiatives and other communication tools , including public procurement assistance and advice as appropriate;
- TA<sup>32</sup>: technical preparatory studies, feasibility studies, CBA, EIA, detailed design, technical specifications and tender dossiers.

### **Selection criteria**

The evaluation and selection of projects is the responsibility of the selection committee established by the OS (**see also C.5. and E.1**). The criteria for selecting projects to be financed will comply with the following principles:

- Project maturity and readiness for implementation;
- Compliance with relevant EU environmental legislation and standards;
- Link to implementation of environmental plans and sectoral strategies;
- Consistency with the national waste management plan;
- Environmental priorities namely improvements to public health, protection of environmentally sensitive areas, protection of natural resources;
- An integrated approach;
- Major impact on the population;
- Shortage of financing capacity;
- Financial sustainability ('polluter pays' and 'cost recovery' principles);
- Complementarity and availability of other financial resources;
- Long-term optimal maintenance (affordability criteria);
- Cost-effectiveness of investment and operation (cost-efficiency criteria).

### **Final beneficiaries**

- Selected municipalities;
- Selected local authorities, where appropriate.

### **Monitoring indicators/targets/definitions**

The table below outlines the core indicators and targets for this measure.

## Indicators

Table C.7. Core indicators for Priority 2 - Measure 2.1.

Type of indicator	Indicator	Baseline value (2004)	Target (2012)	Source of verification
<b>Outputs</b>				
	Number of existing composting plants	5	10	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Number of recycling facilities (MRF)*	10	15	MoEF, final beneficiary, project/programme reports, ÇEVKO reports
	Capacity of recycling facilities (MRF) (tonnes/year)	317 500	417 500	MoEF, final beneficiary, project/programme reports, ÇEVKO reports
	Number of additional new transfer stations	0	9	MoEF, final beneficiary, project/programme reports
<b>Results</b>				
	Amount of waste disposed in sanitary landfills (tonnes/year)**	7 002 000	7 900 000	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Amount of municipal solid waste disposed in compost plant (tonnes/year)	351 000	460 000	TURKSTAT, MoEF, final beneficiary, project/programme reports
	Additional population receiving integrated solid waste management systems	0	2 900 000	MoEF, final beneficiary, project/programme reports, ÇEVKO reports

### Material Recovery Facility.

Since the feasibility studies for the majority of the projects have not yet been completed, the figures stated in the tables represent the estimated values.

## C.2. TECHNICAL ASSISTANCE



### Aim

To provide TA and strengthen management capacity of both the overall EOP and project - specific measures.

### Specific objectives

- Effective management of the EOP;
- To improve the planning capacity of the final beneficiaries in line with national and EU strategies;
- To develop institutional capacity for project preparation, management and absorption of IPA and future Structural Funds.

### Rationale

One important aim of this priority axes is to increase the capacity of the institutions dealing with the management of the EOP.

Lessons learnt from the past (interim evaluation of EU pre -accession assistance, PHARE, 1999-2002) highlight the absence of adequate planning documents resulting in weaknesses in 'needs analysis'. This TA priority axes will ensure development of expertise in the interests of the rational and effective planning of projects to be funded under the EOP, and for the management of future Structural Funds.

The TA complements past and ongoing EC assistance projects: additional information is given in **Section C.4. (b)**.

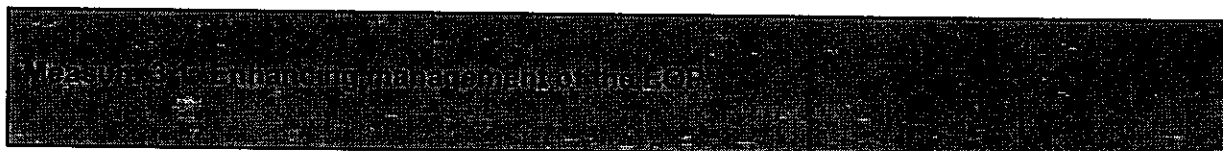
New tools will also be developed for improved monitoring of the service providers.

Approximately 6% of the total budget of the EOP is allocated to this priority axes.

### Description

This priority will focus upon **(1)** capacity building for the managing authorities of the programme i.e. the OS and the SMC, **(2)** supporting the implementation of studies for monitoring and evaluation of the programme (and individual projects), **(3)** possible revision of the existing EOP and also preparation of the next programme, including the preparation and identification of projects for the next funding period, **(4)** training activities targeted

towards potential future beneficiaries (building upon the training to be conducted during 2007 under TR 06 03.13), and (5) support in dissemination of programme information, publicity and visibility activities. It will also provide support to municipalities and the MoEF for preparing Master Plans and carrying out sector studies. These operations will be implemented through service contracts (restricted tender or Framework Contract).



Actions which are eligible for funding are:

- Preparation, organisation and carrying out training for strengthening institutional capacity in project implementation;
- Support for monitoring and evaluation activities of the EOP and individual projects; necessary training for the Monitoring and Evaluation team (costs related to evaluations carried out by external evaluators);
- Technical support for call of proposals (preparation and evaluation);
- Tendering assistance: technical support to evaluation committees for evaluation of tenders (in particular works contracts);
- Conducting studies to improve the implementation of the EOP;
- Providing assistance in the management process of the EOP (assistance in appraisal of operations, exchange of experience for the staff involved in OP management by way of study visits and meetings, remuneration costs for staff transferred to the IPA Unit to implement the tasks related to preparation, selection, verification, implementation, monitoring, evaluation and audits);
- Preparing new programme documents for the next programming period. This will include support for partnership consultations, workshops and training of the beneficiaries with regard to strengthening their capacity in project preparation and submission as well as for future sound management and timely project implementation;
- Supporting promotion and publicity of the EOP: Implementation of the Communication Action Plan (CAP) including production and distribution of information materials for the general public as well as potential beneficiaries, and organising and conducting conferences, seminars and information meetings;
- Providing assistance to the OS after the transition period;

- Preparation and updating of necessary documents for accreditation;
- Providing expert assistance and training for the staff of the IPA Unit within the OS;
- Purchase and installation of hardware, software and other office equipment necessary for management, implementation, monitoring, control and evaluation of the EOP.



This measure will focus upon the preparation of municipal ( local authority union) wastewater Master Plans and regional solid waste management Master Plans. It will concentrate upon:

- Support for municipalities in the preparation of wastewater Master Plans as provided in their Work Schedule (**see Section C.1. Priority 1, Rationale**). For each project area, the Master Plan (supported by a local socio-economic and affordability study) will identify the long-term (10+ years) service improvements and investment needs. This Master Plan will be the reference document upon which future investments will be based. It will also be made available to the public and include support to municipalities for the establishment of local authority unions (assessment, scenario analyses), as appropriate;
- Support for the preparation of regional solid waste management Master Plans as provided in their Work Schedule (**see Section C.1. Priority 2, Rationale**) and based upon the national waste management plan (**see Section C.1. Priority 2, Rationale**). For each project area, the Master Plan (supported by a local socio-economic and affordability study) will identify the long-term (10+ years) service improvements and investment needs. This Master Plan will be the primary reference document upon which future investments will be based. It will also be made available to the public and will include support to municipalities for the establishment of local authority unions (assessment, scenario analyses), as appropriate;
- Support for technical preparatory studies, feasibility studies, EIA, CBA, detailed design, technical specifications and tender dossiers including projects identified under international or regional cooperation initiatives to ensure that high quality projects are prepared for the uptake of funds in future programming periods.

In addition, it is proposed to extend funding to support the MoEF to identify performance indicators and the development of benchmarking tools with a view to strengthening the knowledge base in such areas as costs and tariffs, and developing new transparency guidelines and practices in line with EU policy. This will also have the effect of improving the



measurement of comparisons between regions and municipalities, as well as supporting the MoEF to monitor and strengthen their water, wastewater and solid waste management services.

### **Final Beneficiaries**

The OS (**see also E.1.**) is eligible for assistance foreseen under Measures 3.1 and the MoEF, municipalities and local authority unions are eligible for assistance foreseen under Measure 3.2.

Activities will thus target the OS, SMC, staff (and elected officials) of municipalities and local authority unions, intermediate bodies (performing on a delegated agreement basis, i.e. Project Implementation Unit-(PIU)), Provincial Directorate staff as well as staff from regional institutions such as İller Bank and DSİ and the general public.

### **Monitoring indicators/targets/definitions**

The table below outlines the core indicators and targets for this measure.

## Indicators

Table C.8. Core Indicators for Priority 3

Type of Indicator	Indicator	Baseline value (2004)	Target (2012)	Source of verification
<b>Outputs</b>				
	Number of trained persons (Programme level)	0	30	MoEF, Programme report
	Number of conferences, seminars, information meetings for promotion and publicity of the Programme	0	30	MoEF, Programme report
	Number of master plans prepared and approved by final beneficiaries	0	20	MoEF, Programme report
	Number of feasibility study package prepared and approved by final beneficiaries	0	20	MoEF, Programme report

### **C.3. HORIZONTAL ISSUES**

#### **(a) Equal treatment between men and women**

The Turkish Constitution guarantees equal treatment between men and women. Projects financed under the EOP will thus be implemented by complying with the principles of preventing all forms of discrimination, and promoting positive gender issues. In particular, equal opportunities will be given in competition for employment at both Project and Programme level (OS and TA). These rights will continue to be monitored on a regular basis by the relevant Public Services Commission.

Identification of future improvement areas will include:

- A better awareness of the total quality approach at all organisational levels, including the concern for efficiency, effectiveness and citizen/client orientation;
- The identification of strengths and weaknesses;
- Inputs into ongoing improvement activities;
- The promotion of communications within the organisation, the basis for sustained change management;
- The assessment of the effectiveness of improvement actions ;
- The exchange of experiences with others all over Europe, to benefit from their identified areas of improvement.

In addition, emphasis will be placed on gender related issues at all stages of the project (project preparation, design and implementation of public awareness). This will add to the effectiveness of the programme and will ensure a better impact upon project activities.

#### **(b) Environmental protection and sustainable development**

The EOP supports the implementation of sustainable environmental infrastructure and enhances service delivery. This is also in line with the priorities and objectives defined under the 6<sup>th</sup> EU Environmental Action Programme (2001 -2010). Moreover, it is consistent with key objectives and principles reflected in the renewed European Sustainable Development Strategy (2005-2010) which builds upon the 2001 Gothenburg Strategy<sup>33</sup>. All projects to be financed under the EOP will contribute to the protection and improvement of the environment. Furthermore, these projects will comply with all national legal provisions.

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<sup>33</sup> The EU first formulated its sustainable development strategy during the 2001 Gothenburg European Council.

Assistance provided in the framework of the SCF must fully respect compliance with sustainable development principles and meet relevant environmental norms, and the relevant Environmental Acquis such as directives on EIA, Habitats and Birds (in order to avoid negative impacts on areas to be determined as NATURA 2000 sites) as appropriate.

Investments in the environment sector will be planned in line with the river basin approach and waste management planning.

The projects to be financed must be appraised case by case to ensure consistency with the relevant obligations of the Environmental Acquis.

DABLAS<sup>23</sup> Initiative and Barcelona Convention will be taken into account in investment plans as mentioned in the Turkish SCF.

Environmental and sustainable development principles and approaches will also be applied in investment projects funded under other OPs (e.g. transport) and other IPA Components such as Component V: Rural Development.

#### **(c) Participation of civil society**

The active involvement of civil society will be encouraged at all stages including project preparation, implementation and monitoring.

### **C.4.COMPLEMENTARITY AND SYNERGIES**

#### **(a) Co-ordination with other investment programmes**

A strong co-ordination between the different components of the IPA Programme will be established in order to achieve the maximum impact, ensure optimal use of resources as well as overall coherence between all forms of assistance.

This will require effective co-ordination between the different investment programmes, and will involve both investment programmes implemented by **(1)** national institutions (such as İller Bank, DS, NEF managed by the MoEF), and **(2)** IFI interventions contributing to the construction of environmental infrastructure. The Ministry of Finance as well as the SPO, which has the responsibility for co-ordinating the annual investment programmes and for approving all investment projects, are in close co-operation with the OS. The OS will also ensure that the selection process timetable (EU submission) is aligned with their administrative procedures.

**Co-ordination with Component I** will be particularly important for maximising delivery of the EOP. NIPAC, which is also the OS for Component I is responsible for ensuring regular dialogue and exchange of information with the OS of the EOP. They will put in place mechanisms for co-ordination which will ensure that key institutions involved in the implementation of projects (e.g. municipalities, local authority unions, related Provincial Directorates) selected under the EOP have access to capacity building assistance implemented under Component I.

**Co-ordination with Components III, IV and V** : Activities to be carried out under the OP Regional Competitiveness, OP Transport, and OP Rural Development will have a positive effect on achieving environmental targets. However, interaction between projects funded under the different OPs is likely to be limited.

On the other hand, activities to be carried out within the scope of the EOP will have a positive effect in achieving socio-economic targets, mainly by stimulating job creation and improving environmental conditions.

Line ministries responsible for the different Components were represented in the working team for preparation of the EOP, 2007 -2009. They will also be members of the SMC.

It should be noted that the SCF foresees that the improvement and development of rural environmental infrastructure is intended to be financed from national resources, and only if, it is deemed appropriate, by international sources (including IPA sources).

#### **(b) Past and on-going projects and programmes**

It should be noted that there are already several national and regional studies taking place which support this EOP.

Recently in Turkey, projects are being implemented with a view to taking necessary actions to fulfil the "Water Framework Directive"<sup>7</sup>. One example is the project entitled 'Implementation of the Water Framework Directive in Turkey' started in 2002 within the scope of the MATRA Programme. A draft management plan was prepared for Büyük Menderes River Basin which was selected as the pilot region.

Benefiting from the outputs of this project, the Twinning Project entitled 'Capacity Building the Water Sector in Turkey' presented to the Pre -Accession Financial Programme (2006) will assess the management and implementation plans for a number of different river basins. These plans will not only consider the "Water Framework Directive"<sup>7</sup>, but also the "Urban Wastewater Treatment Directive"<sup>34</sup> and "Dangerous Substances Directive"<sup>35</sup>.

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<sup>34</sup> Council Directive 91/271/EC of 21 May 1991 concerning urban waste-water treatment.

The project is planned to be completed in 2009 and will support additional studies related to this subject. Furthermore, national studies are continuing in terms of developing regional environmental protection plans in Turkey (Gediz River Basin Master Plan Project, Ergene Basin Environmental Management Master Plan Project).

For the wastewater sector, technical studies (TÜB-TAK and İstanbul Technical University) are already in progress for the identification of agglomerations (and delineation of environmental sensitive areas) in line with EU legislation. The project 'Support Programme for Research Projects of Public Institutions of TÜB-TAK' will be completed in 2009. The MoEF are also carrying out studies as follows:

- Pollution levels of Turkey's inland water resources will be identified with respect to eutrophication. A schedule will be prepared, identifying sensitive and non-sensitive areas throughout Turkey;
- Taking size and equivalent population values of residential areas into consideration and, through research on the economic, technical and social feasibilities, wastewater collection service areas will be designated;

The TA (Priority 3) complements past and ongoing EC assistance:

- EC funded Regional Development Programme in TRA2, TR72, TR52, TRB1 (NUTS II) Regions: technical preparatory studies, Feasibility studies, EIA, CBA, detailed design and technical specifications and tender dossiers have been prepared for 3 wastewater projects and 1 integrated waste management project, namely Elazığ (Palu and Kovancılar), Kars, Sorgun and Erzurum respectively;
- EC funded project started in 2003 - TR 03 06.01 'Support Activities to Strengthen the European Integration Process': technical preparatory studies, feasibility studies, EIA, CBA, detailed design and technical specifications and tender dossiers for 5 integrated waste management project namely Artvin -Rize, Balıkesir, Çorum, Kayseri and Konya;
- EC funded project started in 2005 - TR 05 04.03 'Support Activities to Strengthen the European Integration Process'. Around EUR 3 million were earmarked for technical preparatory studies, feasibility studies, EIA, CBA, detailed design and technical specifications and tender dossiers for 23 projects as follows :
  - 15 wastewater projects namely Erzurum, Bartın, Kırşehir, Adıyaman, Polatlı, Siverek, Seydişehir, Çarşamba, Diyarbakır, Erdemli, Akşehir, Aksaray, Merzifon, Lüleburgaz, Soma;

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<sup>35</sup> Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.

- 8 drinking water projects namely Erzincan, Nizip, Akçaabat, Manavgat, Silvan, Erzurum, Döğüş and Ezi; and

In addition, 2 studies were conducted through two specific contracts (Framework Contract) for municipalities falling under the DABLAS<sup>23</sup> initiative (i.e. Ordu and Turhal WWTP projects);

- EC funded project started in 2006 - TR 06 03.13 'Support Activities to Strengthen the European Integration Process'. Around EUR 10 million were earmarked for technical preparatory studies, feasibility studies, EIA, CBA, detailed design and technical specifications and tender dossiers. In addition, provision was made to conduct a first run of training courses during 2007 targeting the managing authorities of the EOP for strengthening institutional capacity in the implementation of projects;
- Project-specific TA activities foreseen under the **Measures**. These activities aim at supporting the supervision of the implemented projects and capacity building for the final beneficiaries. There are also provisions for carrying out additional studies as described above. It includes carrying out master plans which in the future should not be any more incorporated into the various Feasibility Study Terms of Reference (ToR). These strategic documents will be reference for carrying out future feasibility studies and for selecting projects to be financed from other financing sources and future IPA Programmes.

## C.5. INDICATIVE LIST OF PROJECTS

The OS (**see also E.1.**) ensures that the project selection process complies with partnership and transparency principles. Only those projects which satisfy the objectives and fall under the implementation strategy (i.e. priority axes and related measures) of the EOP are considered during the preparation process.

The principles of project preparation and selection are described in the Project Prioritisation Manual developed under the 2002 EC funded EHCIP Project (completed in November 2005). The prioritisation process will be based upon the ranking of projects using first killer (eligibility) criteria to determine which projects are eligible for inclusion in the list of potential projects and then project ranking criteria which ranks potential projects that have not been eliminated.

Table C.9. List of killer (eligibility) project criteria

No.	Item	Criteria
K1	Sector in which the project is located	The project should be in the following sectors <ul style="list-style-type: none"> <li>• Water/Wastewater</li> <li>• Waste Management</li> <li>• Air Pollution</li> <li>• Industrial pollution control</li> </ul>
K2	Type of activity to be implemented at that facility	The project should represent an investment of at least €5 m
K3	Main beneficiary and other beneficiaries (if any) of the project	The direct beneficiary must not be in the private sector
K4	Status of project (general)	The project proposal must contain the information which is added with the questionnaire minimum

Table C.10. Project selection criteria

<b>Environmental criteria</b> <ul style="list-style-type: none"> <li>• Environmental benefits</li> <li>• Health benefits</li> <li>• Environmental strategy</li> </ul>	<b>Technical criteria</b> <ul style="list-style-type: none"> <li>• Scale of project</li> <li>• Type of project</li> <li>• Complexity of Project</li> <li>• Readiness of project</li> </ul>
<b>Financial criteria</b> <ul style="list-style-type: none"> <li>• Capital cost</li> <li>• Operation and maintenance cost</li> <li>• Finance secured</li> </ul>	<b>Institutional criteria</b> <ul style="list-style-type: none"> <li>• Definition of responsibilities</li> <li>• Legal framework in place</li> <li>• Institutional capacity of project owner</li> </ul>
<b>Economic criteria</b> <ul style="list-style-type: none"> <li>• Affordability of charges</li> <li>• Affordability of investments</li> <li>• Economical benefit</li> </ul>	<b>Policy criteria</b> <ul style="list-style-type: none"> <li>• Demonstration potential</li> <li>• Related international conventions<sup>36</sup></li> <li>• Regional development</li> </ul>

<sup>36</sup> Including DABLAS Initiative and Barcelona Convention.



The Project Prioritisation Manual will be monitored on an annual basis. The database will be updated and the criteria evaluated at regular intervals. From 2007 and at two yearly intervals, application forms and criteria will be revised to match changing needs and priorities.

From 2008 on and at two yearly intervals, potential beneficiaries will be called for submission of their project proposals in order to update the pipeline of potential projects to be financed under IPA or from other sources. No municipalities will receive IPA funds for more than 1 project during the first implementation period of EOP (2007 -2009).

In 2006, a first call for submission was organised by the OS of the EOP, and a PSC was established. This consisted of major stakeholders who were responsible for environmental investments and policies and for enforcement of the environmental legislation/E C Directives namely representatives of the SPO, İller Bank, DSİ, EUSG, Treasury and MoEF.

The PSC revised the Project Prioritisation Manual by adding in the killer selection criteria list a criterion regarding population where beneficiaries should be municipalities with a population over 50 000 inhabitants. The questionnaires were sent to 450 municipalities in April 2006. Around 300 questionnaires were returned and 131 projects were ranked. Distribution per sector was as follows: 18 drinking water projects, 61 wastewater projects and 52 solid-waste projects. The process was completed in February 2007.

A map is attached (**see Annex 5**) showing projects submitted for possible co-financing by the EC as well as a schedule projects in **Annex 3**. The Project Identification Card for each major project is given in **Annex 4** including project name, investment value and financing sources, description of the main components, description of project objectives and expected results, timetable, status of basic project documentation, status of project design. A list of projects (the annual distribution and financial tables are presented **in the next Section D**.) was established by taking into account the time necessary for conducting preparatory studies (feasibility studies, EIAs) as well as for carrying out other measures such as land acquisition and consultation under the EIA procedure. This will ensure that the implementation of projects can be completed within the time allocated by the application of the 'payment' N+3 rule.

Projects which will be funded by the IPA will, as a pre-requisite, comply with the Acquis Communautaire for each major project to be submitted to the EC, and also be in full compliance with Article 157 of the IPA Implementing Regulation (2007) .

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## D. FINANCIAL TABLE

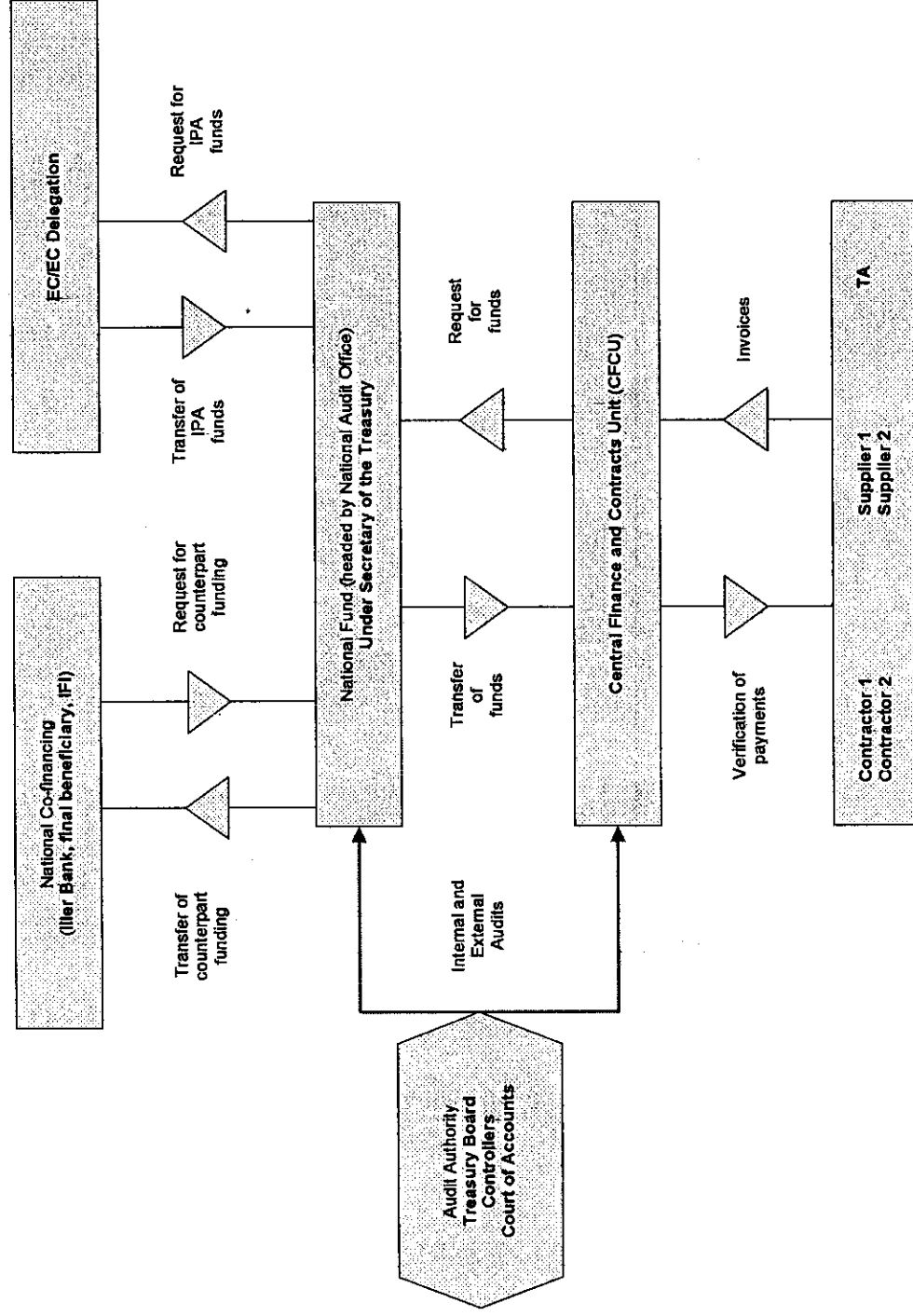
An assessment of costs, investment and financing strategy was developed under the UÇES, 2007-2023. The EOP financial plan is consistent with this exercise.

The appropriate allocation under each priority within the financial plan is as follows:

- Priority 1, Improving delivery of drinking water and wastewater services: approximately 66% of the EOP;
- Priority 2, Improved integrated solid waste management: approximately 28% of the EOP;
- Priority 3, Technical assistance : approximately 6% of the EOP.

The implementation of the EOP will be financed by IPA resources amounting to EUR 204.1 million and also by national resources amounting to EUR 68.033 million. An overview of the payment flow is **shown in Diagram D. 1.**

Diagram D.1. Showing proposed payment flow (schematic draft subject to adaptations)



N.B. Titles in bold show the responsible person/authority

The contribution from the IPA was calculated on the basis of the maximum standard rate of 75% of the total public eligible cost for environmental infrastructure and on the basis of 75% for the TA priority axes activities. The national co-financing concerns investment operations provided under the measures as well as the TA related to investment operations and TA dedicated priority activities. All national co-financing will be provided in accordance with the IPA Financial Agreement.

The national co-financing framework establishing principles as well as procedures is under development and co-ordinated by T.C. Bank. This framework will set up procedures for national-co-financing through a national contribution fund, in line with EU funding mechanisms and timelines as well as procedures for IFI co-financing (e.g. time required for Treasury approval, implementing procedures to be followed). These will ensure that funds are duly available as to amount and time, and will define procedures for EU and NF contributions in order to ensure efficient management and control of the national co-financing in line with Central Finance and Contracts Unit (CFCU) stipulations.

T.C. Bank will provide co-financing by loan and/or loan plus grant for all projects funded under the EOP, 2007-2009. The bank will also manage the national contribution fund fed by Ministry of Environment and Forestry, Ministry of Finance and other resources coming from the government. Possible contribution from IFIs (loan) would also be channelled through T.C. Bank. An Implementation Agreement (IA) (**see section E.1**) will be signed between the beneficiary and the OS which can make provisions regarding to an repayment from the beneficiaries.

It is intended that the level of grant (IPA and national) will provide incentives to the final beneficiaries. In order to achieve maximum impact and optimise the use of available financial resources, a grant ceiling (per project) will be applied taking into consideration the results of economic and financial analyses regarding affordability and cost recovery potential.

The financial allocation for the EOP as a whole is based upon a combination of the following factors:

- Meeting objectives of the investment strategy developed under the UÇES, 2007-2023;
- Meeting objectives of the SCF;
- The demand-driven approach from project proposals submitted by potential final beneficiaries to the OS.

The financial allocation between the identified priority axes has been determined by reference to the following considerations:

- The requirements as described in the UÇES, 2007-2023 with regards to the implementation of EC Directives in the water and waste sectors;
- The fact that the Programme must be implemented over a limited period (2007 -2009) with limited financial resources relative to total needs, renders investment prioritisation essential;
- The complementarity with investment programmes implemented by other institutions with both national and external financial sources.

The EU financial contribution to the EOP will be implemented in line with the financial plan presented in the following tables:

Table D.1. Financial table for 2007-2009

2007-2009	Total Expenditure (€) (1) = (2+6)	Total Public Expenditure (€) (2) = (3+4)	Public Expenditure (€)		Private (indicative) (€) (5)	IPA co-financing rate (%) (6) = (3/2) (RD)	For information Other (IFI, etc) (€) (7)
			Community Contribution (IPA) (€) (3)	National Public Contribution (€) (4)			
Priority axis 1: Improved delivery of drinking water and wastewater services	179 064 000	179 064 000	134 298 000	44 766 000	-----	75%	-----
Measure 1.1: Improving the quality of drinking water distributed	76 741 333	76 741 333	57 556 000	19 185 333	-----	75%	-----
Measure 1.2: Improving quality of the receiving water bodies	102 322 667	102 322 667	76 742 000	25 580 667	-----	75%	-----
Priority axis 2: Improved management of solid waste management	76 741 333	76 741 333	57 556 000	19 185 333	-----	75%	-----
Measure 2: Increasing quantity of recycled waste and improving final disposal	76 741 333	76 741 333	57 556 000	19 185 333	-----	75%	-----
Priority axis 3: Technical assistance	16 328 000	16 328 000	12 246 000	4 082 000	-----	75%	-----
Measure 3.1: Enhancing OP management	4 328 000	4 328 000	3 246 000	1 082 000	-----	75%	-----
Measure 3.2: Enhancing beneficiary capacity for planning	12 000 000	12 000 000	9 000 000	3 000 000	-----	75%	-----
Total 2007-2009	272 133 333	272 133 333	204 100 000	68 033 333	-----	75%	-----

Table D.2. Financial table for 2007

2007	Total Expenditure (€) (1) = (2+5)	Total Public Expenditure (€) (2) = (3+4)	Public Expenditure (€)		Private (Indicative) (€) (5)	IPA co-financing rate (%) (6) = (3/2) (RD)	For information Other (IFI, etc) (€) (7)
			Community Contribution (IPA) (€) (3)	National Public Contribution (€) (4)			
Priority axis 1: Improved delivery of drinking water and wastewater services	43 200 000	43 200 000	32 400 000	10 800 000	-----	75%	-----
Measure 1.1: Improving the quality of drinking water distributed	12 525 333	12 525 333	9 394 000	3 131 333	-----	75%	-----
Measure 1.2: Improving quality of the receiving water bodies	30 674 667	30 674 667	23 006 000	7 668 667	-----	75%	-----
Priority axis 2: Improved integrated solid waste management	37 969 333	37 969 333	28 477 000	9 492 333	-----	75%	-----
Measure 2: Increasing quantity of recycled waste and improving final disposal	37 969 333	37 969 333	28 477 000	9 492 333	-----	75%	-----
Priority 3: Technical assistance	8 164 000	8 164 000	6 123 000	2 041 000	-----	75%	-----
Measure 3.1: Enhancing OP management	1 497 333	1 497 333	1 123 000	374 333	-----	75%	-----
Measure 3.2: Enhancing beneficiary capacity for planning	6 666 667	6 666 667	5 000 000	1 666 667	-----	75%	-----
Total 2007	89 333 333	89 333 333	67 000 000	22 333 333	-----	75%	-----

Table D.3. Financial table for 2008

2008	Total Expenditure (€) (1) = (2+5)	Total Public Expenditure (€) (2) = (3+4)	Public Expenditure (€)		Private (indicative)	IPA co-financing rate (%) (6) = (3/2) (RD)	For Information Other (IFI, etc) (6) (7)
			Community Contribution (IPA) (€) (3)	National Public Contribution (€) (4)			
Priority axis 1: Improving quality of drinking water and wastewater services	61 520 000	61 520 000	46 140 000	15 380 000	-----	75%	-----
Measure 1.1: Improving the quality of drinking water distributed	26 246 666	26 246 666	19 685 000	6 561 667	-----	75%	-----
Measure 1.2: Improving quality of the receiving water bodies	35 273 333	35 273 333	26 455 000	8 818 333	-----	75%	-----
Priority axis 2: Improved integrated solid waste management	26 246 666	26 246 666	19 685 000	6 561 667	-----	75%	-----
Measure 2: Increasing quantity of recycled waste and improving final disposal	26 246 666	26 246 666	19 685 000	6 561 667	-----	75%	-----
Priority axis 3: Technical assistance	4 900 000	4 900 000	3 675 000	1 225 000	-----	75%	-----
Measure 3.1: Enhancing OP management	1 566 667	1 566 667	1 175 000	391 667	-----	75%	-----
Measure 3.2: Enhancing beneficiary capacity for planning	3 333 333	3 333 333	2 500 000	833 333	-----	75%	-----
Total 2008	92 666 666	92 666 666	69 500 000	23 166 667	-----	75%	-----



Table D.4. Financial table for 2009

2009	Total Expenditure (€) (1) = (2+5)	Total Public Expenditure (€) (2) = (3+4)	Public Expenditure (€)		Private (Indicative) (€) (5)	IPA co-financing rate (%) (6) = (3/2) (RD)	For Information Other (IFI, etc) (€) (7)
			Community Contribution (IPA) (€) (3)	National Public Contribution (€) (4)			
Priority axis 1: Improved delivery of drinking water and wastewater services	74 344 000	74 344 000	55 758 000	18 586 000	-----	75%	-----
Measure 1.1: Improving the quality of drinking water distributed	37 969 333	37 969 333	28 477 000	9 492 333	-----	75%	-----
Measure 1.2: Improving quality of the receiving water bodies	36 374 667	36 374 667	27 281 000	9 093 667	-----	75%	-----
Priority axis 2: Improved integrated solid waste management	12 525 333	12 525 333	9 394 000	3 131 333	-----	75%	-----
Measure 2: Increasing quantity of recycled waste and improving final disposal	12 525 333	12 525 333	9 394 000	3 131 333	-----	75%	-----
Priority 3: Technical assistance	3 264 000	3 264 000	2 448 000	816 000	-----	75%	-----
Measure 3.1: Enhancing OP management	1 264 000	1 264 000	948 000	316 000	-----	75%	-----
Measure 3.2: Enhancing beneficiary capacity for planning	2 000 000	2 000 000	1 500 000	500 000	-----	75%	-----
Total 2009	90 133 333	90 133 333	67 600 000	22 533 333	-----	75%	-----

## E. IMPLEMENTATION PROVISIONS

This Chapter describes the systems and arrangements in place as they are known at the time of the drafting of the EOP. In this connection, a number of critical decisions regarding structures and responsibilities as well as management and information systems will need to be taken within the context of the introduction of decentralised management. This will follow a different timing from that involved in the adoption of the EOP. The Framework Agreement and the Financing Agreement to be signed will be obliged to take such new developments into consideration. In the meantime, the provisions given below must be understood to be subject to possible latter adaptations.

In accordance with Council Regulation (EC) No. 1085/2006 of 17 July 2006 establishing an IPA, and Commission Regulation (EC) No. 718/2007 of 12 June 2007 Implementing Council Regulation No. 1085/2006 establishing an IPA (IPA Implementing Regulation), the Prime Ministry Circular of .../.../2007 designated the main structures, authorities and tasks for IPA management and implementation.

This Chapter addresses the implementation arrangements for the EOP <sup>37</sup>.

According to Article 10 of IPA Implementing Regulation, IPA assistance will be implemented through decentralised management initially with ex-ante controls by the Commission for Component III and IV. However, the ultimate aim is the conferral of decentralised management to national authorities without ex-ante controls by the Commission. After a transition period, during which the Commission can verify that all the necessary management and control systems are functioning effectively in accordance with the relevant Community and national rules, decentralised management without ex-ante controls may be conferred to the national authorities by the Commission .

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<sup>37</sup> The different components of the IPA Programme are well documented and the various roles, tasks and responsibilities of each management and control structure clearly given. It should be noted, that full account is taken of the relevant documents and they will be implemented in full and as required.

## **E.1. MANAGEMENT AND CONTROL STRUCTURES**

### **E.1.1. BODIES AND AUTHORITIES**

The structures and authorities necessary to ensure the effective and efficient management of the interventions co-funded from national and IPA resources, as well as their functions and responsibilities are addressed in this section in compliance with the relevant provisions of IPA Implementing Regulation (Articles 21 to 31). It is appreciated that these authorities and structures must be effectively in place, operationally ready and accredited before the Commission can confer decentralised management authority.

The management and control structures also include the following:

- (a)** National IPA Co-ordinator;
- (b)** Strategic Co-ordinator for Components III and IV;
- (c)** Competent Accrediting Officer;
- (d)** National Authorising Officer;
- (e)** National Fund;
- (f)** Audit Authority;
- (g)** Operating Structure by IPA Component or Programme .

The main functions and responsibilities of the above mentioned bodies except the OSs are given in the relevant articles of IPA Implementing Regulation and in Annex A of the Draft Framework Agreement.

Within this framework, the functions of the OS responsible for the management and implementation of the EOP will only be given in this chapter.

#### **(a) Operating Structure (OS) for the EOP**

Under the Prime Ministry Circular of .../.../2007 the MoEF has been appointed as the OS for the EOP.

### **Functions**

The OS is responsible for managing and implementing the EOP in accordance with the principles of sound financial management and effective and efficient internal control. In this respect, according to Article 28(2) of IPA Implementing Regulation, it shall have particular responsibility for:

- Drafting annual and multi -annual EOPs;
- Programme monitoring and guiding the work of the SMC by providing the documents necessary for monitoring the quality of EOP implementation;
- Drawing up annual and final implementation reports and, after their examination by the SMC, submitting them to the Commission, to the NIPAC and the NAO;
- Ensuring that projects are selected for funding and approved in accordance with the criteria and mechanisms applicable to the EOP (establishing a PSC); and that they comply with applicable Community and national rules;
- Arranging for tendering procedures, grant award procedures, the subsequent contracting, making and receiving payments to and from the final beneficiary;
- Ensuring that all parties involved in implementation either maintain a separate accounting system or separate accounting codes;
- Ensuring that the NF and the NAO receive all necessary information on the procedures and verifications carried out in relation to expenditure;
- Setting up procedures to ensure the retention of all documents required to ensure an adequate audit trail;
- Setting up, maintaining and updating the reporting and information system;
- Ensuring an internal audit of the various accounting sub-units;
- Ensuring timely reporting of irregularities;
- Carrying out verifications to ensure that the expenditures declared have actually been incurred in accordance with the applicable rules, the products and services have been delivered in accordance with approvals, and the payment requests by the final beneficiary are correct. These verifications shall cover administrative, financial, technical and physical aspects of operations, as appropriate;
- Ensuring compliance with information and communication requirements .

In addition to the above-mentioned responsibilities resulting from the Article 28(2) of IPA Implementing Regulation, the OS is also responsible for :

- Managing of the Secretariat of the Monitoring Committee for the EOP;
- Ensuring the evaluations of the EOP;
- Implementing the measures under TA of the EOP.

### **Compositions**

The OS will be composed of the following bodies:

#### **1) IPA Unit:**

- 1.1. Programming Sub -Unit;
- 1.2. Monitoring and Evaluation Sub -Unit;
- 1.3. Technical Implementation Sub -Unit;
- 1.4. Quality Assurance and Control Sub -Unit;
- 1.5. Tendering, Contracting, Payment and Accounting Sub Unit (CFCU) <sup>38</sup>.

#### **2) Secretariat to the Monitoring Committee for the EOP**

#### **3) Internal Audit Unit**

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<sup>38</sup> During the transition period, budgeting, tendering, contracting, payments, accounting and financial reporting aspects of the procurement of services, supplies, works and grants in the context of the EOP will be carried out by the CFCU. After the transition period, a Finance and Contracts Unit for the EOP in the OS will be established.

The heads of the different bodies constituting the OS will be clearly designated and shall be responsible for the tasks assigned to their respective bodies, and as shown below.

Table E.1. Heads of the bodies, which constitute the Operating Structure

<b>Head of Operating Structure</b>	..... Deputy Undersecretary ..... (address) Ankara/TURKEY Phone: Fax: E-mail:
<b>Head of IPA Unit</b>	Necessary appointment will be made following the Prime Ministry Circular
<b>Chair of Monitoring Committee</b>	..... Deputy Undersecretary .....(address) Ankara/TURKEY Phone: Fax: E-mail:
<b>Head of Internal Audit Unit</b>	..... Undersecretary .....(address) Ankara/TURKEY Phone: Fax: E-mail:

### **Distribution of functions**

#### **Transition Arrangements with CFCU**

Pursuant to the Prime Ministry Circular No. .../.../2007, all procedural aspects of the tendering process, contracting matters and financial management including payment of project activities under EOP are delegated to the CFCU, under the IPA components I II and IV for a transition period of 2007 -2010, subject to annual review by the NAO.

In 2007, the MoEF has already seconded eight staff to work in the CFCU in order to build upon their work experience and, later, for their taking over the related duties and responsibilities under the IPA Unit. This means that the CFCU will carry out a number of functions during the transition period which include:

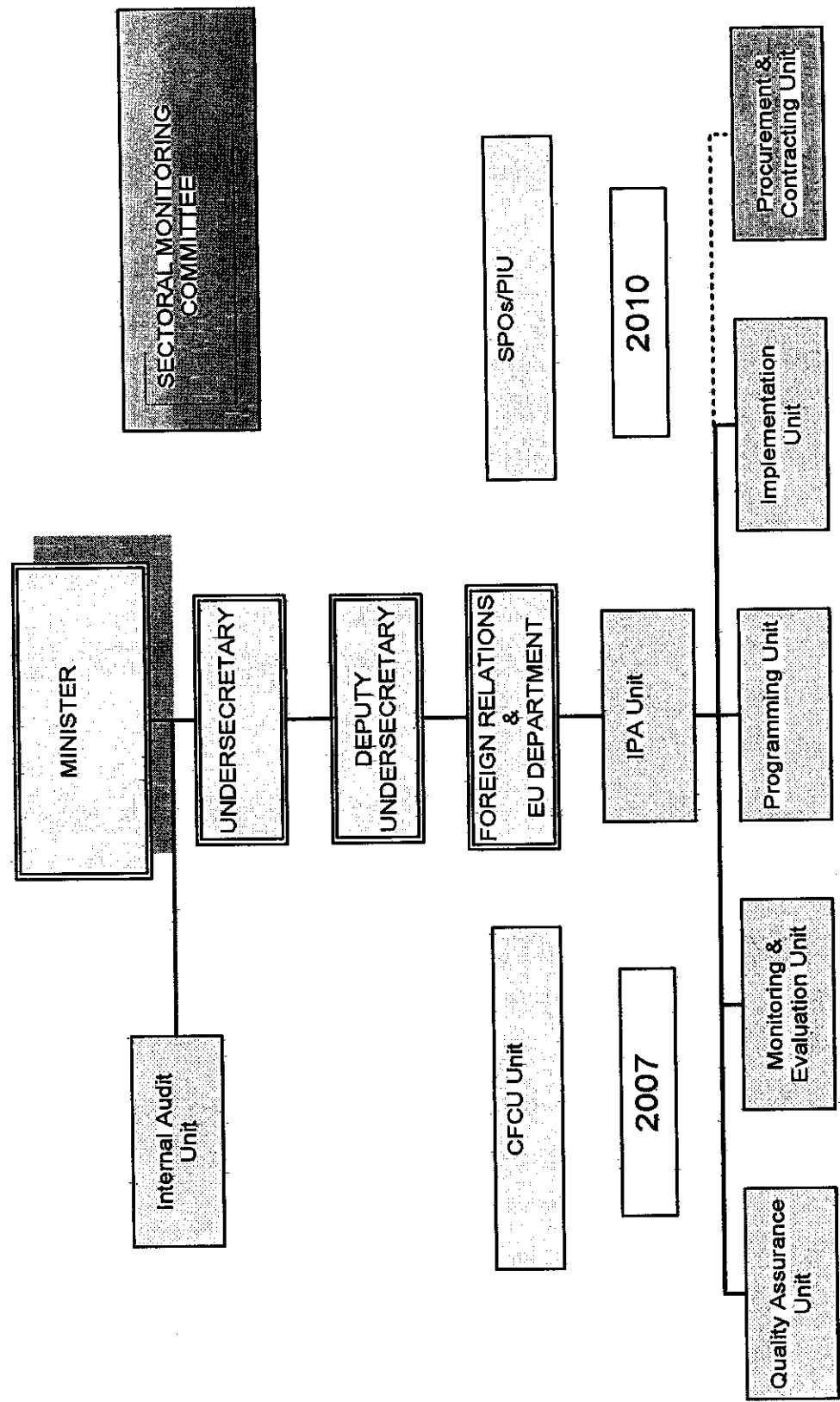
- Ensure, as its major objective and responsibility, compliance with the procurement rules laid down in the EC PRAG (Practical Guide to Contract Procedures for EC External Actions) for conducting procurement of Projects under the EOP;
- Prepare/sign contracts, as well as any addenda for forwarding to the EC Delegation (ECD) for endorsement, and then to the successful tenderers for signature, and passing a copy of the contracts to the relevant parties including the OS;
- Make payments and necessary recoveries, maintain accounting systems and records in accordance with the EU and Turkish regulations;
- Set-up procedures to ensure the retention of all documents required to create an adequate audit trail;
- Ensure the timely reporting of irregularities to the OS and NF/NAO;
- Carry out administrative and financial verifications to ensure that the expenditures declared have actually been incurred in accordance with applicable rules, the products and services have been delivered in accordance with approvals, and the payment requests by the final beneficiary are correct ;
- Submit to the OS monthly financial reports and the semi-annual reports on IPA funds utilisation;
- Ensure internal audit is carried out properly;
- Provide any information on tendering, contracting, payment and accounting aspects of the implementation of the projects under the EOP, and as requested by the OS.

It should be noted that the contractual responsibilities of the CFCU will not be delegated to the PIU (such as approval of payments, commissioning and final approval at hand -over). In any case, the final responsibility will remain with the CFCU. It is expected that the PIU will be assisted by TA and/or a supervising engineer.

The IPA OS agreed by the line Ministries that are formulating their OPs is shown in **Diagram E.1. below.** The structure and duties of the IPA Unit under the MoEF will be as follows:



Diagram E.1. IPA Operating Structure



**The Programming Sub -Unit is responsible for:**

- Preparation of annual and multi-annual Programmes;
- Preparation of OP;
- Project identification and formulation (Call for Proposals, Guidelines, Eligibility Check, Screening);
- Project prioritisation for OP;
- Organisation of PSC;
- Financial planning for EU funds;
- Budgeting, co-financing arrangements (national & IFI);
- Information and assistance for potential final beneficiaries;
- Organisation of publicity-visibility measures on programming;
- Submission of proposals/applications to the EC.

**The Monitoring and Evaluation Sub -Unit is responsible for:**

- Preparation of annual and final implementation reports, and their submission to the EC;
- Secretariat of the SMC;
- Preparation of Sectoral Monitoring Reports;
- Programme monitoring (including maintaining a computerised data base) in close co-operation with CFCU, SPO;
- Co-ordination of evaluation studies.

**The Technical Implementation Sub -Unit is responsible for:**

- Development of ToRs for project preparation (Technical Feasibility, CBA, EIA);
- Organising the composition of the PIU;
- Establishment and co-ordination of the project steering committees;
- Preparation of operational agreements with beneficiaries;
- Participation in tender evaluation (evaluation committees);
- Controlling the activities delegated to CFCU;
- Checking the reports from CFCU and PIUs;
- Following- up audits and evaluations;

- Co-ordination with CFCU and implementation units (infra projects/PIU and capacity building projects, twinning or TA/SPO);
- Organisation of publicity -visibility measures at programme level.

For the EOP, the beneficiaries (mainly municipalities) will be supported by PIUs which will deal with day-to-day implementation of the project(s) and function as a consultative board for the Technical Implementation Unit (TIU) of the OS and CFCU. PIUs will be composed of members representing the beneficiary, OS and World Bank - more details are given below. Furthermore, there will be a Selection Committee responsible from the evaluation and selection of the projects, also organised by the Technical Implementation Sub -Unit. The participants of this committee will be SPO, World Bank, DS and Technical Departments.

**The Quality Assurance and Control Sub -Unit is responsible for:**

- Preparation and updating standards, procedures and manuals;
- Checking quality of documents (project fiche, tenders, reports, operational agreements, call for submission, etc.), quality of information flow;
- Controlling the flow of information for the Management Information System (MIS);
- Implementation of Risk management;
- Reporting of irregularities and follow-up;
- Carrying out training needs analyses;
- Workload and sensitive staff post analyses;
- On the-spot checks of projects ;
- Proper archiving

**Tendering, Contracting, Payment and Accounting Sub Unit :**

The functions of this unit will be carried out by the CFCU during the transition period as mentioned above.

In the past, EU funds were managed according to the Prime Ministry Circular 2001/41 (2001). For the forthcoming period, arrangements have been revised to comply with the requirements of the IPA Regulation and an overview of the main management, control and reporting procedures is **shown in Diagram E.2. below**. In particular, as well as agreeing the OS for the IPA component the EOP will be administered at several levels.

The IPA Unit will also be supported by the following bodies :

**The Internal Audit is responsible for:**

- Carrying out the internal audit of the institution;
- Making studies for the improvement of the internal audit and control system of the institution;
- Checking whether calculations and transactions are performed accurately, completely and in a timely manner;
- Checking whether the operations of the institutions comply with the financial agreements and programmes.

**(b) The Beneficiaries**

The Beneficiaries will be actively involved in the implementation of the projects. The implementation modalities for each approved project will be governed by a written IA signed between the OS and the beneficiary. The IA will reflect conditionality, if any, and implementation modalities as provided by the Financing Agreement concluded between Turkey and the EC. The beneficiary will confirm its willingness to comply with EU environmental principles (such as the 'user pays' and 'polluter pays' principles) to apply long-term optimal maintenance, implement cost-effective operations or cost recovery principles, and assign adequate human resources for maintenance. The IA will also reflect co-financing arrangements and, possibly, financial procedures to ensure that all funds are duly available as to both amount and frequency.

At project level, the IA will see to the establishment of a Steering Committee (SC), as an advisory body to provide overall guidance and to oversee implementation. Members of the SC include representatives of the CFCU, EC D, MoEF, World Bank, SPO and DS.

The beneficiary will be supported by a PIU in the monitoring and supervision of the project. A PIU will be established for each project and will support the CFCU in the implementation of the project. Although its composition will be agreed on a project by project basis, generally the PIU will be made up of 3 members including one representative each from the beneficiary (acting as Head), MoEF and World Bank.

**The PIU will carry out a number of functions including:**

- Progress monitoring at Project level;
- Liaisons with the supervisor (Engineer according to FIDIC) of the project;
- Preparation of Project Monitoring Reports and their submission to the TIU;
- Function as a Consultative Committee for the CFCU and TIU;

- Participation in the Project Steering Committee;
- Checking of payment requests and invoices and support to technical, financial reporting and accounting and pre-approval of invoices and payments for forwarding to the CFCU;
- Monitoring of the contractor's training activities for future operational staff;
- Participation in approval of works, performance tests of the completed works, commissioning and pre-approval of hand-over certificates;
- Monitoring compliance with visibility requirements;
- Appropriate ad-hoc reporting to the CFCU.

### **E.1.2. SEPERATION OF FUNCTIONS**

In accordance with Article 21.2 of the IPA Implementing Regulation and Article ...of the Prime Ministry Circular, the appropriate segregation of duties is ensured between and within the designated bodies. The activities as planned at the time of the drafting the EOP are given below. However, as indicated in the beginning of this chapter a number of critical decisions regarding structures and responsibilities as well as management and information systems will be taken in the context of the accreditation for conferral of decentralised management. To this end, the Framework Agreement, as well as the Financing Agreement to be signed after conferral of decentralised management, will set out detailed provisions regarding management and control systems. The provisions of this section must therefore be understood as subject to latter adaptations by the applicable provisions of these agreements, where required.

#### **(a) Separation of functions between the bodies**

The separation of functions results from a division of tasks as described above. This follows the principle that there shall be a clear separation between **(1)** verification, evaluation, controls and assessments carried out by the OS and by the NF, **(2)** the AA and the implementation and payment procedures.

Clear separation between audits and implementation and payment procedures has been guaranteed through the differentiation of the bodies responsible for executing these tasks. Audits will be carried out by the Board of Treasury Controllers, which acts as AA, whereas implementation and payment procedures will be performed by the OS and the CFCU.

Furthermore, the division of tasks between bodies will be established through Implementing Agreements. These will be concluded between the MoEF, CFCU and NF. An Implementation (Operational) Agreement will also be concluded between the MoEF and the final beneficiaries.

**(b) Separation of functions within the IPA Unit**

The organisational structure of the bodies and their internal management and control procedures take into account an adequate separation of functions including the following principles **(1)** before an operation is authorised, the operational and financial aspects will be verified by staff other than those responsible for initiation or implementation of the operation, **(2)** certificates of statement of expenditure will be drawn up by a person or department within the NF that is functionally independent from any other services, **(3)** the initiation, the ex-ante, and the ex-post controls are separate functions, to be carried out by different persons, functionally independent of each other.

In order to avoid any possible conflict of interest and to comply with the principles of segregation of duties, the duties of the OS will be distributed between IPA Sub -Units, namely Programming, Quality Assurance and Control, Monitoring and Evaluation and Technical Implementation **as described under E.1.**



## **E.2. MONITORING AND EVALUATION**

The IPA Regulation includes specific provisions for the monitoring and evaluation of each OP.

### **E.2.1. MONITORING ARRANGEMENTS**

This section of the OP describes the systems in place as they are known at the time of the drafting of the OP. However, a number of critical decisions regarding structures and responsibilities will be taken in the context of the accreditation for conferral of decentralised management, which follows a different timing from the adoption of the OP. Accordingly, the Framework Agreement, as well as the Financing Agreement to be signed after conferral of decentralised management, will set out detailed provisions regarding management and control systems. This chapter must be understood as provisional, to be superseded by the applicable provisions of these agreements.

In order to ensure coherence and co-ordination of the implementation of the IPA components, programmes and operations, the following Monitoring Committees will be established:

- IPA Monitoring Committee covering all the IPA components;
- SMC for the EOP;
- National Coordination Structures ;
  - Financial Cooperation Board ,
  - Regional Development and Human Resources Development Coordination Committee for III and IV components of the IPA.

#### **(a) IPA Monitoring Committee**

According to Article 58 of the IPA Implementing Regulation, Turkey, within six months after the entry into force of the IPA Implementing Regulation, shall set up an IPA Monitoring Committee, in agreement with the NIPAC and the Commission, to ensure coherence and co-ordination in the implementation of all IPA components.

The IPA Monitoring Committee shall satisfy itself as to the overall effectiveness, quality and coherence of the implementation of all programmes and operations towards meeting the objectives set out in the Financing Agreements as well as in the MIPD.



The IPA Monitoring Committee may make proposals to the Commission, the NIPAC and the NAO for any actions to ensure coherence and co-ordination between the programmes and operations implemented under the different components, as well as for any cross-component corrective measures needed to ensure the achievement of the global objectives of the assistance provided, and to enhance its overall efficiency.

It may also make proposals to the SMC (**see below**) for decisions on any corrective measures to ensure the achievements of the programme objectives and enhance the efficiency of assistance provided under the EOP.

The IPA Monitoring Committee shall adopt its internal rules of procedure in compliance with a monitoring committee mandate established by the Commission, and within the national institutional, legal and financial framework.

The IPA Monitoring Committee shall include among its members representatives of the Commission, the NIPAC, the NAO, representatives of the OS, and the sectoral co-ordinator. A representative from the Commission and NIPAC will co-chair the IPA Monitoring Committee meetings.

The IPA Monitoring Committee shall meet at least once a year. Intermediate meetings may also be convened, in particular on a thematic basis.

#### **(b) Sectoral Monitoring Committee (SMC)**

According to Article 59 of IPA Implementing Regulation, the Head of the OS for the EOP will establish a SMC within six months after entry into force of the regulation. This Committee will be co-chaired by the Head of the OS as well as a representative from the European Commission.

The following members will be represented on the SMC:

- The National IPA Coordinator or his/her representative;
- A representative of the Commission;
- A representative of the Strategic Coordinator for Components III and IV;
- Representatives of each sub-unit of the Operating Structure for the EOP:
  - A representative of the Programming Sub-unit,
  - A representative of the Monitoring and Evaluation Sub-unit,
  - A representative of the Technical Implementation Sub-Unit,
  - A representative of the Quality Assurance and Control Sub-Unit,

- A representative of the Internal Audit Unit ,
- A representative of the Central Financing and Contracts Unit;
- A representative of the Miller Bank;
- A representative of the National Authorizing Officer ;
- Civil society and socio-economic partners;
- Line ministries responsible for OP Regional Competitiveness, OP Transport, OP Human Resources OP Rural Development;
- Where appropriate, IFIs when they provide co-financing.

The composition of the SMC can be reviewed and extended by the Head of the OS in agreement with the EC in order to guarantee sufficient representation and membership.

The SMC EOP will be assisted by a permanent secretariat provided by the OS for the preparation of papers for discussion by the committee or for clearance by written procedure. The OS shall also inform the SMC EOP regularly about the progress made in implementing decisions from previous meetings.

Within this framework, secretariat services of the SMC EOP will be carried out by the Monitoring Team which will be established under the Monitoring and Evaluation Sub-Unit of the OS (**please see Diagram E.1 above**). SMC EOP will report to the IPA Monitoring Committee.

The SMC EOP will oversee the effectiveness and quality of the programme implementation, and will monitor especially the financial absorption capacity of the different interventions. In accordance with the Article 167 of IPA Implementing Regulation, the Monitoring Committee shall:

The SMC carries out a number of functions that include:

- Considering and approving the general criteria for selecting projects, and approving any revision to those criteria in accordance with programme needs;
- Reviewing progress made towards achieving the specific targets of the programme on the basis of documents submitted by the MoEF;
- Examining the results of implementation, particularly the achievement of the targets set for each priority axis and measure as well as interim evaluations it shall carry out this monitoring by reference to the indicators agreed;
- Examining and approving annual and final reports on implementation , including OP summary table attached to the implementation chapter of the EOP;

- Reporting to the IPA Monitoring Committee on progress in implementation and the functioning of the management and control systems;
- Being informed about the audit activities carried out and the opinion given by the audit authorities and the EC concerning the EOP;
- Making proposals for corrective measures.

The Secretariat of the SMC will be the responsibility of the Monitoring and Evaluation Sub-Unit under the IPA Unit in MoEF.

The SMC shall draw up its rules of procedure in compliance with a SMC mandate set out by the Commission, and within the institutional, legal and financial framework of the beneficiary country concerned. It shall adopt these rules of procedure in agreement with the OS and the IPA monitoring committee, in order to exercise its missions in accordance with this Regulation.

The OS is responsible for the preparation and implementation of the monitoring activities in close coordination with the SMC for the Regional Development and Human Resource components. It will prepare a monitoring and evaluation framework in line with EU requirements.

### **(c) National Coordination Structures**

Overall coherence for financial cooperation with the EU as well as participation to Community Programmes shall be ensured through internal mechanisms by the involvement of all key actors (NIPAC, NAO, and Strategic Coordinator) under political ownership. Accordingly, identification of two new structures is envisaged: Financial Cooperation Board (FCB) and Regional Development and Human Resources Development Coordination Committee.

#### **1) Financial Cooperation Board**

The FCB is envisaged to be established under the chairmanship of the Chief Negotiator with the involvement of NIPAC, NAO, Strategic Coordinator, Ministry of Foreign Affairs, and Ministry of Finance. Ministry of Transport, Ministry of Industry and Trade, Ministry of Environment and Forestry, Ministry of Labor and Social Security, Ministry of Agricultural and Rural Affairs and other relevant public institutions may participate, where appropriate. EUSG will provide secretariat of the Board.

This Board will ensure overall coherence for financial cooperation with the EU through political ownership and inter-ministerial coordination.

This Board will be responsible for;

- Monitoring and steering of general financial cooperation process,
- Assessment of overall and annual breakdown of the funds among IPA components.

## **2) Regional Development and Human Resources Development Coordination Committee**

As a part of the institutional set-up under IPA, a Regional Development and Human Resources Development Coordination Committee for the SCF will be established. The Committee will be composed of under the chairmanship of the Undersecretary or one Deputy Undersecretary of the State Planning Organisation, Undersecretaries of the OSs responsible for each OP and the high-level representatives of Ministry of Foreign Affairs, Ministry of Finance, Undersecretariat of Treasury, EUSG and EIB Bank. SPO will provide secretariat of the Coordination Committee.

The main tasks and responsibilities of the Regional Development and Human Resources Development Coordination Committee are as follows:

- To steer the management of the SCF;
- To secure OPs compliance with the SCF;
- To review the progress being made towards achieving objectives and targets on the OP base;
- To propose to the OS any revision of the programme for the attainment of the programmes' objectives and improvement of its management;
- To consider and approve any proposal to amend the financing agreement of the programme.

## **E.2.2. MANAGEMENT INFORMATION SYSTEM**

The Heads of the OS and CFCU are responsible for the efficiency and accuracy of the management and implementation of the EOP. They will establish, maintain and regularly update a reporting and information system to gather reliable financial and statistical information on implementation, and for monitoring and evaluation. They will then submit this data in accordance with arrangements agreed between NIPAC and the EC.

The system will be facilitated by one or several computerised system(s), in a form chosen by the OS, which will enable it to:

- Monitor and manage the implementation of operations and different projects, from the moment of tendering and call for proposals to the closure of the EOP, 2007 -2009;
- Carry out and monitor financial transactions;
- Ensure that reporting requirements are met and that implementation of EOP, 2007-2009 is carried out as planned.

Both the OS and the CFCU will share this system.

## **E.2.3. MONITORING SYSTEMS AND INDICATORS**

The quantitative and qualitative progress made in implementing the EOP as well as its efficiency and effectiveness in relation to its objectives will be measured by the use of evaluation and monitoring indicators related to the results and outputs of the individual measures.

In identifying appropriate indicators, account must be taken of the methodologies, guidelines and lists of examples of indicators issued by the EC, in particular the "Indicative Guidelines on evaluation methods: Monitoring and evaluation indicators" (August 2006, working document No. 2 for the programming period 2007-2013).

The Head of the OS will be responsible for monitoring the EOP and will collect data (outputs, results and expenditures) from the different projects. The OS will establish, maintain and update the reporting and information system by taking this project-level data concerning final beneficiaries and aggregating them into measure(s) and priority axis. On this basis, the OS, in close coordination with the CFCU, will assess the progress of the EOP at each level against objectives and targets, prepare reports to the SMC, draft the sectoral annual and final reports on implementation and launch interim evaluations, if required.

In the context of monitoring and for the purpose of using indicators, the role of the OS will also be to ensure that:

- Monitoring requirements are built into the call for tenders and proposals documents;
- Project applications (when appraised and selected) include proposed outputs and results, as well as data on final-beneficiaries, that are consistent with the EOP indicators for the appropriate measure;
- The provision of data is built into the IA signed with final beneficiaries as an obligation, and that the performance data are provided systematically and in a timely manner by the final beneficiaries alongside the project reimbursement claim.

#### **E.2.4. SELECTION OF OPERATIONS**

The OS will establish a PSC for the selection of operations. This committee will appraise project applications in compliance with the selection criteria and methodologies agreed by the SMC and published in the call for proposal documents. The administration and compliance check with eligibility and administrative criteria will be carried out by the Technical Implementation Sub-Unit under the IPA Unit in MoEF. The Committee will then make recommendations to the OS, in compliance with Article 158 of the IPA Implementing Regulation. The members of the Committee will include representatives from;

- MoEF;
- SPO;
- İller Bank;
- DS.

Procurement (including the award of major projects) will be in accordance with EC PRAG and will be conducted by the CFCU. The CFCU will also organise the tender selection committees for the evaluation of service, works and supply tenders.

#### **E.2.5. SECTORAL ANNUAL AND FINAL REPORTS ON IMPLEMENTATION**

Sectoral annual and final reports on implementation will be prepared by the MoEF as OS in accordance with Article 169 of the IPA Implementing regulation. These reports will be prepared by the Monitoring and Evaluation Sub-Unit under the IPA Unit in MoEF and will assess (1) the implementation progress and achievement, or otherwise, of the objectives, (2) the problems encountered in managing the EOP and the measures taken for mitigation, (3) the financial management, (4) the monitoring and evaluation activities carried out. These reports will include specific progress reports on each major project, in accordance with a format to be agreed with the Commission.

## **E.2.6. EVALUATION ARRANGEMENTS**

Evaluations are tools for assessing the relevance, efficiency and effectiveness of the financial assistance as well as the impact and sustainability of the expected results. As a minimum, an ex-ante evaluation and an interim evaluation should be carried out under the responsibility of the Head of the OS in accordance with the principles laid down in the IPA Regulation and guidance provided by the EC. The evaluation arrangements and activities must fully respect the principle of proportionality.

### **(a) Ex-ante evaluation**

An ex-ante evaluation has been carried out under the responsibility of the OS by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) International Services and the main recommendations incorporated into this EOP. A summary is provided **under Section A.1.7.**

Under the responsibility of the OS, an ex ante evaluation of the EOP has been carried out by the independent expert within the framework of the technical assistance project called "Support to the SPO to Build Capacity at Central, Regional and Local Level to Implement Economic and Social Cohesion Measures ." SPO has bearded overall responsibility for overseeing and coordinating the ex -ante evaluation process.

Key points related to the E nvironmental Report and Ex-ante Evaluation Report of the EOP is provided as an Annex (**see Annex 6-7**). Furthermore, a summary of the results of the ex-ante evaluation and the way the evaluation was conducted within the EOP.

The main purposes of the ex ante evaluation were to:

- assess whether the overall programme is an appropriate means for addressing the issues confronting Turkey ;
- check whether the programme has well defined strategic axes, priorities and objectives that are relevant to Turkey's needs and is achievable ;
- advise on the quantification of objectives and the establishment of a basis for both monitoring and future evaluation work ;
- review the adequacy of the implementation and monitoring arrangements and help with the design of project selection procedures and criteria.

### **(b) Interim evaluation**

Interim evaluations will be carried out during the implementation of the EOP,. A mid -term evaluation will also be carried out in close co -ordination with similar evaluations for the other OPs. These will address implementation or management issues of an individual priority area or a key area of intervention, especially when the monitoring of the programme reveals a

significant departure from the initial goals. At any rate, evaluations should be planned to provide data on indicators agreed upon in the OPs that cannot be obtained through the monitoring system. For the EOP, the results will be sent to the ad-hoc committee on evaluations, to the SMC and to the EC. Budget allocations have already been made under the TA priority axis.

**(c) Ex-post evaluation**

Ex-post evaluations will be the responsibility of the EC in collaboration with the SPO. Some 'strategic evaluations' may also be carried out.

The ex-post evaluation will be carried out by independent experts and will be completed not later than three years after the end of the programming period. The results of the evaluations will be published according to the applicable rules on access to documents.

**(d) Evaluation function**

The Head of the OS is responsible for ensuring that adequate evaluations of the EOP are carried out, under the Co-ordinator for the Regional Development and Human Resource Components. These evaluations will be conducted externally, by independent evaluators.

Evaluation with cross-cutting themes relevant for several programmes will also be managed by the same Co-ordinator.

**(e) Evaluation committee**

The SMC should design an ad-hoc committee to assist the OS in its evaluation activities. The committee members should be experts in evaluation. Relevant stakeholders should be able to contribute.



### **E.3. INFORMATION AND PUBLICITY**

An inter-ministerial communication committee has been established since May 2007 under the co-ordination of the SPO for overall Economic and Social Cohesion (ESC) communication measures and to develop a global communication strategy. However, line ministries are in charge of preparing and implementing the Communication Strategy and related CAP for each OP.

A short term awareness raising programme is currently being designed and will be implemented during the second part of 2007.

#### **E.3.1. INTRODUCTION**

Information and publicity are important for the successful design and delivery of the EOP, given the essential partnership basis of the entire undertaking. The main aspects can be broken down into a series of activities and these are also eligible for pre-accession funding.

Accordingly, Article 62 of the IPA Regulation sets out certain requirements regarding the information to be provided and publicity of programmes and operations financed by the Community, addressed to citizens and beneficiaries with the aim of highlighting the role of Community funding and ensuring transparency.

The information to be provided by the EOP should include, inter alia, the publication of the list of final beneficiaries, the names of the projects and the amount of Community funding allocated to operations. Promulgation given by the Commission by way of publication of relevant information on tenders and contracts in the official Journal of the European Union and other relevant media and websites will also serve to publicise the programme.

Article 63 of the IPA Regulation states that the Commission and the relevant authorities of the beneficiary country shall agree to a coherent set of activities, to be funded from the TA priority of the OP, to make available and publicise information about IPA assistance.

In accordance with the above provisions, the OS will be responsible for the programme information and publicity activities. The information shall be addressed to all citizens within Turkey and to EU citizens in general, and specifically target potential beneficiaries. Campaigns will highlight the role of the Community and ensure that IPA assistance is transparent.

### **E.3.2. REQUIREMENTS**

In compliance with Article 63 of the IPA Regulation and the European Commission Regulation (EC) 1159/1000 of 30 May 2000, the OS will be responsible for preparing a CAP to publicise information about IPA assistance to the potential beneficiaries and informing the public about the support activities of the E U. The CAP will cover the entire period from 2007-2013. The OS will submit a draft of the CAP to the Commission within four months from the date of signature of the Financing Agreement covering the EOP. As a minimum the plan will include the following points:

- The aims and target groups;
- The strategy and content;
- The indicative budget;
- The administrative departments;
- The criteria used for evaluation.

A special team responsible for information and publicity will be established within the OS. It will elaborate a CAP to provide a strategic coherence to the set of activities to publicise information about IPA assistance. The function to be performed by the Publicity Team is as follows:

- Preparing the CAP;
- Informing the Commission about amendments made to the CAP;
- Managing the communication activities of the Plan and related budget ;
- Participating to the working group promoted by the MoEF ;
- Managing the information on the contents of the EOP provided at the Ministry's website ;
- Preparing timely publication of materials related to EOP (newsletter, leaflets, reports, etc.);
- Supervising general public awareness researches ;
- Monitoring the communication actions undertaken by the Implementing Institutions and beneficiaries and providing advice to support compliance with EU publicity requirements ;
- Supporting the organisation of conferences and other information events in partnership with the key stakeholders of the EOP and the other OSs;
- Managing the media aspects of such events ;
- Responding to requests for information from the media and general public ;

- Organizing and implementing a monitoring system to verify the effectiveness of the plan ;
- Preparing the monitoring reports on information and publicity activities for the SMC of EOP and for the European Commission.

### **E.3.3. ACTIVITIES**

The Publicity Team will ensure that the information and publicity measures are implemented in accordance with the CAP and aiming at the broadest possible media coverage using all suitable forms and methods of communication at the appropriate territorial level. They will be responsible for organising the following:

- a major information activity publicising the launch of the EOP, if necessary, even in the absence of the final version of the CAP;
- at least one major information activity a year presenting the achievements of the EOP including major projects;
- the publication (electronically or otherwise) of the list of beneficiaries, the names of the projects and the amount of Community and national funding allocated to the operations.

The Publicity Team will provide potential beneficiaries with clear and detailed information on:

- the possibility of financing opportunities offered jointly by national funding and the Community through the EOP;
- the conditions of eligibility to be met in order to qualify for financing under the EOP;
- a description of the procedures for examining applications for funding and of the time schedule involved;
- the criteria for selecting the operations to be financed;
- the contacts at national, regional or local level that can provide information on the EOP.

### **E.3.4. INDICATIVE BUDGET**

The indicative budget for the CAP under this OP for the period 2007-2009 will be set at an appropriate level in order to provide adequate cover for the costs of the publicity and information measures. The budget allocation per year, as well as the indicative amounts necessary for the period 2010-2013, will also be presented in the CAP.

### **E.3.5. MANAGEMENT AND IMPLEMENTATION**

Information and publicity activities will be carried out by the Publicity Team established under the Programming Sub -Unit of the IPA Unit. Publicity Team will be composed of the experts involved in the preparation process of the EOP and as well as the officials from the Press and Public Relations Counsellorship and Information Technologies (IT) Department of MoEF.

The Publicity Team will support the Head of the OS and have the following functions and responsibilities:

- Agree the CAP with the Commission;
- Co-ordinating information and publicity activities under other IPA funded programmes;
- Communication with the media;
- Elaboration, implementation and assessment of the CAP for the EOP;
- Represent the EOP in the relevant national and commission information networks;
- Handle enquires from beneficiaries;
- Monitor and control the information and publicity requirements from the beneficiaries;
- Develop, produce and distribute information materials; prepare and manage public events;
- Develop and maintain the EOP website;
- Liaison with IT regarding technical maintenance;
- Manage out-sourced services;
- Elaborate and monitor annual CAPs and co-ordinate internal events and training.

Some of the information and publicity measures will almost certainly require out -sourcing for professional services (such as design and pre -print, web page, printing, advertising, photography and development and implementation of survey / opinion polls for feed -back from the public). It will be responsibility of the unit to manage such services and ensure they are contracted in accordance with public procurement rules.

### **E.3.6. MONITORING, EVALUATION AND REPORTING**

Monitoring, evaluation and reporting are compulsory requirements for the implementation of the publicity measures included in the CAP of the EOP.

The progress made in the implementation of the CAP will be reported during meetings with the SMC. The Head of the OS will inform the SMC about the information and communication measures carried out and the means of communication used.

The annual and final reports on implementation of the EOP will include the following information:

- Examples of information and communication measures undertaken in implementing the CAP;
- The arrangements for the information and publicity measures concerning the publication electronically or otherwise of the list of beneficiaries, the names of the operations and the amount of public funding allocated to the operations;
- The content of major amendments to the CAP.

A set of indicators for evaluation of the publicity measures will be included in the CAP and these will be used to assess the efficiency and effectiveness of the publicity activities.

The results of the qualitative and quantitative analyses will be used to elaborate the annual CAPs and any need for modifications.

### **E.3.7. PARTNERSHIP AND NETWORKING**

Bodies that can disseminate information concerning the EOP to the general public are as follows:

- Professional trade associations and organisations;
- Economic and social partners;
- NGOs;
- Educational institutions;
- Business organisations;
- Information centres on Europe and Commission representatives;
- Other main stakeholders for each priority.

The OS will work in close co-operation with these bodies in order to publicise information regarding the EOP and the IPA.

### E.3.8. INTERNET

In order to publicise the EOP, a web site will be established by the OS. This website will be used for informing the general public about the funding opportunities under the EOP, amount of the support, eligibility criteria for financial assistance, project selection criteria and selection process etc. It will be linked to the IPA, ECD, DG ELARG, DG EMPL and DG REGIO websites as well with the websites of the other OPs. It will be created according to the following principles:

- **Accessibility to as many users as possible** - ensuring the site has a simple address; registering it on main search engines so it can be easily located ; designing it to be viewable with low specification screens and software; ensuring it is quick to download;
- **Prioritising fast access to rich information** - the site should be clearly organised so users can find what they are looking for quickly and easily; the information should be available as downloadable portable document format (pdf) documents, where possible;
- **Visual appeal** - strong visual identity through logos, use of colours etc. without limiting the clarity, speed and simplicity;
- **Continuous Development as an ongoing resource;**
- **Interactive content, exploiting the unique strengths of websites.**

Furthermore, a web page has been designed for the Economic and Social Cohesion (ESC) Inter-ministerial Working Group which involves Strategic Coordinator (SPO) and OSs. This web page is one of the main instruments of the Inter-ministerial Working Group in publicity of the EU funding opportunities, SCF, and OPs under III & IV components of the IPA. This web site aims to carry out consultation activities related to the OP's, to promote the EU funds in Turkey, to ensure exchange of information and to give updated information to all stakeholders at central, regional and local level.

**Annex 1: List of stakeholders involved in the preparation of the EOP, 2007 -2009**

List of Institutions involved in the preparation of the EOP
<ul style="list-style-type: none"> <li>• Ministry of Environment and Forestry (MoEF): <b>Operating Structure (OS)</b>                      (Department of Foreign Affairs and European Union)</li> </ul>
<ul style="list-style-type: none"> <li>• Prime Ministry Undersecretariat of State Planning Organisation (SPO)                      (General Directorate of European Union Relations)                      (General Directorate of Social Sectors and Coordination)</li> </ul>
<ul style="list-style-type: none"> <li>• Prime Ministry Undersecretariat of Treasury                      (General Directorate of Foreign Economic Relations)</li> </ul>
<ul style="list-style-type: none"> <li>• Prime Ministry Secretariat General for EU Affairs (EU SG)                      (Department of Sectoral and Regional Policies)</li> </ul>
<ul style="list-style-type: none"> <li>• Prime Ministry Southeastern Anatolia Project Regional Development Administration</li> </ul>
<ul style="list-style-type: none"> <li>• Prime Ministry Turkish Statistical Institute (TURKSTAT)</li> </ul>
<ul style="list-style-type: none"> <li>• Ministry of Foreign Affairs                      (Deputy General Directorate for Energy, Water and Environment)</li> </ul>
<ul style="list-style-type: none"> <li>• Ministry of Interior                      (Deputy General Directorate of Local Authorities)</li> </ul>
<ul style="list-style-type: none"> <li>• Ministry of Finance                      (Directorate of EU and Foreign Relations)</li> </ul>

List of Institutions Involved in the preparation of the EOP

- Ministry of National Education  
(General Directorate of Foreign Relations)

- Ministry of Public Works and Settlement  
(European Union Unit)  
(General Directorate of Bank of Provinces -International Relations Unit)

- Ministry of Health (MoH)  
(General Directorate of Basic Health Services)

- Ministry of Transport  
(Department of European Union Coordination)

- Ministry of Agriculture and Rural Affairs  
(General Directorate of Protection and Control)

- Ministry of Labour and Social Security  
(Department of European Union Coordination)

- Ministry of Industry and Trade  
(General Directorate of European Union Coordination)

- Ministry of Environment and Forestry  
(General Directorate of State Hydraulic Works)

- Ministry of Culture and Tourism  
(Department of Foreign Relations and European Union Coordination)

- Turkish Standards Institution

- Energy Market Regulatory Authority



List of Provincial Directorates of the Ministry of Environment and Forestry involved in the preparation of the EOP
• Governorship of Adana (Provincial Directorate of Environment and Forestry)
• Governorship of Ankara (Provincial Directorate of Environment and Forestry)
• Governorship of Antalya (Provincial Directorate of Environment and Forestry)
• Governorship of Balıkesir (Provincial Directorate of Environment and Forestry)
• Governorship of Bursa (Provincial Directorate of Environment and Forestry)
• Governorship of Çorum (Provincial Directorate of Environment and Forestry)
• Governorship of Denizli (Provincial Directorate of Environment and Forestry)
• Governorship of Diyarbakır (Provincial Directorate of Environment and Forestry)
• Governorship of Erzurum (Provincial Directorate of Environment and Forestry)
• Governorship of Gaziantep (Provincial Directorate of Environment and Forestry)

List of Provincial Directorates of the Ministry of Environment and Forestry involved in the preparation of the EOP	
• Governorship of İstanbul (Provincial Directorate of Environment and Forestry)	
• Governorship of İzmir (Provincial Directorate of Environment and Forestry)	
• Governorship of Kayseri (Provincial Directorate of Environment and Forestry)	
• Governorship of Kocaeli (Provincial Directorate of Environment and Forestry)	
• Governorship of Konya (Provincial Directorate of Environment and Forestry)	
• Governorship of Mersin (Provincial Directorate of Environment and Forestry)	
• Governorship of Samsun (Provincial Directorate of Environment and Forestry)	
• Governorship of Trabzon (Provincial Directorate of Environment and Forestry)	

List of Universities involved in the preparation of the EOP
<ul style="list-style-type: none"><li>• Presidency of Balıkesir University (Faculty of Engineering and Architecture - Department of Environmental Engineering)</li></ul>
<ul style="list-style-type: none"><li>• Presidency of Bozüyük University (Institute of Environmental Sciences)</li></ul>
<ul style="list-style-type: none"><li>• Presidency of Çukurova University (Faculty of Engineering and Architecture - Department of Environmental Engineering)</li></ul>
<ul style="list-style-type: none"><li>• Presidency of Dokuz Eylül University (Faculty of Engineering - Department of Environmental Engineering)</li></ul>
<ul style="list-style-type: none"><li>• Presidency of Erciyes University (Faculty of Engineering - Department of Environmental Engineering)</li></ul>
<ul style="list-style-type: none"><li>• Presidency of Hacettepe University (Faculty of Engineering - Department of Environmental Engineering)</li></ul>
<ul style="list-style-type: none"><li>• Presidency of İstanbul Technical University (Faculty of Civil Engineering – Department of Environmental Engineering)</li></ul>
<ul style="list-style-type: none"><li>• Presidency of Kocaeli University (Faculty of Engineering - Department of Environmental Engineering)</li></ul>
<ul style="list-style-type: none"><li>• Presidency of Mersin University (Faculty of Civil Engineering - Department of Environmental Engineering)</li></ul>

List of Universities involved in the preparation of the EOP

- Presidency of Pamukkale University  
(Faculty of Engineering - Department of Environmental Engineering)
- Presidency of Selçuk University  
(Faculty of Engineering and Architecture - Department of Environmental Engineering)
- Presidency of Uludağ University  
(Faculty of Engineering and Architecture - Department of Environmental Engineering)

List of NGOs involved in the preparation of the EOP
• Agricultural Development Foundation
• Association of Environmental Volunteers of Diyarbakır
• Association of Environmental Volunteers of Edirne
• Business Association for Sustainable Development
• Central Anatolia Region Environmental Platform (ÇAÇEP)
• Economic Development Foundation
• Economic Policy Research Foundation of Turkey (TEPAV)
• Environmental Consultation and Engineering Association (Association of Environment)
• Environmental Protection and Packaging Recovery & Recycling Trust (ÇEVKO)
• Environmental Protection Foundation of İzmir
• Environmental Protection Foundation of Sivas
• Federation of Nature Conservation in Black Sea (KARDOBA)
• Federation of Sustainable Agriculture Associations
• Global Balance Association
• Marmara Region Environmental Platform

List of NGOs involved in the preparation of the EOP

- Nature Association
- Sustainable and Ecological Agriculture Association
- Technology Development Foundation of Turkey (TTGV)
- The Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats (TEMA)
- The Union of Chambers and Commodity Exchanges of Turkey (TOBB)
- Turkey Environmental Protection Foundation
- Turkish Environmental and Woodlands Protection Society (TÜRÇEK)
- Turkish Environmental Platform
- Turkish Industrialists' and Businessmen's Association (TÜSİAD)
- Turkish Marine Environment Protection Association (DENİZ TEMİZ)
- Turkish National Committee on Solid Wastes (KAKAD)
- Turkish Nature Conservation Association
- Union of Chambers of Turkish Engineers and Architects (TMMOB)
- Union of Municipalities in Turkey
- West Black Sea Region Environmental Platform (BAKÇEP)

List of NGOs involved in the preparation of the EOP
• West Mediterranean Region Environmental Platform (BAÇEP)
• World Energy Council Turkish National Committee
• World Wildlife Foundation -Turkey (WWF - Turkey)
• Youth Association for Habitat and Agenda 21

## Annex 2: Events and meetings held with the stakeholders involved in the preparation of the EOP, 2007 -2009

List of events and meetings held with the stakeholders involved in the preparation the EOP			
Name	Date	Venue	
Introductory Meeting on the SCF and Ops	15 April 2006	SPO	
Training Meeting on Preparation of the SCF	27-29 June 2006	SPO	
Training Meeting on Preparation of the EOP	02-08 July 2006	SPO	
Initial Meeting on the EOP	21 July 2006	MoEF	
Consultation Meeting on EOP	28 July 2006	DEDEMAN HOTEL	
Meetings on Preparation of the EOP	01 August 2006 - 01 February 2007 (during all weeks)	MoEF	
First Monitoring and Evaluation Meeting on the Draft SCF and EOP - (with European Commission Team)	30 November 2006	SPO	
First Meeting of the EOP Ex-ante Evaluation	22 December 2006	MoEF	
Second Meeting of the EOP Ex-ante Evaluation	12 January 2007	MoEF	
Monitoring and Evaluation Meeting on the Draft EOP (with Inter-institutional Team)	18-19 January 2007	MoEF	
Third Meeting of the EOP Ex-ante Evaluation	01 February 2007	MoEF	
OP and Partnership Principle Seminar for the Environment	05 March 2007	DEDEMAN HOTEL	



List of events and meetings held with the stakeholders involved in the preparation the EOP			
Name	Date	Value	
First Monitoring and Evaluation Meeting on the Draft EOP - (with European Commission Team)	09 March 2007	BRUSSEL	
Second Monitoring and Evaluation Meeting on the Draft SCF and EOP - (with European Commission Team)	27 March 2007	SPO	
Second Monitoring and Evaluation Meeting on the Draft EOP - (with European Commission Team)	12 June 2007	MoEF	
Monitoring and Evaluation Meeting on the Draft EOP - (with Directorates of Provinces Team)	14 June 2007	MoEF	
Monitoring and Evaluation Meeting on the Draft EOP - (with University Team)	15 June 2007	MoEF	
Monitoring and Evaluation Meeting on the Draft EOP - (with Inter-institutional Team)	22 June 2007	MoEF	
Monitoring and Evaluation Meeting on the Draft EOP - (with NGOs Team)	25 June 2007	MoEF	
European Union - NGOs Dialogue Meeting	26 June 2007	NEVA PALACE HOTEL	
Fourth Meeting of the EOP Ex-ante Evaluation	03 July 2007	MoEF	

**Annex 3: List of major environmental infrastructure projects under the EOP, 2007 -2009**

List of major drinking water projects		
Ranking	Name of the project	Cost (EUR)
1	Manavgat Drinking Water Supply Project	18 800 000
2	Erci• Drinking Water Supply Project	22 000 000
3	Do• ubeyaz• Drinking Water Supply Project	19 400 000
4	Ezeltere Drinking Water Supply Project	10 000 000
Total		70 200 000

**List of major waste water projects**

<b>Ranking</b>	<b>Name of the project</b>	<b>Cost (EUR)</b>
1	Erzurum WWTP, Collector, Stormwater and Sewerage Network Project	78 000 000
2	Kırşehir WWTP Project	12 700 000
3	Adıyaman WWTP Project	18 500 000
4	Siverek WWTP Project	13 200 000
5	Diyarbakır WWTP Biological Treatment Upgrade Project	30 200 000
6	Turhal WWTP Project (DABLAS Programme Project)	10 000 000
7	Aksaray WWTP Rehabilitation Project	13 500 000
8	Ceyhan WWTP, Storm water Network and Drinking Water Transmission Line Project	13 150 000
9	Bandırma WWTP and Stormwater Network Project	11 150 000
10	Turgutlu WWTP Project	10 000 000

List of major waste water projects		
Ranking	Name of the project	Cost (EUR)
11	Aydın WWTP Project	14 850 000
12	Ordu WWTP Project (DABLAS Programme Project)	10 500 000
Total		236 750 000

List of major integrated solid waste management projects		
Ranking	Name of the project	Cost (EUR)
1	Kayseri Integrated SWM Project	30 387 500
2	Çorum Integrated SWM Project	21 815 497
3	Konya Integrated SWM Project	22 936 200
4	Balıkesir Integrated SWM Project	14 224 000
5	Artvin-Rize Integrated SWM Project	14 500 000
6	İzmir-Harmandalı Integrated SWM Project	10 850 000
7	Van Integrated SWM Project	20 600 000
8	Batman Integrated SWM Project	18 000 000
9	Malatya Integrated SWM Project	23 000 000
10	Ereğli Integrated SWM Project (NUTS II Project)	10 000 000

<b>Total</b>	<b>186 313 197</b>
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#### **Annex 4: Project identification cards**

The Project Identification Card for each major project is given including project name, investment value and financing sources, description of the main components, description of project objectives and expected results, timetable, status of basis project documentation, status of project design.

Project No : 1		Priority Axis : 1		Measure No. : 1.1	
Project location : MANAVGAT/ ANTALYA					
1. Project name		Renewal of Manavgat Drinking Water Supply and to increase capacity			
2. Investment value (estimated)		18 800 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• New Resources</li> <li>• Storage Tanks</li> <li>• Network - Pressurised Main Line-</li> </ul>			
4. Description of main project objectives and expected results		Objective of the project is to provide drinking water to Manavgat City Centre and to contiguous tourism areas.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	2004	Done in coordination with Aler Bank.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	Completed	1) 01/06/2005 2) 01/06/2005	1) Geological - Geotechnical Survey Report 2) Final Project of Manavgat Drinking Water - Project Report	

9. Status of project design documentation and permits

Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comments
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	Completed	2005	Carried out by Hler Bank according to Turkish Standards.
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		

10. Description of the land ownership status	There is no expropriation problem for the project area.
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11. Describe current project status	Technical Assistance Project to prepare 8 Drinking Water Supply Projects from the Priority Projects for IPA. The project will be a service contract and under tendering by CFCU (Shortlisting). The Project is financed under SEI 2005 Program. The Projects are expected to be ready for IPA 2008 Programming.
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12. Name of final beneficiary	Manavgat Municipality	13. Name of Operator	Manavgat Municipality
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14. Sources of financing	
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National component (including final beneficiary)	IFT (specify)	Other donor (specify)	Proposed IPA grant
4 700 000 EUR	.....EUR	.....EUR	14 100 000 EUR

15. Additional Comments	
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Project No : 2		Priority Axis : 1		Measure No. : 1.1	
Project location : ERC- / VAN					
1. Project name		Erci- Drinking Water Supply Project			
2. Investment value (estimated)		22 000.000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• New Resources;</li> <li>• Storage Tanks (2500 m<sup>3</sup> + 7500 m<sup>3</sup>);</li> <li>• Network Line;</li> <li>• City Network.</li> </ul>			
4. Description of main project objectives and expected results		<p>The present water network of the district is insufficient due to water losses and population increase. Despite the best efforts of the municipality, only 60% of the district is provided with water.</p> <p>After project completion, disinfected water will be provided for the entire public.</p>			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	On-going	2004	With the own resources of the municipality.	
Feasibility study (with cost-benefit analysis which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	None			

9. Status of project design documentation and permits

Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		

10. Description of the land ownership status

There is no expropriation problem for the project area.

11. Describe current project status

Technical Assistance Project to prepare 8 Drinking Water Supply Projects from the Priority Projects for IPA. The project will be a service contract and under tendering by CFCU (Shortlisting). The Project is financed under SEI 2005 Program. The Projects are expected to be ready for IPA 2008 Programming.

12. Name of final beneficiary

Erci• Municipality

13. Name of Operator

Erci• Municipality

14. Sources of financing

National component (including final beneficiary)	IF (specify)	Other donor (specify)	Proposed IPA grant
5 500 000 EUR	.....EUR	.....EUR	16 500 000 EUR

Project No : 3		Priority Axis : 1		Measure No. : 1.1	
Project location : DOGUBAYAZIT/ A• RI					
1- Project name		Restoration of Baıkı• Göl Transmission Line, Establishment Of Treatment Plant And Restoration Of City Network Project			
2- Investment value (estimated)		19 400 000 EUR			
3- Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Drinking water Treatment Plant;</li> <li>• Storage Tanks (5000 m<sup>3</sup> + 300 m<sup>3</sup>);</li> <li>• Network - Pressurised Main Line;</li> <li>• City Network.</li> </ul>			
4- Description of main project objectives and expected results		<p>Objective of the project is to meet the drinking water demand of the district</p> <p>The outcomes of the project will be:</p> <p>1) Increased amount of drinking water and potable water; 2) Eliminating the threat of wastewater penetrating into network due to negative pressure at cracks and leakage points with the restoration of the city network replacing one in an irreparable condition; 3) The treatment plant will ensure drinking water and potable water will be supplied according to standards determined by related laws and EU Directives; 4) Present transmission line was built by using AC pipes, but, was demolished by villages located on the route of transmission line. Renewal of the transmission line with more resistant pipes will ensure safety of the line.</p>			
5- Month and year of start of project implementation		2009	6- Month and year of end of project implementation		2012
				7- Project duration (months)	36
8- Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	2004	Done in coordination with •ler Bank.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	Completed	1) 2005 2) 03/2005	1) Do• ubayazıt Drinking Water Supply Justification and Planning Report, done by •ler Bank. 2) Study and Planning Report (Also there is an 5-page additional study and planning report).	

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input checked="" type="checkbox"/>	Completed	06.11.2006	Taken by General Directorate of National Estate of Ministry of Finance for the location of treatment plant
Holding Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		<p>There is no expropriation problem for the project area except the place of storage tanks. Allocation of the area of storage tanks will be done by the municipality.</p> <p>Additional land expropriation for treatment plant may be needed.</p>		
11. Describe current project status		<p>Technical Assistance Project to prepare 8 Drinking Water Supply Projects from the Priority Projects for IPA. The project will be a service contract and under tendering by CFCU (Shortlisting). The Project is financed under SEI 2005 Program. The Projects are expected to be ready for IPA 2008 Programming.</p>		
12. Name of final beneficiary		Doğubeyazıt Municipality	13. Name of Operator	Doğubeyazıt Municipality
14. Sources of financing				
National component (including final beneficiary)	EU (specify)	Other donor (specify)	Proposed IPA amount	
4 850 000 EUR	.....EUR	.....EUR	14 550 000 EUR	
15. Additional Comments		<p>In existing situation, there is a cascade aeration for water coming from Balıklı Göl. But, this system was damaged and process is not sufficient for treatment.</p> <p>The feasibility and environmental impact assessment studies for the project have not been completed yet.</p>		



Project No : 4		Priority Axis : 1		Measure No. : 1.1	
Project location : <b>BULANCAK/ G-RESUN</b>					
1. Project name		Ezeltere Drinking Water Project			
2. Investment value (estimated)		10 000 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• New Resources;</li> <li>• Treatment Plant;</li> <li>• Storage Tanks;</li> <li>• Network - Pressurised Main Line.</li> </ul>			
4. Description of main project objectives and expected results		The objective of the project is to meet the water demand and provide safe drinking water for the district at least until the year 2040.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input type="checkbox"/>				
Feasibility study (with cost benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>				
EIA study	<input type="checkbox"/>				
Tender documents	<input type="checkbox"/>				
Other (specify)	<input checked="" type="checkbox"/>	Completed		Hydrologic and Hydrogeological Study Report.	

9) Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>			
Preliminary design	<input type="checkbox"/>			
Main design	<input type="checkbox"/>			
Final design	<input type="checkbox"/>			
Location Permit	<input type="checkbox"/>			
Building Permit	<input type="checkbox"/>			
Other (Specify)	<input type="checkbox"/>			
10) Description of the land ownership status		There is no expropriation problem for the project area. The area is public domain.		
11) Describe current project status		Technical Assistance Project to prepare 8 Drinking Water Supply Projects from the Priority Projects for IPA. The project will be a service contract and under tendering by CFCU (Shortlisting). The Project is financed under SEI 2005 Program. The Projects are expected to be ready for IPA 2008 Programming.		
12) Name of final beneficiary		Bulancak Municipality	13) Name of operator Bulancak Municipality	
14) Sources of financing				
National component (including final beneficiary)	EU (specify)	Other donor (specify)	Proposed IPA grant	
2 500 000 EUR	.....EUR	.....EUR	7 500 000 EUR	
15) Additional Comments				

Project No : 1		Priority Axis : 1		Measure No. : 1.2	
Project location : ERZURUM/ ERZURUM					
1. Project name		Erzurum Wastewater Treatment Plant, Collector, Storm Water and Partial Sewerage Network Project			
2. Investment value (estimated)		78 000 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a new Wastewater Treatment Plant (WWTP); Capacity: 408.000 Domestic population equivalent (2010) 30.037 Industrial population equivalent for (2010), Project flow rate: 157.500 m<sup>3</sup>/day (2010), 315.000 m<sup>3</sup>/day (2033)</li> <li>• Construction of Collector Line (Ø2400 mm and 6650 m long to move the discharge point, Feasibility Report, 1999);</li> <li>• Construction of Sewerage Network (20 km extension for the new development regions, Feasibility Report, 1999);</li> <li>• Construction of storm water network (74 km, Feasibility Report, 1999).</li> </ul>			
4. Description of main project objectives and expected results		<p>The main objective is to prevent the pollution of Karasu River as well as to eliminate the problems caused by the lack of a separate sewerage network system.</p> <p>The Project will provide a sustainable solution to the, wastewater treatment and management problems of Erzurum.</p>			
5. Month and year of start of project implementation	2009	6. Month and year of end of project implementation	2012	7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	1999	Carried out by Erzurum Water and Sewerage Administration.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input checked="" type="checkbox"/>	Completed	2002	Preliminary EIA Study.	
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	Completed		There is Geotechnical study available.	

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comments
Conceptual design	<input checked="" type="checkbox"/>	Completed	1999	In the context of the Pre-Feasibility study.
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		The land is currently owned partially by the legal persons and partially by the natural persons.		
11. Describe current project status		A Technical Assistance Project covering 15 WWTP Projects will assist to prepare Erzurum WWTP Project for IPA Program (Feasibility, EIA, Design, Tender Dossier, IPA Application Package). The project will be a service contract and under tendering by CFCU (Shortlisting completed). The Project is financed under SEI 2005 Program by EU and has a duration of 14 months.		
12. Name of final beneficiary		Erzurum Metropolitan Municipality	13. Name of Operator	Erzurum Water and Sewerage Administration.
14. Sources of financing				
National component (including final beneficiary)	IFI (Specify)	Other donor (Specify)	Proposed IPA Grant	
19 500 000 EUR	.....EUR	.....EUR	58 500 000 EUR	
15. Additional Comments				



Project No : 2		Priority Axis : 1		Measure No. : 1.2	
Project location :		KIR• EH•R/ KIR• EH•R			
1. Project name		Kır•ehir Wastewater Treatment Plant Project			
2. Investment value (estimated)		12 700 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>Construction of a new Wastewater Treatment Plant (WWTP)</li> </ul> <p>Design Populations: 2012 - 128 500 population equivalent; 2032 - 257 000 population equivalent Project Flow Rate : 1460 m³/h (2012), 3080 m³/h (2032) (Based on the Final Design Report, İler Bank, 2002).</p>			
4. Description of main project objectives and expected results		The main objective of the project is to discharge the wastewater generated in Kır•ehir and nearby district in compliance with the relevant Turkish and EU Standards. The project will contribute to the improvement of health and environmental conditions in Kır•ıçözü River and the surrounding area through the delivery of clean irrigation water and an increase in soil productivity.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
		7. Project duration (months)		36	
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	1998	Carried out by İler Bank according to Turkish Standards.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	Completed	2002	WWTP Application Project with Final Design Report. Also, Geotechnical Study is available, İler Bank, 2002.	

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comments
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	Completed	2002	According to Hler Bank's Standards.
Location Permit	<input type="checkbox"/>			
Building Permit	<input type="checkbox"/>			
Other (specify)	<input type="checkbox"/>			
10. Description of the land ownership status		The land expropriation process is completed.		
11. Describe current project status		A Technical Assistance Project covering 15 WWTP Projects will assist to prepare Kırşehir WWTP Project for IPA Program (Feasibility, EIA, Design, Tender Dossier, IPA Application Package). The project will be a service contract and under tendering by CFCU (Shortlisting completed). The Project is financed under SEI 2005 Program by EU and has a duration of 14 months.		
12. Name of final beneficiary		Kırşehir Municipality	13. Name of Operator	Kırşehir Municipality
14. Sources of financing				
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed Budget	
3 175 000 EUR	.....EUR	.....EUR	9 525 000 EUR	
15. Additional Comments				

Project No : 3		Priority Axis : 1		Measure No. : 1.2	
Project location : ADIYAMAN/ ADIYAMAN					
1. Project name		Ad-yaman Wastewater Treatment Plant Project			
2. Investment value (estimated)		18 500 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a new WasteWater Treatment Plant (WWTP); (Capacity: 434 l/sec),</li> <li>• Construction of Collector Line.</li> </ul>			
4. Description of main project objectives and expected results		The main objective of the project is to discharge the wastewater generated in Ad-yaman in compliance with the relevant Turkish and EU Standards and to prevent pollution in Atatürk Dam.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	2007	WWTP Feasibility and Final Design, İler Bank.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	In Progress	End of 2007	According to World Bank's Standards.
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		The land expropriation process is completed./ Land expropriation studies are on-going.		
11. Describe current project status		A Technical Assistance Project covering 15 WWTP Projects will assist to prepare Kırşehir WWTP Project for IPA Program (Feasibility, EIA, Design, Tender Dossier, IPA Application Package). The project will be a service contract and under tendering by CFCU (Shortlisting completed). The Project is financed under SEI 2005 Program by EU and has a duration of 14 months.		
12. Name of final beneficiary		Ad-yaman Municipality	13. Name of Operator	Ad-yaman Municipality
14. Sources of financing				
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant	
4 625 000 EUR	.....EUR	.....EUR	13 875 000 EUR	
15. Additional Comments				



Project No : 4		Priority Axis : 1		Measure No. : 1.2	
Project location : S-VEREK/ • ANLIURFA					
1. Project name		Siverek Sewerage and Wastewater Treatment Plant Project			
2. Investment value (estimated)		13 200 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a new Wastewater Treatment Plant; (Capacity: for 2012: 383 l/sec; for 2032 -771 l/sec),</li> <li>Project Population: 136.000 census (2012) 275.000 census (2032)</li> <li>• Construction of Collector Line;</li> <li>• Construction of Sewerage Network.</li> </ul>			
4. Description of main project objectives and expected results		The main objective is to treat and discharge separately the stormwater and sewage in compliance with Turkish and EU Standards. The project will result in a sustainable and safe infrastructure.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	1999-2000	Sewerage Application Project, Aler Bank, 1999. WWTP Application Project and Final Design, Aler Bank, 2000.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input checked="" type="checkbox"/>	Completed	2001	Preliminary EIA Study.	
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	Completed	2000	Geotechnical Study in the context of WWTP Application Project.	

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	Completed	2000	According to Hler Bank's standards.
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		The land expropriation process is on-going.		
11. Describe current project status		A Technical Assistance Project covering 15 WWTP Projects will assist to prepare Erzurum WWTP Project for IPA Program (Feasibility, EIA, Design, Tender Dossier, IPA Application Package). The project will be a service contract and under tendering by CFCU (Shortlisting completed). The Project is financed under SEI 2005 Program by EU and has a duration of 14 months.		
12. Name of final beneficiary	Siverek Municipality		13. Name of Operator	Siverek Municipality
14. Sources of financing				
National Component (including final beneficiary)	IF (specify)	Other donor (specify)	Proposed IPA grant	
3 300 000 EUR	.....EUR	.....EUR	9 900 000 EUR	
15. Additional Comments				

Project No : 5		Priority Axis : 1		Measure No. : 1.2	
Project location : D-YARBAKIR/ D-YARBAKIR					
1. Project name		Diyarbakır Wastewater Treatment (Biological Treatment Rehabilitation)			
2. Investment value (estimated)		30 200 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Upgrade of Wastewater Treatment Plant (WWTP) to Biological System; (Capacity: for 2010 - 903 242 population equivalent, for 2020 - 1 412 615 population equivalent).</li> </ul> <p>Peak Stormwater Flow : 383.507 m³/day (2010)</p> <p>BODs load: 67000 kg/day (2010)</p>			
4. Description of main project objectives and expected results		The main objective is to treat wastewater in order to discharge it in a safe manner according to Turkish and EU standards.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation	2012	7. Project duration (months)
					36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	1997	WWTP Feasibility Study Final Report, KfW, 1997.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input checked="" type="checkbox"/>	Completed	1997	In the context of WWTP Feasibility Study Final Report, KfW, 1997.
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		The land is already owned by the municipality.		
11. Describe current project status		A Technical Assistance Project covering 15 WWTP Projects will assist to prepare Erzurum WWTP Project for IPA Program (Feasibility, EIA, Design, Tender Dossier, IPA Application Package). The project will be a service contract and under tendering by CFCU (Shortlisting completed). The Project is financed under SEI 2005 Program by EU and has a duration of 14 months.		
12. Name of final beneficiary		Diyarbakır Metropolitan Municipality	13. Name of Operator	Diyarbakır Water and Sewerage Administration
14. Sources of financing				
National components (including final beneficiary)	FI (specify)	Other donor (specify)	Proposed IPA grant	
7 550 000 EUR	.....EUR	.....EUR	22 650 000 EUR	
15. Additional Comments				



Project No : 6		Priority Axis : 1		Measure No. : 1.2	
Project location : TURHAL/ TOKAT					
1. Project name		Turhal Wastewater Treatment Plant Project			
2. Investment value (estimated)		10 000 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a new Wastewater Treatment Plant (WWTP).</li> </ul>			
4. Description of main project objectives and expected results		The main objective of the Project is to contribute to the protection of the Black Sea and to protect the environment and the seaboard. The Project will prevent pollution of Ye-il-mak River which finally flows into the Black Sea and will reduce discharges in line with Turkish and EU standards.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
			7. Project duration (months)		36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land expropriation studies are on-going.		
11. Describe current project status		A Technical Assistance Project covering Turhal and Turhal WWTP Projects will assist to prepare Turhal WWTP Project for IPA Program (Feasibility, EIA, Design, Tender Dossier, IPA Application Package). The project will be a framework contract and under tendering by CFCU. The Project is financed under SEI 2005 Program by EU and has a duration of 12 months.		
12. Name of final beneficiary		Turhal Municipality	13. Name of Operator	Turhal Municipality
14. Sources of financing				
National component (including final beneficiary)	EU (specify)	Other donor (specify)	Proposed IPA grant	
2 500 000 EUR	.....EUR	.....EUR	7 500 000 EUR	
15. Additional comments				

Project No : 7		Priority Axis : 1		Measure No. : 1.2	
Project location : AKSARAY/ AKSARAY					
1. Project name		Aksaray Wastewater Treatment Plant and Collector Line Project			
2. Investment value (estimated)		13 500 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>Wastewater Treatment Plant (WWTP)</li> </ul> <p>First stage (2020): project population: 189.000 flow rate: <math>Q_{max}=4160 \text{ m}^3/\text{h}</math></p> <p>Second stage (2035): project population: 295.000 flow rate: <math>Q_{max}=5796 \text{ m}^3/\text{h}</math></p> <ul style="list-style-type: none"> <li>Collector Line</li> </ul>			
4. Description of main project objectives and expected results		The main objective is to treat the domestic and industrial wastewater of Aksaray in accord with Turkish and EU Standards and to protect Tuz Lake from pollution thus contributing to human health improvements and environmental protection.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	2001-2002	<p>Tuz Lake Integrated Environmental Project Feasibility Report, 2001, ASPA.</p> <p>Tuz Lake Integrated Environmental Project WWTP Application Report, 2002, ASPA.</p>	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input checked="" type="checkbox"/>	Completed	2002	Includes General Conditions, Technical Specifications, Bill of Quantities, Unit Prices, Design. The tender documents are in Turkish.	
Other (specify)	<input type="checkbox"/>	None			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	Completed	2002	According to Turkish Standards.
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (Specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		The land expropriation process is on-going.		
11. Describe current project status		A Technical Assistance Project covering 15 WWTP Projects will assist to prepare Aksaray WWTP Project for IPA Program (Feasibility, EIA, Design, Tender Dossier, IPA Application Package). The project will be a service contract and under tendering by CFCU (Shortlisting completed). The Project is financed under SEI 2005 Program by EU and has a duration of 14 months.		
12. Name of final beneficiary		Aksaray Municipality	13. Name of Operator	Aksaray Municipality
14. Sources of financing				
National component (including final beneficiary)	IFU (specify)	Other donor (Specify)	Proposed IPA grant	
3 375 500 EUR	.....EUR	.....EUR	10 125 000 EUR	
15. Additional Comments				



Project No : 8		Priority Axis : 1		Measure No. : 1.2	
Project location : CEYHAN/ ADANA					
1. Project name		Ceyhan Wastewater Treatment Plant,Rainwater Network and Drinking Water Transmission Line Project			
2. Investment value (estimated)		13 150 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a new Wastewater Treatment Plant (WWTP);</li> <li>• Construction of Stormwater Network (30 km).</li> </ul>			
4. Description of main project objectives and expected results		The wastewater is currently discharged to the Ceyhan River without treatment. This adversely affects all the area, including farmers who utilise water from the Ceyhan Basin. The objective is to eliminate these negative impacts, treat the wastewater in accordance with Turkish and EU Standards and prevent the pollution of Iskenderun Bay, the final receiving body of the Ceyhan River.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comments
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land expropriation studies are not completed yet.		
11. Describe current project status				
12. Name of final beneficiary		Ceyhan Municipality	13. Name of Operator	Ceyhan Municipality
14. Sources of financing				
National component (including final beneficiary)	IFU (specify)	Other donor (specify)	Proposed IPA grant	
3 287 500 EUR	.....EUR	.....EUR	9 862 500 EUR	
15. Additional Comments				

Project No : 9		Priority Axis : 1		Measure No. : 1.2	
Project location : BANDIRMA/ BANDIRMA					
1. Project name		Bandırma Wastewater Treatment Plant and Stormwater Network Project			
2. Investment value (estimated)		11 150 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a new Wastewater Treatment Plant (WWTP), (Capacity: for 2000 - 26.238 m<sup>3</sup>/day; for 2021 - 43.737 m<sup>3</sup>/day; for 2036 - 69.019 m<sup>3</sup>/day).</li> <li>• Construction of Collector Line.</li> </ul>			
4. Description of main project objectives and expected results		The objective is to discharge wastewater into the Marmara Sea according to Turkish and EU Standards and hence prevent the further pollution of the Marmara Sea and consequential damage to the floral and fauna species.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	2001		
Feasibility study (with cost-benefit analyses, which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comments
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input checked="" type="checkbox"/>	Completed	2000	In the context of Bandırma WWTP Feasibility Study.
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land expropriation studies are on-going.		
11. Describe current project status				
12. Name of final beneficiary		Bandırma Municipality	13. Name of Operator Bandırma Municipality	
14. Sources of financing				
National component (including final beneficiary)	IF (specify)	Other donor (specify)	Projected IPA grant	
2 787 500 EUR	.....EUR	.....EUR	8 362 500 EUR	
15. Additional Comments				



Project No : 10		Priority Axis : 1		Measure No. : 1.2	
Project location : TURGUTLU/ MAN-SA					
1. Project name		Turgutlu Wastewater Treatment Plant Project			
2. Investment value (estimated)		10 000 000 EUR			
3. Description of main project components and/or activities		• Construction of a new Wastewater Treatment Plant (WWTP).			
4. Description of main project objectives and expected results		The objective is to reduce the pollution level to accepted Turkish and EU standards and to create a safer, healthier environment.			
5. Month and year of start of project implementation		2009-	6. Month and year of end of project implementation		2012
		7. Project duration (months)			36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date		Comment
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comments
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status				
11. Describe current project status				
12. Name of final beneficiary	Turgutlu Municipality		13. Name of Operator	Turgutlu Municipality
14. Sources of financing				
National component (including final beneficiary)	IFJ (specify)	Other donor (specify)	Proposed IPA grant	
2 500 000 EUR	.....EUR	.....EUR	7 500 000 EUR	
15. Additional Comments				

Project No : 11		Priority Axis : 1		Measure No. : 1.2	
Project location : AYDIN/ AYDIN					
1. Project name		Aydın West Wastewater Treatment Plant Project			
2. Investment value (estimated)		14 850 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a new Wastewater Treatment Plant (WWTP);</li> <li>• Construction of Collector Line.</li> </ul>			
4. Description of main project objectives and expected results		<p>The main objective is to protect the bio-diversity in the aquatic environment, prevent eutrophication, increase productivity of fields irrigated by the river which impacts negatively on the people who consume vegetables irrigated with the wastewater. The wastewater is discharged to the Büyük Menderes River which flows into the Aegean Sea on the borders of Dilek Peninsula National Park. This region is a highly sensitive area where fish spawn and migratory birds visit. Hence, the project will also protect the ecosystem in the region as well as protect the environment.</p>			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none in progress/ completed)	Completion date	Comments
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land expropriation studies are on-going.		
11. Describe current project status				
12. Name of final beneficiary		Aydın Municipality	13. Name of operator	Aydın Municipality
14. Sources of financing				
National component (including final beneficiary)	IF (specify)	Other donor (specify)	Project ID/Name	
3 712 500 EUR	.....EUR	.....EUR	11 137 500 EUR	
15. Additional Comments				

Project No : 12		Priority Axis : 1		Measure No. : 1.2	
Project location :		ORDU/ ORDU			
1. Project name		Ordu Wastewater Treatment Plant Project			
2. Investment value (estimated)		11 500 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a new Wastewater Treatment Plant (WWTP).</li> </ul>			
4. Description of main project objectives and expected results		The main objective of the Project is to contribute to protecting the Black Sea and to protect the environment and the seaboard. The Project will reduce the discharges in compliance with Turkish and EU standards.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation	2012	7. Project duration (months)
					36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	1995	WWTP Application Project, İller Bank, 1995.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			



9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land is already owned by the Municipality.		
11. Describe current project status		A Technical Assistance Project covering Ordu and Turhal WWTP Projects will assist to prepare Turhal WWTP Project for IPA Program (Feasibility, EIA, Design, Tender Dossier, IPA Application Package). The project will be a framework contract and under tendering by CFCU. The Project is financed under SEI 2005 Program by EU and has a duration of 12 months.		
12. Name of final beneficiary		Ordu Municipality	13. Name of Operator	Ordu Municipality
14. Sources of financing				
National component (including financial aid)	IF (specify)	Other donor (specify)	Proposed IPA Grant	
2 875 000 EUR	.....EUR	.....EUR	8 625 000 EUR	
15. Additional Comments				

Project No : 1		Priority Axis : 2		Measure No. : 2.1	
Project location : KAYSERİ KAYSERİ					
1. Project name		Kayseri Integrated Solid Waste Management Project			
2. Investment value (estimated)		30 387 500 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a sanitary landfill (Amount of solid waste: 2005 - 273 428 tonnes/year, 2010:2025 - 7 841 071 tonnes/year),</li> <li>• Establishment of a gas utilization and energy recovery unit;</li> <li>• Establishing of a pilot composting plant with a capacity of 40.000 tonnes per year.</li> <li>• Establishment of 16 civic amenity centers;</li> <li>• Establishment of 2 Transfer Stations and 2 Material Recovery Facilities (MRF);</li> <li>• Rehabilitation of Molu Dump Site;</li> <li>• Technical Assistance.</li> </ul>			
4. Description of main project objectives and expected results		<p>The overall aim of the Kayseri SWM Project is to accelerate Turkey's accession by enabling Turkey to achieve a high level of environmental protection and compliance with the EU waste sector Directives. The purpose of this project is to establish a solid waste management system within the borders of Kayseri Metropolitan Municipality, in accordance with the Turkish Legislation and the EU Acquis, to reduce environmental pollution and increasing re-use and recycling of solid waste. The Project will reduce pollution of ground water, soil and air caused by current dumpsites, the volume of bio-degradable waste landfilled to the required levels and to increase the recycling of packaging wastes from the very start of the project by means of bring banks for recyclables and CACs + project components. This increase will contribute to Turkey's meeting the objectives of the EU Directives.</p>			
5. Month and year of start of project implementation		2008	6. Month and year of end of project implementation	2011	7. Project duration (months)
36					
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input checked="" type="checkbox"/>	Completed	June, 2007		
EIA study	<input checked="" type="checkbox"/>	Completed	November, 2006		

Tender documents	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
<b>9. Status of project design documentation and permits</b>				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comments
Conceptual design	<input checked="" type="checkbox"/>	Completed	June, 2007	
Preliminary design	<input checked="" type="checkbox"/>	Completed	June, 2007	
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	Completed	June, 2007	In the context of the Feasibility Study.
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
<b>10. Description of the land ownership status</b>		Land is already owned by the municipality.		
<b>11. Describe current project status</b>		A Technical Assistance is assisting to prepare Kayseri SWM Project for IPA Program (Feasibility, EIA, Design, IPA Application Package). The project is a framework contract and going on. The Project is financed under SEI 2003 Program by EU and has a duration of 14 months.		
<b>12. Name of final beneficiary</b>	Kayseri Metropolitan Municipality		<b>13. Name of Operator</b>	Kayseri Metropolitan Municipality
<b>14. Sources of financing</b>				
National contribution (including final beneficiary)	EU (GBP/€M)	Other donor (specify)	Proposed IPA grant	
7 646 875 EUR	.....EUR	.....EUR	22 940 625 EUR	
<b>15. Additional Comments</b>				



Project No : 2		Priority Axis : 2		Measure No. : 2.1	
Project location : ÇORUM/ ÇORUM					
1. Project name		Çorum Integrated Solid Waste Management Project			
2. Investment value (estimated)		21 815 497 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>Controlled landfill site located at Karapurcek (Çorum) with leachate and landfill gas management system;</li> <li>Construction of 4 transfer stations;</li> <li>Construction of leachate pre-treatment plant;</li> <li>Construction of 5 banks and up to 6 additional civic amenity centres in Çorum;</li> <li>Pilot study for separation at source for 1000 households in Çorum;</li> <li>Pilot composting plant with a capacity of 5 000 tonnes input/year, (full capacity in 2015)</li> <li>Rehabilitation and closure of 14 existing dump sites (Both minor and major scale rehabilitations).</li> </ul>			
4. Description of main project objectives and expected results		<p>The overall objective of the SWM project is to accelerate Turkey's accession by enabling Turkey to achieve a high level of environmental protection and compliance with the EU waste sector Directives. Establishment of a solid waste management system for Çorum municipality in accordance with Turkish Legislation and the EU Acquis, will reduce the pollution of groundwater and environment in Çorum municipality and increase reuse and recycling.</p>			
5. Month and year of start of project implementation		2008	6. Month and year of end of project implementation		2011
		7. Project duration (months)		36	
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date		Comment
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input checked="" type="checkbox"/>	In progress	2007		
EIA study	<input checked="" type="checkbox"/>	Completed	June, 2007		Completed including Public Participation
Tender documents	<input checked="" type="checkbox"/>	In progress	2007		
Other (specify)	<input checked="" type="checkbox"/>	In progress	2007		Design Works Drawings

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comments
Conceptual design	<input checked="" type="checkbox"/>	Completed	April, 2007	
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	In progress	October, 2007	Subject to TA Consultant Development
Location Permit	<input checked="" type="checkbox"/>	In progress	Expected in January, 2008	Prior Construction Start
Building Permit	<input checked="" type="checkbox"/>	In progress	Expected in January, 2008	Prior Construction Start
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land is already owned by the municipality.		
11. Describe current project status		A Technical Assistance is assisting to prepare Çorum SWM Project for IPA Program (Feasibility, EIA, Design, IPA Application Package). The project is a framework contract and going on. The Project is financed under SEI 2003 Program by EU.		
12. Name of final beneficiary		Çorum Municipalities' Union	13. Name of Operator	Çorum Municipalities Union
14. Sources of financing				
National component (including final beneficiary)	EU (specify)	Other donor (specify)	Proposed IPA grant	
5 453 874 EUR	.....EUR	.....EUR	16 361 623 EUR	
15. Additional Comments				

Project No : 3		Priority Axis : 2		Measure No. : 2.1	
Project location : KONYA/ KONYA					
1. Project name		Konya Integrated Solid Waste Management Project			
2. Investment value (estimated)		22 936 200 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"><li>• Establishment of a sanitary landfill;</li><li>• Establishment of a leachate pre-treatment plant;</li><li>• Establishment of a gas utilization unit;</li><li>• Establishing of a pilot composting plant;</li><li>• Establishment of 16 civic amenity centers;</li><li>• Establishment of 3 Transfer Stations and 3 Material Recovery Facilities.</li><li>• Rehabilitation of 22 Existing Dump Sites; (1 Major scale and 21 minor scale rehabilitation)</li><li>• Technical Assistance.</li></ul>			
4. Description of main project objectives and expected results		<p>The overall aim of THA Konya SWM Project is to accelerate Turkey's accession by enabling Turkey to achieve a high level of environmental protection and compliance with the EU waste sector Directives. The purpose of this project is to establish a solid waste management system within the borders of Konya Metropolitan Municipality, in accordance with Turkish Legislation and the EU Acquis, with a view to reducing environmental pollution and increasing reuse and recycling of solid waste.</p> <p>The results of the project will be as follows:</p> <ul style="list-style-type: none"><li>• Pollution of groundwater, soil and air caused by current dumpsites will be reduced;</li><li>• Health risk and negative amenity effects such as bad odour, insects, rodents, fires, scattered wastes from current dump sites will be reduced;</li><li>• The volume of bio-degradable waste landfilled will be reduced to the levels required by the EU directives as specified for Turkey;</li><li>• Recycling of packaging wastes will be increased from the very start of the project by means of bring banks for recyclables and CACs + project components. This increase will contribute to Turkey meeting the objectives of the EU directives, in particularly the packaging waste directive</li></ul> <p>The unhealthy and unhygienic working conditions of the street-scavengers will be improved by incorporating them into the operation of a regulated system.</p>			
5. Month and year of start of project implementation		2008	6. Month and year of end of project implementation		2011
		7. Project duration (months)		36	

8. Readiness of basic project documentation				
Document type	Status	Status description	Completion date	Comments
Pre-feasibility study	<input type="checkbox"/>	None		
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input checked="" type="checkbox"/>	In progress	Expected in October, 2007	
EIA study	<input checked="" type="checkbox"/>	Completed	September, 2007	
Tender documents	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comments
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	In Progress	Expected in October, 2007	In the context of the Feasibility Study.
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land expropriation studies are completed from Treasury.		
11. Describe current project status		A Technical Assistance is assisting to prepare Konya SWM Project for IPA Program (Feasibility, EIA, Design, IPA Application Package). The project is a framework contract and going on. The Project is financed under SEI 2003 Program by EU.		
12. Name of final beneficiary		Konya Metropolitan Municipality	Name of operator	Konya Metropolitan Municipality

14. Sources of financing			
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant
5 734 050 EUR	.....EUR	.....EUR	17 202 150 EUR
15. Additional Comments			



Project No : 4		Priority Axis : 2		Measure No. : 2.1	
Project location : BALIKESIR/ BALIKESIR					
1. Project name		Balıkesir Integrated Solid Waste Management Project			
2. Investment value (estimated)		14 224 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of Central Sanitary Landfill;</li> <li>• Establishment of Leachate Treatment Plant;</li> <li>• Establishment of Landfill Gas Collection and Incineration System;</li> <li>• Medical Waste Sterilization Unit;</li> <li>• Implementation of 6 Civic Amenity Centers;</li> <li>• Implementation of Pilot Composting Plant (Capacity: 5000 tonnes/year);</li> <li>• Closure and rehabilitation of 7 current landfill sites in operation;</li> <li>• Consulting and Engineering (TA).</li> </ul>			
4. Description of main project objectives and expected results		<p>The overall aim of the Project is to accelerate Turkey's accession by enabling Turkey to achieve a high level of environmental protection in compliance with the EU waste sector Directives. The purpose of this project is to reduce the pollution of groundwater and protect the environment in Balıkesir and surrounding villages and increase reuse and recycling by establishing a solid waste management system for Balıkesir, Susurluk, Savaştepe, Ervinli, Bigadiç, Kepsut, Pamukçu municipalities in accordance with EC and Turkey's legislation. It will reduce the pollution of groundwater, soil and air caused by current dumpsites; reduce health risk and negative amenity affects such as bad odours, insects, rodents, fires, scattered wastes from current dump sites and to decrease the volume of bio-degradable waste land filled from the current high level to the levels required by the EU directives as specified for Turkey in the DSIP and to increase recycling of packaging wastes by means of bring banks and recycling centres. This increase will represent an important contribution towards meeting the objectives of the EU directives, in particular, in regard to packaging waste.</p>			
5. Month and year of start of project implementation		2008	6. Month and year of end of project implementation		2011
			7. Project duration (months)		36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost benefit analyses which includes economic and financial analysis)	<input checked="" type="checkbox"/>	In progress	November, 2007		

EIA study	<input checked="" type="checkbox"/>	In progress	November, 2007	
Tender documents	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
<b>9. Status of project design documentation and permits</b>				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comment
Conceptual design	<input checked="" type="checkbox"/>	In progress	2007	In the context of the Feasibility Study
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	In progress	2007	In the context of the Feasibility Study
Location Permit	<input checked="" type="checkbox"/>	In progress	Expected in January, 2008	Prior Construction Start
Building Permit	<input checked="" type="checkbox"/>	In progress	Expected in January, 2008	Prior Construction Start
Other (specify)	<input type="checkbox"/>	None		
<b>10. Description of the land ownership status:</b>		Land is already owned by the municipality.		
<b>11. Describe current project status</b>		A Technical Assistance is assisting to prepare Balıkesir SWM Project for IPA Program (Feasibility, EIA, Design, IPA Application Package). The project is a framework contract and going on. The Project is financed under SEI 2003 Program by EU.		
<b>12. Name of final beneficiary</b>		BACEYÖB (Union of the municipalities: Balıkesir, Susurluk, Savaştepe, Arındı, Bigadiç, Kepsut, Pamukçu )	<b>13. Name of Operator</b>	Balıkesir Municipality
<b>14. Sources of financing</b>				
National Component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant	
3 556 000 EUR	.....EUR	.....EUR	10 668 000 EUR	
<b>15. Additional Comments</b>				

Project No : 5.		Priority Axis : 2		Measure No. : 2.1	
Project location : ARTVIN-RIZE					
1. Project name		Artvin-Rize Integrated Solid Waste Management Project			
2. Investment value (estimated)		14 500 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a sanitary landfill;</li> <li>• Construction of a leachate treatment plant;</li> <li>• Establishment of a gas utilization unit;</li> <li>• Establishment of 2 Transfer Stations and a Material Recovery Facility;</li> <li>• Establishing of a pilot composting plant</li> <li>• Rehabilitation of Existing Dump Sites.</li> </ul>			
4. Description of main project objectives and expected results		The overall aim of the Project is to accelerate Turkey's accession by enabling Turkey to achieve a high level of environmental protection and compliance with the EU waste sector Directives. Establishment of a solid waste management system for Artvin and Rize provinces in accordance with the Turkish Legislation and the EU Acquis, will reduce the pollution of groundwater and environment in the region of municipalities union and increase recycling and reuse.			
5. Month and year of start of project implementation		2008	6. Month and year of end of project implementation		2011
			7. Project duration (months)		36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comments	
Preliminary study	<input checked="" type="checkbox"/>	Completed		Completed before the award of this framework contract.	
Feasibility study (with economic analysis, which includes economic and financial analysis)	<input checked="" type="checkbox"/>	In progress	2007		
BIA study	<input checked="" type="checkbox"/>	In progress	November, 2007		
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			



9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input checked="" type="checkbox"/>	In progress	2007	In the context of Feasibility study
Main design	<input checked="" type="checkbox"/>	In progress		In the context of Feasibility study
Final design	<input checked="" type="checkbox"/>	In progress		In the context of Feasibility study
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input checked="" type="checkbox"/>	In progress	October 2007	1/1000 scaled map
10. Description of the land ownership status		Land expropriation studies are on-going.		
11. Describe current project status		A Technical Assistance is assisting to prepare Artvin-Rize SWM Project for IPA Program (Feasibility, EIA, Design, IPA Application Package). The project is a framework contract and going on. The Project is financed under SEI 2004 Program by EU.		
12. Name of final beneficiary		ARRIKAB (Municipalities Union)	13. Name of Operator	ARRIKAB (Municipalities Union)
14. Sources of financing				
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant	
3 625 000 EUR	.....EUR	.....EUR	10 875 000 EUR	
15. Additional Comments				

Project No : 6		Priority Axis : 2		Measure No. : 2.1	
Project location : <b>HARMANDALI/ ZM-R</b>					
1. Project name		Zmir - Harmandali Integrated Solid Waste Management - Capacity Increase and Rehabilitation Project			
2. Investment value (estimated)		10 850 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>Increasing the capacity of the existing landfill (140 ha additional area)</li> </ul>			
4. Description of main project objectives and expected results		<p>The main objective is to set up an integrated solid waste management regime which will provide sustainable utilization of landfill site by extending the lifetime of the landfill and provide safe disposal of the solid wastes of Zmir Metropolitan Municipality in compliance with the Turkish and EU standards and therefore to prevent negative impacts on environment.</p>			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Remarks	
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost-benefit analysis which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	Completed	1/25000 scaled map		

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land expropriation studies are on-going.		
11. Describe current project status				
12. Name of final beneficiary		İzmir Metropolitan Municipality	13. Name of Operator	İzmir Metropolitan Municipality
14. Sources of financing				
National component (including final beneficiary)	IFI (specify)		Other donor (specify)	Proposed IPA grant
2 712 500 EUR	.....EUR		.....EUR	8 137 500 EUR
15. Additional Comments				

Project No : 7		Priority Axis : 2		Measure No. : 2.1	
Project location : VAN/ VAN					
1. Project name		Van Integrated Solid Waste Management Project			
2. Investment Value (estimated)		20 600 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a Sanitary Landfill (Projected solid waste amount 2017 - 209.858 ton/year, 2027 - 282.031 ton/year, 2037 - 379.027 ton/year),</li> <li>• Establishment of a Medical Waste Disposal Unit;</li> <li>• Establishment of a Landfill Gas Collection and Elimination Unit;</li> <li>• Establishment of a Waste Battery Storage Unit;</li> <li>• Rehabilitation of existing dumpsite.</li> </ul>			
4. Description of main project objectives and expected results		The main objective is to manage the present uncontrolled disposal of solid wastes and to provide environmental sustainability in the region. The Project will increase public awareness on the environment through educational activities, reduce pollution loads and hence protect natural sources in eliminating the negative effects of existing wild dumpsite on the population and the environment and to recycle the recoverable wastes back into the economy.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation	2012	7. Project duration (months)
					36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Document	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	2006	Design Works and drawings according to Turkish standards.	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input type="checkbox"/>	In progress	2007		
EIA study	<input checked="" type="checkbox"/>	Completed	2005		
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			



9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	Completed	2006	In the context of Application Project, 2006.
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Some part of the land is owned by individuals, other parts are public domain and access area is owned by the Ministry of Agriculture and Rural Affairs. Part that was owned by the individuals was expropriated by Van Municipality. Allocation procedure is going on for the rest.		
11. Describe current project status				
12. Name of final beneficiary	Van and nearby Municipalities		13. Name of Operator	Van and nearby Municipalities
14. Sources of financing				
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant	
5 150 000 EUR	.....EUR	.....EUR	15 450 000 EUR	
15. Additional Comments				

Project No : 8		Priority Axis : 2		Measure No. : 2.1	
Project location : BATMAN/ BATMAN					
1. Project name		Batman Integrated Solid Waste Management Project			
2. Investment value (estimated)		18 000 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of Sanitary Landfill (Amount of solid waste (annual cumulative values): 2005 - 70 000 tonnes; 2015 - 934 500 tonnes; 2026 - 2 907 000 tonnes);</li> <li>• Development of Recycling Activities;</li> <li>• Rehabilitation &amp; Capacity Building on Waste Collection and Storage.</li> </ul>			
4. Description of main project objectives and expected results		The main objective is to set up a integrated solid-waste management regime to prevent environmental harm caused by solid wastes and leachate and to recycle the wastes, leading to their safe disposal.			
5. Month and year of start of project implementation		2009	6. Month and year of end of project implementation		2012
				7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comments	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed	2003		
Feasibility study (including landfill analyses, which includes economic and financial analysis)	<input type="checkbox"/>	None			
EIA study	<input checked="" type="checkbox"/>	Completed	2003		
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	Completed	2002	Geotechnical study.	

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input checked="" type="checkbox"/>	Completed	2003	Done by GAP Administration in the context of Application Project according to Turkish Standards.
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land expropriation studies are completed.		
11. Describe current project status				
12. Name of final beneficiary	Batman Municipality		13. Name of Operator	Batman Municipality
14. Sources of financing				
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant	
4 000 000 EUR	.....EUR	.....EUR	14 000 000 EUR	
15. Additional Comments				

Project No : 9		Priority Axis : 2		Measure No. : 2.1	
Project location : MALATYA/ MALATYA					
1- Project name		Malatya Integrated Solid Waste Management Project			
2- Investment value (estimated)		23 000 000 EUR			
3- Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a Sanitary Landfill;</li> <li>• Recycling of solid waste.</li> </ul>			
4- Description of main project objectives and expected results		The main objective is to set up an integrated solid waste management regime. It will provide sustainable utilisation of the landfill site by extending its lifetime and provide safe disposal of the solid wastes of Malatya Municipality in compliance with the Turkish and EU standards and will prevent further negative impacts on the environment.			
5- Month and year of start of project implementation		2009	6- Month and year of end of project implementation	2012	7- Project duration (months) 36
8- Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input type="checkbox"/>	None			
Feasibility study (with cost benefit analysis and/or socio-economic and financial analysis)	<input type="checkbox"/>	None			
Environment	<input type="checkbox"/>	None			
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input type="checkbox"/>	None			



9. Status of project design documentation and permits				
Documentation type	Status (tick box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>	None		
Preliminary design	<input type="checkbox"/>	None		
Main design	<input type="checkbox"/>	None		
Final design	<input type="checkbox"/>	None		
Location Permit	<input type="checkbox"/>	None		
Building Permit	<input type="checkbox"/>	None		
Other (specify)	<input type="checkbox"/>	None		
10. Description of the land ownership status		Land expropriation studies are on-going.		
11. Describe current project status				
12. Name of final beneficiary		Malatya Municipality	13. Name of Operator	Malatya Municipality
14. Sources of financing				
National component (including final beneficiary)	IFT (specify)	Other donor (specify)	Proposed IPA grant	
5 750 000 EUR	.....EUR	.....EUR	17 250 000 EUR	
15. Additional Comments		<p>Determined site for the project is owned by General Directorate of Forestry. Procedure required for allocation of site to the municipality is going on.</p> <p>On the other hand, establishment of union of municipalities are planning by participation of 12 municipalities.</p>		

Project No : 10		Priority Axis : 2		Measure No. : 2.1	
Project location : <b>ERE• LI KONYA</b>					
1. Project name		Ere• li Integrated Solid Waste Management Project			
2. Investment value (estimated)		10 000 000 EUR			
3. Description of main project components and/or activities		<ul style="list-style-type: none"> <li>• Construction of a sanitary landfill;</li> <li>• Installation of proper collection and transfer system for solid waste .</li> </ul>			
4. Description of main project objectives and expected results		The main objective is to set up a integrated solid waste management regime to provide safe disposal of the solid wastes and thus protect the environment.			
5. Month and year of start of project implementation		2008	6. Month and year of end of project implementation	2011	7. Project duration (months)
					36
8. Readiness of basic project documentation					
Document type	Status	Status description	Completion date	Comment	
Pre-feasibility study	<input checked="" type="checkbox"/>	Completed			
Feasibility study (with cost benefit analysis, which includes economic and financial analysis)	<input checked="" type="checkbox"/>	On-going	End of 2007		
EIA study	<input checked="" type="checkbox"/>	Completed	2004		
Tender documents	<input type="checkbox"/>	None			
Other (specify)	<input checked="" type="checkbox"/>	Completed		1/25 000 scaled map	

9. Status of project design documentation and permits				
Documentation type	Status (tick-box)	Status description (none/in progress/ completed)	Completion date	Comment
Conceptual design	<input type="checkbox"/>			
Preliminary design	<input type="checkbox"/>			
Main design	<input type="checkbox"/>			
Final design	<input type="checkbox"/>			
Location Permit	<input type="checkbox"/>			
Building Permit	<input type="checkbox"/>			
Other (specify)	<input type="checkbox"/>			
10. Description of the land ownership status		A Technical Assistance Project under TRA2, TR72, TR52 and TRB1 Statistical Region Level II - Regional Development Program (EU Financial-Programme 2004). This TA Project includes preparation of an EU infrastructure project for each Statistical Region Level II (Feasibility, EIA and Tender Dossier). The project shall be completed by the end of November 2007. The Project is coordinated by State Planning Organization.		
11. Describe current project status				
12. Name of final beneficiary		Ere•li Municipality	13. Name of Operator	Ere•li Municipality
14. Sources of financing				
National component (including final beneficiary)	EU (specify)	Other donor (specify)	Proposed IPA grant	
2 500 000 EUR	.....EUR	.....EUR	7 500 000 EUR	
15. Additional Comments		A regional waste management system was proposed for the municipalities of Ere•li and Halkapınar by Provincial Directorate of Environment and Forest of Konya. However, there isn't any established municipalities' union at the present time.		

The map displays the geographical distribution of water and waste management projects across Turkey. The legend indicates three types of projects: Waste Water (dark grey), Solid Waste (medium grey), and Drinking Water (light grey). The map shows various provinces and cities, with shaded areas indicating the locations of these projects. The Black Sea is to the north, and the Mediterranean Sea is to the south. A scale bar and a north arrow are also present.



