

JOHANNESBURG SUMMIT 2002

TURKEY



COUNTRY PROFILE



UNITED NATIONS

INTRODUCTION - 2002 COUNTRY PROFILES SERIES

Agenda 21, adopted at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, underscored the important role that States play in the implementation of the Agenda at the national level. It recommended that States consider preparing national reports and communicating the information therein to the Commission on Sustainable Development (CSD) including, activities they undertake to implement Agenda 21, the obstacles and challenges they confront, and other environment and development issues they find relevant.

As a result, in 1993 governments began preparing national reports for submission to the CSD. After two years of following this practice, the CSD decided that a summarized version of national reports submitted thus far would be useful. Subsequently, the CSD Secretariat published the first Country Profiles series in 1997 on the occasion of the five-year review of the Earth Summit (Rio + 5). The series summarized, on a country-by-country basis, all the national reports submitted between 1994 and 1996. Each Profile covered the status of all Agenda 21 chapters.

The purpose of Country Profiles is to:

- Help countries monitor their own progress;
- Share experiences and information with others; and,
- Serve as institutional memory to track and record national actions undertaken to implement Agenda 21.

A second series of Country Profiles is being published on the occasion of the World Summit on Sustainable Development being held in Johannesburg from August 26 to September 4, 2002. Each profile covers all 40 chapters of Agenda 21, as well as those issues that have been separately addressed by the CSD since 1997, including trade, energy, transport, sustainable tourism and industry.

The 2002 Country Profiles series provides the most comprehensive overview to date of the status of implementation of Agenda 21 at the national level. Each Country Profile is based on information updated from that contained in the national reports submitted annually by governments.

Preparing national reports is often a challenging exercise. It can also be a productive and rewarding one in terms of taking stock of what has been achieved and by increasing communication, coordination and cooperation among a range of national agencies, institutions and groups. Hopefully, the information contained in this series of Country Profiles will serve as a useful tool for learning from the experience and knowledge gained by each country in its pursuit of sustainable development.

NOTE TO READERS

The 2002 Country Profiles Series provides information on the implementation of Agenda 21 on a country-by-country and chapter-by-chapter basis (with the exception of chapters 1 and 23, which are preambles). Since Rio 1992, the Commission on Sustainable Development has specifically addressed other topics not included as separate chapters in Agenda 21. These issues of trade, industry, energy, transport and sustainable tourism are, therefore, treated as distinct sections in the Country Profiles. In instances where several Agenda 21 chapters are closely related, for example, chapters 20 to 22 which cover environmentally sound management of hazardous, solid and radioactive wastes, and chapters 24 to 32 which refer to strengthening of major groups, the information appears under a single heading in the Country Profile Series. Lastly, chapters 16 and 34, which deal with environmentally sound management of biotechnology, and transfer of environmentally sound technology, cooperation, capacity-building respectively, are presented together under one heading in those Country Profiles where information is relatively scarce.

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LIST OF COMMONLY USED ACRONYMS

ACS	Association of Caribbean States
AMCEN	Africa Ministerial Conference on the Environment
AMU	Arab Maghreb Union
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CARICOM	The Caribbean Community and Common Market
CBD	Convention on Biological Diversity
CIS	Commonwealth of Independent States
CGIAR	Consultative Group on International Agricultural Research
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMESA	Common Market for Eastern and Southern Africa
CSD	Commission on Sustainable Development of the United Nations
DESA	Department for Economic and Social Affairs
ECA	Economic Commission for Africa
ECCAS	Economic Community for Central African States
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ECOWAS	Economic Community of West African States
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIDA	Foundation for International Development Assistance
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
GHG	Greenhouse Gas
GIS	Geographical Information Systems
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IAEA	International Atomic Energy Agency
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
ICT	Information and Communication Technology
ICTSD	International Centre for Trade and Sustainable Development
IEEA	Integrated Environmental and Economic Accounting
IFAD	International Fund for Agricultural Development
IFCS	Intergovernmental Forum on Chemical Safety
IGADD	Intergovernmental Authority on Drought and Development
ILO	International Labour Organisation

IMF	International Monetary Fund
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	Integrated Pest Management
IRPTC	International Register of Potentially Toxic Chemicals
ISDR	International Strategy for Disaster Reduction
ISO	International Organization for Standardization
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature and Natural Resources
LA21	Local Agenda 21
LDCs	Least Developed Countries
MARPOL	International Convention for the Prevention of Pollution from Ships
MEAs	Multilateral Environmental Agreements
NEAP	National Environmental Action Plan
NEPAD	New Partnership for Africa's Development
NGOs	Non-Governmental Organizations
NSDS	National Sustainable Development Strategies
OAS	Organization of American States
OAU	Organization for African Unity
ODA	Official Development Assistance/Overseas Development Assistance
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
PRSP	Poverty Reduction Strategy Papers
SACEP	South Asian Cooperative Environment Programme
SADC	Southern African Development Community
SARD	Sustainable Agriculture and Rural Development
SIDS	Small Island Developing States
SPREP	South Pacific Regional Environment Programme
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNCED	United Nations Conference on Environment and Development
UNCCD	United Nations Convention to Combat Desertification
UNCHS	United Nations Centre for Human Settlements (Habitat)
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNIFEM	United Nations Development Fund for Women
UNU	United Nations University
WFC	World Food Council
WHO	World Health Organization

WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wildlife Fund
WWW	World Weather Watch (WMO)

CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES

Decision-Making: The Ministry of Foreign Affairs (MOFA) is responsible for decision making on international cooperation and assistance in coordination with other relevant ministries and agencies. The Ministry of Environment mainly considers sustainable development and environmental management issues. Other Ministries, institutions and organizations such as: the State Planning Organization (SPO); the Ministry of Health; the Ministry of Industry and Trade; the Ministry of Agriculture and Rural Affairs; the Undersecretariat of Foreign Trade (UFT); Undersecretariat of Treasury; the Turkish Agency for Cooperation (TÝCA); and the General Directorate for State Hydraulic Works (DSI) are involved in their relevant capacities. The activities of the Ministry of Environment cover issues such as: appropriate land use; protection of natural resources; plants and animal species; prevention and control of pollution; and raising public awareness. Other duties of the Ministry are: setting environmental policies and strategies; coordinating environmental activities at local, national and international levels; issuing environmental licenses; collecting information; and organizing training activities. All these activities are conducted in close cooperation with other ministries, related institutions, local governments, and non-governmental organizations. A total of 800 and 500 people are currently being employed by the Ministry of Environment at the headquarters and in provincial offices respectively. Turkish legislation and regulations to address matters concerning particularly sustainable development in line with the international commitments and cooperation framework are as follows:

- Environment Law No 2872 and its following by-laws:
- Fund for Prevention of Pollution (1985);
- Protection of Air Quality (1986);
- Noise Control (1986);
- Fines to Be Imposed on Ships and Other Seagoing Vessels (1987);
- Control of Water Pollution (1988);
- Solid Wastes Control (1991);
- Environmental Impact Assessment (1993 revised 1997);
- Environmental Impact Assessment (1997);
- Medical Wastes Control (1993);
- Hazardous Wastes Control and Management (1995);
- Control of Harmful Chemical Substances and Products;
- Reduction of Ozone Depleting Substances(1999);
- Convention on International Trade in Endangered Species of Wild Fauna and Flora National Implementation Regulation (2001);
- Control of Soil Pollution (2001);
- Environmental Inspection (2002); and,
- Protection of Wetlands (2002).

The State Planning Organization (SPO) prepares strategies for development, the development plans which are accepted as the basic instruments of government policies in economic and social issues for efficient use of resources. SPO has included environmental issues in its development plans since the Third Five Year Development Plan, which covered the period 1973 – 1977. The concept of “sustainable development” has been embodied in the Sixth Five Year Development Plan (for the period 1990-1994), whereas the National Environmental Action Plan, NEAP, (which could be accessed at: <http://ekutup.dpt.gov.tr/cevre/eylempla/neap.html>) has been prepared during the Seventh Five Year Development Plan period for efficient environmental management. NEAP has been prepared by the technical support of the Ministry of Environment under the coordination of the SPO and with significant level of involvement of the related institutions and stakeholders. Within this framework the following topics were emphasized: (i) the significance of conducting certain activities for the development of an efficient environmental

management system; (ii) the importance of the need for environmental data and public awareness; (iii) new investment proposals in different thematic areas; and (iv) compliance with the international environmental standards of the EU and adoption of the related regulations thereof. The Eighth Five Year Plan covering the period 2000-2005 also addresses the concept of sustainable development and it emphasizes the necessity of striking a balance between ecological equilibrium and the economic growth.

Programmes and Projects: No information available.

Status: Turkey receives a limited amount of official development assistance (ODA). The total net ODA received was 302 million US Dollars in 1995 (0,13 % of Gross National Product, GNP) which substantially diminished over the years, in the year 1999 reduced to negative value –9.7 million US Dollars as can be seen from the following table:

TABLE 1: DISTRIBUTION OF BILATERAL AND MULTILATERAL FINANCIAL FLOWS TO TURKEY BY OECD COUNTRIES AND MULTILATERAL AGENCIES						
II. TOTAL ODA NET BILATERAL MULTILATERAL GRAND TOTAL						
		1995	1996	1997	1998	1999
		173.7	50.6	-59.0	-80.5	-66.4
		128.4	190.5	54.9	92.9	56.7
		302.1	231.2	-4.1	12.4	-9.7
Source: “Geographical Distribution of Financial Flows to Aid Recipients”, OECD, 2001.						

Turkey is considered as an emerging donor and Turkish ODA have steadily increased over the past years as shown in Table 2.

TABLE 2: DISTRIBUTION OF OFFICIAL OUTFLOWS FROM TURKEY BY TYPE OF TRANSACTION			
Type of Transaction	1997	1998	1999
	Value (Million US \$)	Value (Million US \$)	Value (Million US \$)
Official Grants	83.3	55.3	42.8
Payments to Multilateral Organizations	23.4	23.9	83.5
Other Official Flows	276.6	321.5	320.2
Official Flows, Total	383.3	400.7	446.5
Source: Turkish State Institute of Statistics, News Bulletins of 21.03.2000 and 03.03.2001.			

International cooperation in the field of environment: Turkey’s international environmental cooperation takes place in the framework of its foreign policy and of relations with its major economic partners. Turkey is a member of: OECD; the Council of Europe; and NATO (from the outset); and has become an accession country for the European Union. Turkey is a party to all OECD legal acts on environmental issues, in particular legally binding decisions in the areas of chemicals, hazardous waste, and industrial accidents. During 1990s Turkey has also strengthened bilateral environmental co-operation (See under **Cooperation**). The regional cooperation programmes, particularly Mediterranean Action Plan and Black Sea Environment Programme have been provided

much in terms of capacity building and improving the international partnerships with the countries in the regarded regions. The nature and extent of its relations with nearby countries has evolved considerably since the end of the former Soviet Union. Turkey's general environmental and sustainable development policy at the international fora could be summarized as "common but differentiated responsibilities".

Turkey is preparing for the full membership to the European Union and implementing a National Programme to adopt the rules and standards of the Union that is a challenge for the country. Issues regarding the purpose of sustainable development take place in this National Programme too (See *The Turkish National Programme for the Adoption of the Acquis* at www.abgs.gov.tr). Turkey envisages to increase and maintain the amount of ODA at a satisfactory level for the purpose of becoming a Development Assistance Committee (DAC) member.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: Information and data on bilateral, sub-regional, regional, or multilateral/international cooperation can be accessed via the Internet at the following World Wide Web Sites:

- www.cevre.gov.tr Turkish Ministry of Environment Web Site;
- www.mfa.gov.tr Turkish Ministry of Foreign Affairs Web Site;
- www.dpt.gov.tr SPO: The State Planning Organization Web Site;
- www.foreigntrade.gov.tr Undersecretariat for Foreign Trade;
- www.tika.gov.tr Turkish Agency for Co-operation Web Site;
- www.saglik.gov.tr Turkish Ministry of Health Web Site;
- www.hazine.gov.tr Undersecretariat of Treasury;
- www.enerji.gov.tr The Ministry of Energy;
- www.tarim.gov.tr The Ministry of Agriculture and Rural Affairs;
- www.sanayi.gov.tr The Ministry of Industry and Trade; and
- www.abgs.gov.tr General Secretariat of European Union.

Research and Technologies: No information available.

Financing: The proportion of GNP spent on ODA, which was 0.05% in 1996, became 0.23% in 1999. As sectoral breakdown figures say, the share of outflows on environmental cooperation is inconsiderably small.

Cooperation: In the 1990s, Turkey has strengthened bilateral environmental co-operation with a large number of countries, mainly in its region, and has signed, ratified and implemented many international environmental agreements. Numerous initiatives have been taken to increase co-operation with other Black Sea and Turkish-speaking countries. While limited official development aid has been received, technical assistance has been provided to other developing countries. Problems associated with pollution of coastal waters in the Mediterranean Region have been reduced, and new wastewater treatment facilities have been installed. In this regard, more efficient progress has been made when action of the private sector was involved than when State or municipal funding was involved. Moreover, Turkey has been given the chairmanship of the Mediterranean Commission on Sustainable Development (MCSD) through 2002.

Transfrontier movement of hazardous waste has been halted. Turkey has been very successful in improving maritime safety in the Turkish Straits, and in reducing use of ozone-depleting substances ahead of schedule. In these two cases, positive results have been achieved in cooperation with social partners and with the support of NGOs. With regard to the conventional air pollutants (e.g. SO_x, NO_x, VOCs), Turkey is taking into account technological capacities and the relevant UN-ECE protocols (e.g. Helsinki, Sofia, Oslo, Geneva) when revising its air quality regulations, although it is not a party to these agreements. Despite progress at the end of the 1990s, compared with the early part of the decade, some international environmental problems remain to be solved. There

are many international environmental conventions and agreements Turkey intends to ratify; and other agreements which she envisages to ratify along with other European countries. Actions concerning several measures needed to cope with maritime and terrestrial emergencies will be materialized. Construction of sewerage systems and treatment plants for municipal wastewater shall be progressed at a rate, sufficient to abate pollution of coastal waters to a satisfactory extent. In this framework, Turkey is signatory to the international treaties/agreements in the field of environment listed below.

Treaties and Conventions:

<i>Place & Date</i>	<i>Title</i>	<i>Ratified in</i>
1931	Convention on Whale Hunting	1934
Rome, 1949	Agreement on the Establishment of a General Fisheries Council for Mediterranean (as amended)	1954
Paris, 1959	International Convention on the Protection of Birds	1967
Paris, 1951	Convention for the Establishment of the European and Mediterranean Plant Protection Organization (as amended)	1965
Washington, 1959	The Antarctic Treaty	1995
Geneva, 1960	Convention Concerning the Protection of Workers Against Ionizing Radiation	1969
Paris, 1960	Convention on Third Party Liability in the Field of Nuclear Energy (as amended)	1968
Moscow, 1963	Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water	1965
London, Moscow, Washington, 1967	Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space Including the Moon and Other Celestial Bodies	1968
Paris, 1968	European Convention for the Protection of Animals During International Transport	1971
Ramsar, 1971	Convention on Wetlands of International Importance Especially as Waterfowl Habitat	1994
London, Moscow, Washington, 1971	Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea Bed and the Ocean Floor in the Subsoil Thereof	1972
London, Moscow, Washington, 1972	Convention on the Prohibition of the Development, Production of Stockpiling of Bacteriological (Biological) and Toxic Weapons, and on Their Destruction	1975
Paris, 1972	Convention Concerning the Protection of the World Cultural and Natural Heritage	1983
Washington, 1973	Convention on International Trade in Endangered Species of Wild Fauna And Flora (CITES)	1996
Paris, 1974	Agreement on an International Energy Program	1981
Barcelona, 1976	Convention for the Protection of Mediterranean Sea Against Pollution (Barcelona Convention)	1981
London, 1978	Convention on Prevention of Pollution from Ships MARPOL (Annex III and IV not signed By Turkey)	1990
Athens, 1980	Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources	1983

<i>Place & Date</i>	<i>Title</i>	<i>Ratified in</i>
Barcelona, 1976	Protocol Concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in case of Emergency	1981
Geneva, 1982	Protocol Concerning Specially Protected Areas in the Mediterranean	1986
Yzmir, 1996	Yzmir Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal	
Bern, 1979	Convention on the Conservation of European Wildlife and Their Natural Habitats (Bern Convention)	1984
Barcelona, 1976	Dumping Protocol for Mediterranean	1981
Barcelona, 1995	Specially Protected Areas (SPA) and Biodiversity Protocol	-
Madrid, 1994	Offshore Protocol for Mediterranean	-
Geneva, 1979	Convention on Long-range Transboundary Air Pollution	1983
Geneva, 1984	Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Long-term Financing of the Co-operative Program for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP)	1985
Vienna, 1985	Vienna Convention on the protection of the Ozone Layer	1990
Montreal, 1987	Montreal Protocol on Substances that Depleting the Ozone Layer	1990
Vienna, 1986	Convention on Early Notification of a Nuclear Accident	1990
Rio de Janeiro, 1992	Convention on Biological Diversity	1997
Basel, 1989	Basel Convention on the Control of Transboundary Movements Hazardous Wastes and Their Disposal	1994
Bucharest, 1992	Convention on the Protection of the Black Sea Against Pollution	1994
Bucharest, 1992	Protocol on the Protection of the Black Sea Marine Environment Against Pollution from Land Based Sources	1994
Bucharest, 1992	Protocol on Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency Situations	1994
Bucharest, 1992	Protocol on the Protection of the Black Sea Marine, Environment Against Pollution by Dumping	1994
Paris, 1994	Convention on Combating Desertification	1996
1992	Protocol of the International Civil Liability Convention for the Damages Due to Petroleum Pollution (CLC 69)	-
1992	Protocol of the International Convention for the Establishment of and International Compensation Fund for the Damages Due to the Petroleum Pollution (FUND 71)	-

International Environmental Commitments: Turkey becomes a party to a convention or treaty once appropriate political and administrative approvals have been obtained and the decision is published in the Official Gazette. The year given for becoming a party to a particular convention is the year of publication in the Official Gazette.

Declarations:

- Stockholm Declaration on Human Environment (1972)
- Helsinki Declaration on European Security and Cooperation (1975,1980,1986,1988)

- Genoa Declaration on Mediterranean Sea (1985)
- United Nations/ European Community (UN/EC) Flora Fauna and Living Environment Protection Declaration (1988)
- European Environment a Health Charter (1989)
- Atmospheric Pollution and Climate (Noordwijk) Declaration (1989)
- Euro-Mediterranean Environment Charter (1990)
- UN/EC Sustainable Development (Bergen) Declaration (1990)
- Ozone (Montreal) Protocol (1990)
- New European (Paris) Charter (1990)
- UN/EC Espoo Ministerial Accord (1991)
- OECD Environment and Development Ministerial Policy Accord (1991)
- Rio Declaration on Environment and Development (1992)
- Agenda 21 (1992)
- Declaration on Forestry on Principles (1992)
- OECD Environment Ministers Declaration (1992)
- Cairo Declaration (1992)
- Central Asia and Balkan Republic Environment Ministers Declaration (1994)
- Sofia Ministerial Declaration (1995)
- Barcelona Resolution (1995)
- OECD Environment Ministers Declaration (1996)
- OECD Environment Ministers Declaration (1998)
- OECD Environment Ministers Declaration (2001)

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CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES - TRADE

Decision-Making: Concerning the foreign trade regulation related to international/ multilateral environmental agreements, the activities of Undersecretariat of Foreign Trade cover the issues such as: Import and Export Communiqués on the control of transboundary movements of hazardous wastes; control of ozone depleting substances; control of international trade in endangered species of wild fauna and flora; and etc. All these activities are conducted in close cooperation with other relevant ministries and institutions. The Undersecretariat of Foreign Trade is also responsible for preparing bilateral and multilateral trade and economic agreements. The Undersecretariat of Foreign Trade is responsible for preparing foreign trade regulations according to national economic needs and also rights and obligations arising from International Agreements. Turkish implication of the multilateral and bilateral environmental conventions and agreements that are enhancing the contribution of industry to sustainable development is being explained by the following idea: “Development of the environmental legislation in Turkey is usually considered as a positive step toward sustainability, along with the implementation of some important international environmental legislation and regulations”.

Three topics have been included to the international environmental legislation and regulations having trade implications. First, Turkey has introduced as part of her laws the entire Vienna Convention and its Montreal Protocol on Ozone Depleting Substances. This was published in the Official Gazette No: 20554 on June 20, 1990. Additionally, Turkey became a party to the London Amendments on July 12, 1995; and also Copenhagen Amendment entered into force on February 1996. Concerning the Foreign Trade Regulation (Import and Export Communiqués on ozone depleting substances) in conformity with the implementation of the obligations laid down in articles of Montreal Protocol and its Amendments, for instance, as of January 1, 1993, Turkey started to undertake a program to a practicable extend to discourage the export of Annex A substances to any state not party to this Protocol. Thus, in compliance with the obligation laid down in Article 4 Paragraph 2 of the Protocol, re-exportation of these substances to non-parties from Turkey is not allowed.

Secondly, regarding the Basel Convention entered into force on May 5, 1992 on the control of transboundary movements of hazardous wastes and their disposal, Turkish national legislation on the management of hazardous waste came into force in 1995 after ratifying the Basel Convention. The most important provision of this legislation is the prohibition of importation of all hazardous wastes into Turkey. Concerning the hazardous wastes, Turkey put into force Foreign Trade Communiqués on the imports and exports of hazardous wastes in 1996 and 1998. Thus, Turkey has strengthened its existing regulations. The Communiqué on the Standardization for Foreign Trade Regarding the Substances and Waste Products Keep Under Control with the Objective of Environmental Protection came into force in 2000. The aim of the Communiqué is to keep under control and to regulate the substances and wastes imported, for preventing of the environmental pollution in accordance with Decision of Technical Regulation and Standardization on Foreign Trade under decision of the Council of the Ministers dated January 01, 1996 dated 96/7796. It covers five Appendices (chemicals; fuels; scraps of metals; wastes and waste products; and substances banned). In addition, Turkey has actively contributed to the regional and global efforts to avoid the illegal transportation of hazardous wastes. In this respect, Turkey signed the Izmir Protocol on the Prevention of Pollution of Mediterranean Sea from the Transboundary Movements of Hazardous Waste and Their Disposal in 1996. This Protocol prohibits exports of hazardous waste to developing countries.

Thirdly, the accession of Turkey to the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) came into force on December 22, 1996. Furthermore, Turkish national legislation adopted for the implementation of CITES entered into force on December 27, 2001. Additionally, Turkey is also preparing Foreign Trade Communiqués for the protection of certain species of wild fauna and flora against over-exploitation through international trade.

The main objectives of the Sixth Five-Year Development Plan (1991-1995) have been implemented. The objectives, all within a structure open to international competition, include: accelerating industrial growth; bringing down the chronic inflation rate; increasing the role of the private sector; and giving priority to investments in resources allocation. The functions of the State to set and supervise rules with regard to the realization of economic activities through market mechanisms in order to raise welfare were the other objectives during the period. However, the country was not ready to withdraw the State from economic activities, such as production and distribution.

Programmes and Projects: Turkey has begun the preparation of a Country Programme for the Phasing-out of Ozone Depleting Substances in cooperation with the World Bank.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: The Web site of the Undersecretariat of Foreign Trade is www.dtm.gov.tr and of the State Planning Organization www.dpt.gov.tr.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: Turkey passed the Agreement of the World Trade Organization (WTO) and its annexes on January 26, 1995, which brings new standards on trade and environment. This founding membership to the WTO and the Customs Union with the EU (January 1996) have given a new dimension to Turkey's integration with the global economy. In order to fulfill the commitments to adopt the trade and competition rules of the European Union and WTO, the legislative alignment process is being undertaken with a firm pace. Moreover, Turkey was granted candidate status for the full membership to the EU in Helsinki Summit held in Finland in December 1999. Turkey's new status as a candidate for the EU provides an additional impetus for economic, social and political reforms. Turkey's dynamic private sector has repeatedly shown that it will respond to an improved macroeconomic environment. The prospect of closer ties with the EU has also created favorable business expectations. Turkey-EU relations account to a great extent for sustainable development. The Declaration on Trade and Environment adopted at the recent WTO Ministerial Meeting held in Doha and Turkey's accession to European Union will help Turkey to upgrade Turkish firms' technological capabilities and to contribute to the increased competitiveness of Turkish industry in domestic as well as EU and other foreign markets.

Turkey is also a member for the following organizations: the Organization of the Islamic Conference (OIC) and the Committee for Economic and Commercial Cooperation of the Organization of the Islamic Conference (COMCEC); the Black Sea Economic Cooperation in the framework of which trade and environment relations among member countries are promoted; and the Organization of Economic Cooperation and Development (OECD).

* * *

CHAPTER 3: COMBATING POVERTY

Decision-Making: There are four major social assistance organizations and schemes in place for the poor in Turkey:

1. *Social Assistance and Solidarity Fund:* The Social Assistance and Solidarity Fund, established in 1986, is financed by earmarked taxes and administered by the Prime Ministry. It allocates resources to over 900 foundations in every province; and provides assistance to needy people, chosen at the discretion of the foundations. This is the largest scheme of pure social assistance in Turkey. The Fund aims at helping the poor by the allocation of cash and in-kind transfers to various groups in need, and thereby: mitigating the hardships of needy people; improving the distribution of income; increasing social welfare; and encouraging social cooperation. To be qualified for assistance, people are subject to means testing.

2. *Old Age and Disability Assistance Scheme (Law 2022):* This scheme, established in 1977 under the Law 2022, is administered by the General Directorate of Civil Servants Pension Fund (under the Ministry of Labor and Social Security). It provides benefits for those over 65 years of age and those more than 40 percent disabled who have no social insurance. From 343 thousand beneficiaries in 1977, it has grown to have 967 thousand in 2001. Besides, the Veterans are covered by a special social assistance programme, which is also provided by the Civil Servant Pension Fund.

3. *Green Card Scheme (Free of Charge Health Treatment For the Poor):* According to the law, enacted in 1992, for poor people with no social insurance, medical treatment services and all expenditures made during the treatment in hospitals, are provided by the government free of charge. In order to get medical treatment free of charge, the income level of the poor must be less than 1/3 of the minimum wage level. People meeting the criteria given above receive a “green card” for their medical treatment free of charge.

4. *Social Services and Child Protection Agency (SSCPA):* SSPCA, established in 1983, runs orphanages and old peoples’ homes and is staffed by professional social service workers. Its target groups are: children that require protection; the elderly; and the disabled, to whom it provides small amounts of assistance. The Agency provides the most general level of support to those under its protective care. The benefit formula is also indexed to inflation through a link to the government employee salary formula, updated every six months. The help provided by this agency, the smallest of the schemes, probably is the most cost-effective in achieving its goals.

Other organizations: Along with the main schemes mentioned above, there are also other organizations delivering assistance to specific groups. Some of these organizations and their respective groups are as follows:

- Red Crescent (especially in case of natural disasters and national emergencies);
- Association of Dormitories and Credit for Higher Education;
- Municipalities providing aid for soldier-families;
- Administration for the Disabled; and
- General Directorate for the Enhancement of the Status of Women.

The adoption of the Law on Unemployment Insurance that will secure redundancy payments for those who have lost their jobs is a positive development.

Although important provisions have been made for planning, housing and services, including legal efforts such as the Gecekondulaw, No: 775 of 1966; and the Gecekondulaw Amnesty Law, No: 2981 of 1984, the sheer number of gecekondulaw (slum) has risen from an estimated 240,000 during the First Five-Year Development Plan (1963-1967) to an estimated 2,000,000 at the beginning of the Seventh Five-Year Development Plan (1996-2000).

Within the framework of a sustainable development approach, the integration of environmental policies into all social and economic policies has gained importance. As stated in the Eight Five-Year Development Plan (2001-2005), Turkey's National strategy to combat poverty is as follows:

- Inequalities in income distribution shall be reduced in order to alleviate poverty and enable each segment of the society to gain a fair share from the welfare increase, are the main objectives;
- The main principle will be to implement economic and social policies in harmony with each other that will have as their objective the economic growth, elimination of absolute poverty, alleviation of relative poverty and approximation of the income of the poor segments to an average welfare level;
- The transfer system will be restructured with a view to ensuring redistribution of income to the poor or those who are at the poverty line;
- The participation of the related local people shall be urged by focusing on vocational guidance programs and projects that will increase the productivity of the population in the rural area and diversify agricultural production pattern;
- Special importance shall be put on backing up small and medium sized enterprises and encouraging new entrepreneurs;
- Stress shall be put on measures that will facilitate entrance into the labor market and increase labor force mobility among sectors;
- In order to alleviate discrepancies among regions, along with economic investments, investments on education, health and social services shall be speeded up;
- Social service and social aid systems shall be made easier accessible to the poor section of the population. Within this framework, local administrations, private establishments engaged in providing social aid as well as charity establishments, shall be encouraged to be more efficient in programs on combat with poverty in collaboration with public institutions;
- Education, health and social services shall be made accessible for those in need. Furthermore, projects towards meeting the housing requirement of these sections shall be encouraged; and
- A system, securing food provision for the poor, shall be developed. Moreover, a system that should prevent impoverishment of the masses in times of economic crises or natural disasters and prevent that the population in poverty becomes poorer shall be established.

Programmes and Projects: New types of housing have been introduced, including the 1980s-like “mass housing” scheme, which provides for credits to housing cooperatives through the newly established “Housing Development Administration” and the “Mass Housing Fund” (1984).

Social Risk Mitigation Project (SRMP) is a World Bank Project whose amount of loan is US\$ 500 million. The duration is from October 1, 2001 to December 31, 2005. The development objective of the SRMP is to mitigate the impact of the recent (February 2001) economic crisis on poor households (social risk mitigation) and to improve their capacity to cope with similar risks in the future (social risk management). The SRMP will achieve these objectives through: (i) an adjustment portion, providing immediate support to the poorest affected by the crisis (social risk mitigation); and (ii) an investment portion which in turn consists of three components: (a) building up the capacity of state institutions providing basic social services and social assistance to the poor (social risk management); (b) implementing a social assistance system (Conditional Cash Transfers-CCT) targeted to the poorest 6 percent of the population conditional on improved use of basic health and education services (social risk mitigation and prevention); and (c) increasing the income generating and employment opportunities of the poor (social risk prevention).

Status: It is rather a global phenomenon that poverty steadily grows and deepens. According to various analyses of the United Nations, some 1.1 billion people, half of who live in extreme poverty, are defined as “poor”. This was pointed out during the World Summit for Social Development in Copenhagen in 1995. Turkey is not an exception to this situation.

The absolute poverty level, which can be defined as the level at which basic food expenditures, necessary for a healthy life cannot be afforded, was 8 percent in Turkey by the year 1994. According to the basic requirements approach, which considers food and other consumption needs as a whole, the rate of the population under risk of poverty, is about 24 percent. The absolute poverty level of rural and urban areas are 11,8 percent and 4,6 percent respectively, whereby the rate of the population under risk of poverty by basic consumption needs is 25,4 percent for rural areas and 21,7 percent for urban areas. 95 percent of the population in absolute poverty consists of those whose educational level is either primary school or below and of illiterate people. With a share of 50 percent within the working group, unpaid family workers constitute the greatest poor group. This section is followed by the self-employed with 24,7 percent and wage earners with 16,6 percent. When considered according to economic activity fields, with a share of 73,5 percent within the population in poverty, those dealing with agriculture and forestry constitute the greatest group in poverty.

On the other hand, salaries and wages have increased at high rates in real terms for the period 1990-1994. Wages of workers in the public sector have increased by a factor of 2.04, whereas in the private sector they increased by 1.5. During this period, policies were implemented for improving income distribution, and the share of wage and salary-earners in the Gross Domestic Product (GDP) was raised.

The lack of sufficient housing, which is both a basic need and a very important consumption item for human well being, reflects the extent of poverty, which many socioeconomic groups experience. "Gecekondu", which is the Turkish version of squatter housing seen in every developing country, provides shelter for the urban poor and "have-nots" in and around big cities (metropolises) and invades more and more rural (agricultural) land every day. Of the estimated total urban population of 37.8 million (that is, 60.9% of the total population) in 1995, nearly a quarter still live in gecekondu-type settlements. However, the formation of gecekondu has not been stopped due both to the scarcity of National financial resources and to rising poverty levels.

The recent crisis in the Turkish economy has narrowed the possibilities to implement policies towards increasing social welfare in general and improving income distribution and alleviating poverty in particular. Inflation is still one of the foremost important factors that deteriorate income distribution and poverty in Turkey. While abject poverty (defined as pervasive poverty below biological or nutritional standards) may not be a problem in Turkey, extensive relative poverty is, and the number of poor with less than adequate nutrition, housing, and health standards has been increasing in recent years. The social security institutions in Turkey have increasing financial problems. The imbalance between the active and passive insurers requires organizational changes. The relatively low income of the rural population is the main cause for regional and urban-rural disparities in Turkey. It is estimated that 68.7% of poor households are rural. Most of the poor are from East and Southeast Anatolia (30.3%), whereas only 1.4% is from the Aegean-Marmara Region.

As of 2001, the share of agricultural sector within total employment was 13 percent; its share within the employed manpower on the other hand, was 33 percent. An important number of those, working in the agricultural sector is working with an extremely low productivity either on their own account or as unpaid family workers. The poor does not sufficiently benefit from the increase in income stemming from economic growth. A more pro-poor growth pattern has to be realized. Social security and social aid systems have been inefficient in protecting the poor section of the population. In spite of the fact that the tax burden on the working section has been alleviated relatively by the modification of the income tax tariff, no progress could be achieved towards exempting minimum wages from taxes.

About 70% of the poor earn their living from agriculture. The Government's agricultural product subsidies and tax exemptions are insufficient to alleviate the disparities. In addition to agriculture, a large number of the poor are found in small family enterprises. Since there is no persistent long-term basis for rural development, the difference in the level of welfare between rural and urban areas is gradually increasing, and the migration of the rural population to big cities is leading to: excessive aggregation; increased unemployment; and problems with regard to settlement, housing, environment, infrastructure, transportation, education, health, and public security. The unemployment rate went up to 10.5% in 1994. Similarly, the level of underemployment reached 9.3%. In urban areas, the unemployment rate among educated young people is high, whereas the proportion of women in the labor force is low. Employment in the agricultural sector with low-productivity continues to account for over 45% of the

total employment of about 20.4 million. Employment in the public sector, which makes up 40% of the total paid employment, remained the same in the period 1991-1995.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: The Web site of the State Planning Organization is www.dpt.gov.tr and of the Social Services and Child Protection Agency www.shcek.gov.tr.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 4: CHANGING CONSUMPTION PATTERNS

Decision-Making: On the basis of the multi-stakeholder discussion, the General Directorate for the Protection of Consumers and Competition was set up under the Ministry of Industry and Trade.

On the basis of the multi-stakeholder discussion, the Act on the Protection of Competition, as well as several regulations on consumer protection have been adopted. The Ministry of Environment has signed declarations and protocols with different sectors of the economy to decrease their environmentally harmful loads. For example, a declaration has been signed with the Cement Industry Union whereby cement industry representatives have made a firm promise to decrease and control the environmental pollution produced by this sector. In 1995, production of cars equipped with catalytic converters was initiated with a protocol between the Ministry of Environment and car manufacturers.

National policy discussions on changing production and consumption patterns were held in Turkey in 1993 with: governmental authorities; consumer groups; NGOs at large; the media; and the National Standardization Body. The importance of: the product standards; the adoption of a National scheme for an environmental quality management system; and public awareness-raising have been stressed as the means to achieve the objectives of changing consumption patterns.

Programmes and Projects: No information available.

Status: Arrangements for environmental protection, in order to settle the issues on guarantee, maintenance, and repair services to assure reliability of goods used by the consumers, are still inadequate. The need for harmonization of product standards with the European Community still persists.

Capacity-Building, Education, Training and Awareness-Raising: The mass media; television; radio; print; and increasingly the internet play an important role in spreading out sustainable consumption patterns. Advertisements are also important on consumer decision-making for sustainable consumption. Advertising standards and guidelines are covered in national competition and consumer protection legislation. Information on the environmental characteristics of products and services is communicated in the market through a range of labels, which help consumers to make an environmentally aware choice.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 4: CHANGING CONSUMPTION PATTERNS - ENERGY

Decision-Making: The main coordinating bodies for energy issues in Turkey are: the Ministry of Energy; General Directorate of Electrical Power Resources Survey; and Development Administration (EIE). The establishment of EIE has been made under the Law NO: 2819, 24 June 1935.

Energy policy of Turkey is mainly concentrated on assurance of energy supply sufficiently, reliably, economically, and in time, by taking into account the environmental impacts, so as to contribute to the economic growth and enhancement of the welfare of the people and to support the social development efforts of the country. To implement this policy, utilization of domestic energy resources as soon as possible through accelerated local, private and foreign investments is supported. General energy policies in Turkey have been identified as “State Policies” and the main principles have not been allowed to fluctuate in line with changing governments. The main principles of Turkey’s energy policies are as follows:

- Developing existing sources while accelerating research studies on new sources;
- Meeting demand primarily by making use of local energy resources as much as possible in all energy types;
- Adding new and renewable energy resources as soon as possible to the energy cycle;
- Maintaining source diversification and avoiding dependence on a single source or country in energy importation, by taking into account the cost;
- Supporting the oil and natural gas projects of Eurasian Countries in a manner to contribute to economical and social development of those countries and transporting these resources to the West markets through the Energy Corridor over Turkey;
- Making use of more private and foreign capital in meeting demand in the medium and long terms;
- Completion of transmission process to competitive, stable and transparent markets in power and natural gas sectors by eliminating the difficulties and bottlenecks in these sectors;
- Prioritization of options to respond national requirements economically in the short run, and considering fuel diversification in thermal power plants together with hydroelectric power plants and wind power plants in the long run to ensure power security;
- Accelerating rehabilitation studies in the existing power plants to increase utilization rate and improving existing distribution network for more reliable electricity supply at the lowest cost;
- Implementing “Energy Saving Program” for energy efficiency, preventing extravagance consumption and to minimize losses in production, transmission and consumption of all energy sources;
- Protecting the environment and public health in the process of meeting the energy requirements and controlling emissions originating from energy production and consumption; and
- Programming Research and Development studies (R&D) in the energy field in a way to meet the requirements.

On the other hand, in order to protect the atmosphere, the Government of Turkey promotes policies and programmes in the areas of: energy efficiency; environmentally sound and efficient transportation (European Community, EURO 93); and industrial pollution control. To achieve sustainable energy development and efficiency, the Government considers: the development and use of safe technologies; promotion of R&D relating to appropriate methodologies; public awareness-raising; product labeling; and environmental impact assessment (EIA) as the most important means. The energy sector is working towards the integration of environmental considerations. Major groups are also involved. It is obligatory for all energy investments to have included interest groups and public within the Environmental Impact Assessment Process.

Programs and Projects: No information available.

Status: *Energy Supply in Turkey:* Turkey has limited reserves of oil and natural gas, but proven reserves of lignite in the order of 8.4 billion tones. Combustible renewables, especially wood, and the country’s water sources are

other important indigenous energy sources. Primary energy production of the country was 27.9 Mtoe in 2000. Oil and natural gas productions were relatively small, and the main domestic energy source was coal, mostly lignite, whose production amounted to 60.9 Mt in 2000. Total Primary Energy Supply (TPES) increased at a fast pace. Between 1990 and 2000, TPES increased 4.4% per year. Consumption reached from 53.7 Mtoe in 1990 to 82.2 Mtoe in 2000. Oil accounted for the largest share of demand with 39.6%. Oil is followed by natural gas with 16.2%; lignite with 16.1%; hard coal with 12.2%; non-commercial fuels with 7.9%; hydro and other renewables with 6.1%; and secondary coal with 1.9% in 2000. In 2000, renewable energy sources (excluding hydro) accounted for 8.5 Mtoe. This included: mainly non-commercial wood (5.1 Mtoe); animal and vegetable waste (1.3 Mtoe); geothermal energy (1.8 Mtoe); and solar energy (0.3 Mtoe). Per capita energy consumption reached from 951 koe in 1990 to 1259 koe in 2000.

Due to the stabilization of energy production and rapid demand growth, energy imports in Turkey have surged. Between 1990 and 1999, net energy imports increased 6.6% per year. In 2000, they reached 53.8 Mtoe, i.e. 66% of TPES, in comparison with 53% in 1990. Total coal and coal products importation realized as 10.5 Mtoe, i.e. 18.7% of total import; crude oil and oil products 32 Mtoe (57.3%); natural gas 13.1 Mtoe (23.4%); and electricity 0.3 Mtoe (0.6%) in 2000.

Electricity has a critical importance in the energy sector. Total installed capacity, being 16315 MW in 1990, has reached 27264 MW by the end of 2000. There is also a rapid growth in electricity generation during the last decade. It increased from 57.5 TWh in 1990 to 124.9 TWh in 2000 with an annual average growth rate of 8.1%. In recent years, the growth in electricity generation was below the growth in electricity demand. Therefore, Turkey has become a net importer of electricity since 1997. While the net electricity consumption; per capita net consumption; and per capita gross consumption realized as 46.8 TWh, 829 kWh and 1006 kWh respectively in 1990, these figures have reached 128.3 TWh, 1512 kWh and 1964 kWh respectively in 2000.

Capacity Building, Education, Training and Awareness-Raising: No information available.

Information: The Web site of EIE is www.eie.gov.tr and of the Ministry of Energy www.enerji.gov.tr .

Research and Technologies: No information available

Financing: No information available

Cooperation: No information available

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CHAPTER 4: CHANGING CONSUMPTION PATTERNS - TRANSPORT

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

Decision-Making: The Ministry of Interior; the State Institute of Statistics (SIS); Hacettepe University; and the Institute of Demographic Studies are primarily responsible for demographic issues in Turkey. In addition: the Ministry of Agriculture; the Ministry of Environment; the Ministry of Forestry; the State Planning Organization (SPO); and the State Institute of Statistics are engaged in an integrated policy coordination in the field of population, environment, and development. A Demographic Dynamics and Sustainability Working Group has been set up under the Turkish National Environmental Action Plan (NEAP) to coordinate the different actions in the field of population, environment, and sustainable development.

The Sixth, Seventh and Eighth Five-Year Development Plans have identified targets and implementation strategies: for the establishment of wide-coverage unemployment insurance schemes; creating a skilled labor force; and upgrading the existing employment benefit systems. In addition, the interlinkages between demographic and environmental issues have been given a priority in the five-year development plan.

Programmes and Projects: No information available.

Status: The high population growth rate, which now stands at over 2% per year; and the high maternal and infant mortality rate call for further investments in National population policies. According to National statistics, 93% of the total population is covered by National social security schemes. Private social security schemes have been encouraged to expand these services to the whole population. The total population of Turkey reached 67.844.903 according to the results of General Population Census by the year 2000. The annual population growth fell to 1.78 5%. Average size of household is 4.3.

The average rate of married person is 65.1% of total population. The average age of first marriage is 22 for women, and 25.1 for men. According to the results of Turkish Population and Health Survey, distribution of wedding types is as follows: only official ceremony 3.2%; official and religious ceremony together 89%; only religious ceremony 7.5%; and any type of ceremony 0.3%. According to the same survey results, the rate of bridal head giving to women is 28.6%. It shows that this tradition has been continuing in some regions. According to the Turkish Population and Health Survey (1998) results, total fertility rate is 2.6% and crude birth rate is 0.22%. Women reach highest fertility rate in an age between 20-24. The average age for having first baby is 26.4. Healthy birth rate is 76%; crude death rate is 0.7%; infant mortality rate is 42.7%; and child mortality rate 9.8%. The death rate under the age of five years old is 52.1%. Life expectancy at birth is for males 65.9 years and for females 70.5 years. The total life expectancy is 68.2 years for the year 1996. Disable person rate in Turkey is 7-10%.

Capacity-building, Education, Training and Awareness-Raising: No information available.

Information: The Web page of the State Planning Organization is www.dpt.gov.tr and of the State Institute of Statistics www.die.gov.tr.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH

Decision-Making: the Turkish Grand National Assembly (TBMM) and the Government take the decisions. However, In Turkey the Ministry of Health is authorized with: the planning; coordination; implementation; monitoring; inspection; and evaluation of health services. The State Planning Organization carries out the planning at macro levels. In the implementation, there are other health institutions and organizations in addition to the Ministry of Health, such as: the Ministry of Education; the Ministry of Defence; the Ministry of Transport and Communications; the Municipalities; and etc. Moreover, the Ministry of Finance and the Undersecretariat of Treasury have certain authorization on financial matters.

Articles 41 and 56 of the Constitution consider a healthy life as a fundamental right for people. Health services in Turkey are given separately by various organizations based on various legislations. However, the most fundamental legal framework concerning the health policies in Turkey is set forth by the Law No: 224 issued in 1961.

Furthermore, the Fundamental Law on Health Services No: 3359 issued in 1987 carries out certain arrangements in health services. General Hygiene Law No: 1593 and Private Hospitals Law No: 2219 can be stated as other significant laws on health.

With 5-year development plans and annual programs prepared by the State Planning Organization, following matters are determined: opinions of relevant organizations and institutions; strategies and policies on providing health services; infrastructure needs; and planning of human resources. 8th 5-Year Development Plan is currently applied (2001-2005). Health policies are established in harmonization with the policy of “Health for All”, which is carried out by the World Health Organization (WHO) and accepted by Turkey. With this aim, the Report on Health 21 Objectives and Strategies was issued by the Ministry of Health. Strategies and action plans are prepared at the national level with the participation of relevant persons and organizations. The Supreme Health Council develops recommendations on health issues. Suggestions of Turkish Medical Doctor’s Association; private organizations; and the Social Security Authority are taken also into consideration.

In addition to the Ministry of Health, bodies and institutions involved in the overall process are: the Social Security Authority; university hospitals; health services coordinated by various public institutions and organizations under their own organizational structures; health services given by municipalities; military health organizations; private health services sector; Baðkur (Social security agency for artisans and the self-employed) which does not extend health services but purchases them; the Ministry of Finance which is active in employment of staff and investments; and the Undersecretary of Treasury. National strategies and action plans for women health and family planning at the national level are developed through the participation of relevant stakeholders and organizations.

Programmes and Projects: Relevant directorates affiliated within the Ministry of Health carry out many programs. Certain projects and programs are underway with the agreements made between the Republic of Turkey and international organizations. Third Country Program is carried out with the UNFPA; 2001-2005 Country Program with the UNICEF; and the Third Health Project with the support of the World Bank. Moreover, preparation works for the implementation of a reproductive health project with the cooperation of the European Union; and a transition process to reproductive health are underway. Some other programs and projects are as follows:

- Administrative Education Program;
- Hospital Administration Education Program;
- Education on Education Formation;
- Orientation Education;
- Development Education;
- Monitoring, Evaluation, Control Education;
- Research Studies on the Performance of Small Clinics;
- Flagship Education;
- Sound Drug Use Education;

- National Study on the Load and Cost of Diseases;
- National Study on the Health Calculations;
- The National Environmental Action Plan;
- The National Action Plan on the Women Health and Family Planning;
- Health 21 Objectives and Strategies;
- National Study on the Load and Cost of Diseases;
- National Study on the Health Calculations;
- Sound Drug Use Education;
- The Recognition and Treatment Guide Program;
- Flagship Education;
- The Hospital Administration Education Program; and
- Research Studies on the Performance of Small Clinics.

Status: Market growth and urbanization of the Turkish population over the past two decades have had a major impact on health status and on disease patterns throughout the country. In addition, the number of doctors, nurses, clinics and hospitals has increased. A better supply of food, clean water, safe sanitation, decent housing and basic education is now available to the most of the people although regional and urban-rural disparities still exist among the country's 67 million population.

As of 1999, 38 percent of total beds and 40 percent of physicians were in three metropolises constituting 25.6 percent of total population. Utility rate of the existing beds was 59 percent, in general. Bed utility rate in district hospitals remained under 25 percent and the flow of patients to hospitals in big cities continues. The unbalanced distribution of health personnel and infrastructure throughout the country in general, and the lack of coordination and cooperation among institutions and their service units persist. The rate of population covered by health insurance reached 86.4 percent. With the implementation of Green Card system, 87 million people have been provided the opportunity of in-patient treatment services. The total fertility rate in 1973 was 5.5%; in 1978 4.3%; in 1983 4.1%; in 1988 3.4%, in 1993 2.7%; and in 1998 2.6%. The total mortality rate dropped from 11.6% (in one thousand) in 1970 to 6.7% in 2000. The mother mortality rate persists as a problem: in 1970 it was 2084 out of one hundred thousand; and in 1981 it was 132. The infant mortality rate (in one thousand) was: in 1973 1636; in 1978 134; in 1983 96; in 1988 38; in 1993 52; and in 1998 38. The overall life expectancy (at birth) figures show an increasing pattern in Turkey. Life expectancy for women was 56.3 in 1970; 60.3 in 1980; 69 in 1990; and 71.3 in 2000. Life expectancy for men was 52 years in 1970; 55.8 in 1980; 64.4 in 1990; and 66.7 in 2000.

112 Emergency Health Services: The Department of Emergency Health Services, which is affiliated with Directorate General for Fundamental Health Services of the Ministry of Health, has been established in order to plan, implement, and organize emergency health services required to be given in extraordinary cases countrywide. The objective of 112 Emergency Health Services, which are given in the provincial basis under the coordination of the Department of Emergency Health Services, is: to prevent deaths; to minimize physical disabilities, resulted in ignorance and negligence, and improper transport of persons in cases of emergency cases and injuries; and to extend emergency health services in extraordinary cases. In several situations having a direct threat to human life, such as: natural disasters; emergency diseases; traffic accidents; and occupational and domestic accidents the following actions play a life-saving role: providing first aid and emergency health services; transferring the sick or injured to appropriate treatment facilities in a fast way; extending medical aid during the transfer; and treating the sick person with a trained staff in the treatment centre. In modern concept, "Emergency Health Services" means extending such services to those in need, in place and in time. 112 Emergency Health Services are currently given in 81 provinces, in 434 stations, with 577 ambulances. Emergency health services can be accessed 24-hour by dialing 112 free of charge in case of any disease or injury. In cases of applications deemed to be urgent, an ambulance, with all required equipment and with a professional team including a doctor available in the nearest station, is sent to the sick person. The first treatment is made in the ambulance after which the patient is transferred to the nearest hospital when required. The communication between the station, which is the command center, and the ambulance is performed via radios.

446.025 traffic accidents occurred in Turkey in 2000 causing 4.852 deaths while 115.849 people were injured. 15 - 18 % of the probable deaths were prevented in injuries resulted in traffic accidents owing to proper first aid; and 20

- 25 % of the probable deaths were prevented in injuries resulted in traffic accidents owing to fast and proper emergency aid. Although the number of traffic accidents is mounting, the number of deaths in traffic accidents decreases 6 - 7 % each year thanks to the 112 emergency health services, given countrywide in an increasing number of stations; and to the other precautions taken. In total, 292.353 cases were treated in 2001.

Although certain positive developments are being experienced for main health indicators, such as: infant mortality rate; child mortality below the age of five and immunization rates; maternal mortality; and over-reproduction, expected levels for these indicators have not been attained yet. These levels have not been attained not only due to the problems in the health sector, but also due to the contribution of other factors, such as: the environment; nutrition; distribution of income; and provision of clean drinking water and potable water. Moreover, a lack of common reliable database, meeting the needs covering the entire health system in Turkey, has a negative effect on decision-making, research, and analysis processes.

Capacity-building, Education, Training and Awareness-Raising: Better education, especially for women and girls has increase the population's understanding of the leading threats to good health, the ability to care for their families, and the probability that they will seek appropriate access to health services. The extension of the duration of compulsory basic education from 5 years to 8 years has affirmative effects on awareness-raising.

Information: Activities are underway concerning the works in the harmonization process with the EU, and concerning the works of collecting, storage and transferring information on the projects independently undertaken by organizations; and presenting such information in the electronic environment of common use. However, there are certain problems and confusions in the current application of keeping and collecting the information in different environments by different organizations. The web page of the Ministry of Health is www.saglik.gov.tr.

Research and Technologies: Population and health studies (DHS) are carried out every five year starting from 1963 with the aid of international organizations. Moreover, researches on health services based on the society are carried out by: the Ministry of Health; Hygiene Institutes; private and public drug factories; and public hospitals for education.

Financing: Investments in health, education, and poverty alleviation have led to the improvement of overall health in Turkey. The second Health Project financed by a World Bank loan, and using the management services assistance through the United Nations Development Programme (UNDP) will help to improve the effectiveness, efficiency, and equity of the 4,6 % of GNP (US \$ 98 per capita per year) currently consumed by the health sector in Turkey. In 1996, approximately 2,7 % of GNP was consumed by the private and public health sector. The share allocated to the Ministry of Health from the general budget is 2,3 %. Certain amount of shares is allocated from the general budget to other ministries (such as Ministry of Education and Ministry of Labor and Social Security) for health. Moreover, significant finance input is provided for the field of health with the funds out of the general budget. Finance contributions are also provided for the field of health with the health projects supported by the donor organizations such as: UNFPA; UNICEF; German Development Co-operation, GTZ; Japan International Cooperation Agency (JICA), and U.S Agency for International Development (USAID).

Cooperation: Cooperation with international organizations such as: UNFPA; UNICEF; WHO; USAID; EU; JICA; and John Hopkins Program for International Education in Reproductive Health, JHPIEGO, in the field of health is maintained.

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CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

HUMAN SETTLEMENT

Decision-Making: Founded within the scope of the Law 4698, *the Housing Supreme Committee* is composed of: the Minister, to which the Undersecretariat of Housing is connected; the Minister, to which Directorate General of Title-Deeds and Cadastre is connected; the Minister of Finance; and, the Undersecretary of Housing under the Chairmanship of the Prime Minister. The amendment on the Land Office Law came into force on 28 June 2001 in order to develop housing policies and implement such policies.

The Housing Coordination Committee, established within the scope of the same law, is composed of: the Chairman of the Collective Housing Administration; Director General of the Land Office; Director General of the National Real Estate; Director General of Title-Deeds and Cadastre; the Ministry of Public Works and Settlement; and Director General of Technical Researches and Applications.

Founded within the scope of the Law 4698, *the Undersecretariat of Housing*: provides lands for investment sectors, public institutions, and for all kinds of housings; develops alternative financing models for meeting housing needs; produces land and housing policies; and enables the implementation of such policies in order to provide a sound and organized housing by providing harmonization between the development plans and annual programs, and the regional plans and local plans.

The Housing Development Administration and Directorate General of the Land Office is affiliated with the Undersecretariat of Housing. The Ministry of the Interior; the Ministry of Public Works and Settlement; the Undersecretariat of Housing; and, General Directory of Urban Land Office are responsible for human settlement decision-making. On the other hand, the State Planning Organization carries out regional planning activities.

The following bodies are responsible for the legislation and regulations concerning human settlement:

- *State Planning Organization* is responsible for the preparation of Five Year Development Plans or preparation of Regional Plans or having them prepared.
- *The Ministry of Public Works and Settlement* is responsible for: the preparation of territorial plans or having them prepared and their approval through Planning Law No: 3194/1985; the preparation of land use plans for areas subject to disaster and their approval through Disaster Law No: 7269/1051; the approval of Tourism Area and Centers Master Plans through Tourism Encouragement Law No: 2634, 18.03.1982; the approval of landfill in coasts or land gained through drying through Coastal Law No: 3621, 17.04.1990; the approval of land-use plans related to public institutions, important for transportation, mass housing implementations through the Planning Law, No: 3194, 09.05.1985; the approval of land-use plans of explosive and flammable material stores through the Regulation announced relative to the second article of the Law No: 6551 (1987); the preparations and approval of land-use plans of Squatter Prevention Areas or Rehabilitation Zones through the Squatter Law No: 775/3384; and the approval of Implementation Plans of National Parks through the Law on National Parks No: 2873, 09.08.1993.
- *The Ministry of Tourism* is responsible for: the approval of tourist establishment implementation plans in tourism areas and centers through the Tourism Encouragement Law No: 2634, 12.03.1982; the approval of implementation plans of touristic uses continuing from landfill in coasts through the Coastal Law No: 3621, 17.04.1990; the plans in Greater Municipalities through the Law of Greater Municipalities No: 3030, 27.06.1984; the Construction and Occupancy Permits through the Planning Law No: 3194, 09.05.1985 and the Law on Administration of Greater Municipalities No: 3030, 27.06.1984; and the approval of implementation plans of municipalities in Greater Municipality boundaries through the Law on Administration of Greater Municipalities No: 3030, 27.06.1984.
- *Prime Ministry- Housing Undersecretariat* is responsible for: the approval of land-use plans in organized industry and mass housing areas through the Land Office Law No: 1164, 29.4.1969.

- *The Ministry of Environment* is responsible for: the preparation of environmental basin plans with scale of 1/25000 on sustainable and ecological basis through the Government Decree on the Establishment and Duties of the Ministry of Environment No: 443.
- *The Institution of Specially Protected Areas* is responsible for: the preparation and approval of every type and scale of plans in specially protected areas through the Government Decree on the Establishment; and Duties of the Institution of Specially Protected Areas.
- *The Ministry of Public Works and Settlement* (General Directorate of Bank of Provinces) is responsible for, by the request of municipalities, the preparation of land-use plans by itself or through private tenders through the Law of Bank of Provinces No: 4759, 02.06.1945.

Regional Level:

- *Bosphorus Higher Planning Coordination Council* is responsible for the approval of plans or plan amendments in the coastal strip and fore front view area of the Bosphorus through the Bosphorus Law No: 2960, 22.07.1983 and Planning Law No:3194, 09.05.1985.
- *Southeastern Anatolian Project Regional Development Administration* is responsible for: the use of rights and competence in planning and infrastructural issues in South-Eastern Anatolian Region Provinces relative to the Laws No: 1580 and 3194 through the Governmental Decree No 399, 06.11.1989.
- *Regional Councils of Cultural and Natural Resources Protection Councils* is responsible for: the giving instructions on land-use plans with conservation objectives in urban and archeological natural conservation areas through the Law on the Protection of Cultural and Natural Resources No: 2863/3386, 23.7.1983.

Provincial Level:

- *Governates* are responsible for: the preparation and approval of land-use plans outside the municipal and adjacent area boundaries through the Planning Law No: 3194, 09.05.1985; the announcement of Mass Housing Areas through Mass Housing Law No:2985, 17.03.1984; the determination of village settlement areas through Planning Law No: 3194, 09.05.1985; and the determination of village settlement areas and approval of their plans through the Village Law No: 442/3367, 26.06.1987.

Settlement Level:

- *Municipality* is responsible for: the preparation of land-use plans within the boundaries of Municipalities and Adjacent areas through the Planning Law No:3194, 9.5.1985; the determination of squatter areas and upgrading zones and preparation and approval of their land-use plans through the Squatter Law No: 775/3811; the preparation and approval of upgraded implementation plans through the Amnesty Law on Settlement Development No: 2981/3290/3386; the Construction and Occupancy Permits through the Planning Law NO: 3194, 9.5.1985 and the Municipality Law No: 1580, 3.4.1930; and the approval of land-use plans related to land uses other than tourism in touristic areas and centres through the Tourism Encouragement Law No: 2634, 12.3.1982.
- *Greater Municipality* is responsible for the preparation and approval of master or land gains through drying through the Law on the Administration of Greater Municipalities No: 3030, 27.06.1984.
- *The Ministry of Culture* is responsible for the taking the decision for the regional or higher council to obey in urban, archeological, and natural preservation areas through the Law on the Protection of Cultural and Natural Resources No: 2863, 23.7.1983.
- *Higher Council of Protection of Immovable Cultural and Natural Resources* is responsible for the taking the principle decisions of planning and constructing for urban, archeological and natural preservation areas through the Law on the Protection of Cultural and Natural Resources No: 2863, 23.7.1983.
- *The Ministry of Forestry* is responsible for the determination and protection of national and natural parks, and preparation of development plans through the Law on National Parks No: 2873, 9.8.1993.

The Government of Turkey had a dual role in its preparatory work for the Habitat II Conference. As the host country, Turkey was responsible for all necessary arrangements of the Conference. On the other hand, Turkey

prepared, in close cooperation with a considerable number of public agencies and NGOs, a National Plan of Action. It is based on an enabling strategy which addresses the issues of human settlements in both urban and rural areas, including: the assessments of shelter; infrastructure and service needs; the review of the effectiveness of existing urban policies; and the identification of issues and bottlenecks to local development that call for action. Issues pertaining to: poverty alleviation and job creation; pollution reduction and environmental improvement; as well as community participation; and new modes of governance are also addressed in the Plan.

Housing Development Administration was once again mandated by the Prime Ministry to coordinate and facilitate the national preparations for Ýstanbul +5 process: “Special Session of the United Nations General Assembly for an overall Review and Appraisal of the Implementation of the Habitat Agenda”, which was held in June 2001. In this respect, the first Habitat Forum of Turkey, a revitalized and enlarged version of its National Preparatory Committee for the Habitat II Conference, convened in Ankara, 7-8 September 2000, with about 800 participants representing the full range of Habitat partners. In seven thematic workshops and two plenary sessions, the participants from government organizations, local governments, academia, private sector, and NGOs: reviewed the domestic status of the key issues of the Habitat Agenda; underlined problem areas and ongoing constraints; and displayed best practices on a wide geographical basis. The workshop conclusions were summarized in 67 point final declaration, under the headings of: Shelter; Social Development and Eradication of Poverty; Environmental Management; Economic Development; Governance; International Relations and Development of Partnerships; and Disaster Management. As an input for future action, all workshops put forth requirements for: legislative changes; a need for capacity-building and new institutions; and the urgency of creating an environment of strong partnerships. The Forum also reviewed the ongoing and ever increasing Local Agenda 21 initiatives which has just entered its second stage, bringing the number of participating cities up to 40; and discussed the potential for developing Local Habitat Agendas either as a part of or in parallel to these local commitments.

On the other hand, with regard to regional planning, the following main objectives have been included in the 8th Five-Year Plan (2001-2005): development and management of national resources aiming the provision of maximum economic and social benefits, and minimizing the regional disparities with respect to economic and social terms. In addition: sustainability together with the achievement of social and economic balance; improving the quality of life; and participation have been taken as the main guidelines in the regional planning.

Duties of the Housing Supreme Committee; the Housing Coordination Committee; and the Undersecretariat of Housing, which are founded within the scope of the Law 4698, are as follows:

The Housing Supreme Committee

- Determines general policies on providing lands and housings;
- Determines the land and housing production areas with priority, and the calendar for the production in such areas;
- Supervises domestic and foreign resources required for the production of land and housings; and
- Evaluates and makes decisions on the points, which are prepared and presented to its approval by the Housing Coordination Committee, and the Undersecretariat of Housing within the framework of the Law No: 4698.

The Housing Coordination Committee makes: the preparations, which will be taken as a basis for the decisions of the Housing Supreme Committee; and provides the coordination between the relevant institutions and organizations in the implementation of decisions of the Housing Supreme Committee.

The Undersecretariat of Housing

- Determines the limits of the land production areas by taking the plan objectives of the sector into consideration;
- Provides immovable for all kinds of investments and public institutions by nationalizing, purchasing, transferring, and by performing contracts to sell such immovable to those in need, to rent, exchange and

provide right of transfer for them, and to market or sell them via public institutions and organizations or via private legal entities;

- Supervises the use of domestic and foreign credits, provided for the production of land, infrastructure, and housing, and for the research and development activities concerning the issue by the relevant affiliated institutions, develops alternative finance models; and
- Monitors the implementation of decisions taken by the above-mentioned committees.

As indicated above, active and interested Habitat partners of the initial National Committee, as well as high potential new participants, was brought together in the “Turkish Habitat Forum” which functioned as the National Committee to start a process of problem definition and forward-looking strategies, actions and activities. Moreover, “Sub-commission of Turkey Habitat Forum for Governance”, which is a volunteer group composed of civil society organizations and representatives, was formed to carry out the work on: the “Bill of Local Administrations”; “Law on Associations”; and “Bill of Ombudsman” for the removal of barriers of social organization. With the coordination of Housing Development Administration (HAD), sub-commission met once in a month, 12 times until December 2001, and convened 3 general information sharing meetings in order to present its work on the Law of Local Administrations and Law of Associations. The members of sub-commission also made some meetings with related Ministries, deputies and commissions of Turkish Grand National Assembly (TGNA) to affect the decision-making process in TGNA.

On the other hand, Local Agenda 21 for Urla was a pilot initiative supported by the United Nations Development Programme (UNDP) through the Global Environment Facility (GEF)/NGO Small Grants Programme. Urla is located within the close hinterland of Izmir and is highly affected by the adverse environmental impacts of rapid economic development in Izmir. This project has also provided input to the National Agenda 21 preparatory process. A local committee, involving all relevant stakeholders, has been established for the preparation of Urla Local Agenda 21.

Programmes and Projects: *Sustainable Urban and Rural Settlements, Research Program for the Province of Van:*

Solutions of complex urban and rural problems caused by poverty and rapid migration, like: insufficient housing and infrastructure; exploitation of natural and cultural values; and etc. require objectivity in approaches and techniques, and joint efforts of concerned parties that applied research projects can provide. The social and spatial consequences of these problems are even more serious in relatively more underdeveloped regions of the country, like Eastern Anatolia where science and technology must be utilized to enhance the daily lives of citizens. The Research Program for Van is coordinated by the Scientific and Technical Research Council of Turkey (TÜBİTAK) and supported by: the Municipality of Van; the Chamber of Industry and Commerce of Van; the Trade Union of Van; and the Van (yüzüncüyıl) University. The program has been developed for a period of five years within the context of UN-HABITAT Agenda and the National Environmental Action Plan. In this program, a semi official body has been established in the city of Van where local authorities seek ways and means of accelerating development in the region to re-create the once “glorious” life and culture of their city.

The aim of the Program is to initiate and coordinate basic urban and rural research projects for this city at universities and to induce the local authorities to implement the project results. The budget of the program is jointly financed by national and local funds. This is an umbrella program comprising of various research projects conducted either by the local university or by other forthcoming universities in the country. Projects have been defined in a problem-oriented manner and extensive input data have been collected concerning the economic, social, and spatial aspects of the city and its surroundings. Data have been collected through geographic information techniques and put to the service of the public authorities and private companies. The purpose is to rationalize future investments and urban services provided by the municipalities. The operational model of the Program and the overall results to be derived from its projects are expected to speed up implementation of the envisaged urbanization policies and improve quality of the environment for the citizens of Van. Another technical cooperation project to promote sustainable human settlement development was initiated in October 1994, through the cooperation between the Government of Turkey and the UNDP. It is being executed and financed (US\$ 1.6 million) by the Prime Ministry Housing Development Administration.

On the other hand, the Housing Development Administration, besides the projects that it is undertaking within the scope of its obligations under the current market system, seeks to develop new policies on housing and urban development issues and to develop projects consistent with such policies like: “land with infrastructure for low income groups”; “construction projects based on profit sharing”; “new prospects in housing finance; housing development contractual saving system”; and “mortgage finance”.

Status: It is well known that land is a very limited resource and sixty-three percent of Turkey is affected by soil erosion. In addition, 92% of the total land area and 95% of the total population are under the risk of medium to high-level seismic movements. In Turkey the land component has the largest share in the total cost of housing at the level of 30-40%, and it is an approved fact that the only way of constructing houses at low costs can be achieved by reducing the cost of land. Recent earthquakes have also showed that there are some inefficiency in our construction and planning mechanism. Especially, there were many losses on Marmara and Düzce earthquakes in 1990. A professional insurance system is also lacking. Therefore, a new building and construction supervision system has been created in this context in 2000, with a view to ensure safety of construction works and buildings throughout the country.

There are also some problems in the housing finance. There is insufficiency of housing loans extended by public and private finance institutions, both in terms of their number and amount. Housing units, credited by the Housing Development Administration, cover 14-15% of total housing works (1984-2001). One of the new approaches to solve this problem is to divert the public resources to the production of land with infrastructure. Urban infrastructure is very important in Turkey where the pace of urbanization is a significant figure. The high rate of unplanned areas is disturbing the physical and environmental quality of our cities. In this respect, it is very important to develop urban infrastructure in these areas. Moreover, land has the largest share in the total cost of housing. So, there is a need to: review legislation and institutions regulating land development; and to remove the bottlenecks in the supply of land for low-income households.

The ever-increasing population living in cities and the urban-rural disparity has become the top priority issues in Turkey. Among others, increasing housing demand and traffic problems, result from this phenomenon. There has been an extreme increase in unlicensed (illegal) housing, often without even the most basic amenities, due partially to the insufficient supply of serviced land for housing within or around the city. Insufficient land supply and the lack of viable investment alternatives in the Turkish economy have given rise to speculative investments in the real estate markets, making it even more difficult for the low-income households to attain homes. Financing of housing, primarily by individual savings, is another aspect of the problem. On the other hand, local authorities are under pressure to meet the increased service requirements, ranging from the disposal of immense amounts of solid waste to the provisions of parks and recreational areas. Due to their financial dependency on the central government and legislation limiting their capacity in decision-making, the local authorities in Turkey are unable to provide these services at the required level.

Capacity-Building, Education, Training and Awareness-Raising: As being the focal point of Habitat follow-up activities at national and international level, the Housing Development Administration has initiated the government and the civil society at the central and local levels to identify, promote, improve and implement policies in line with: broad-based consultations and participation; increased institutional, technical and human resources capacities; and, improved access to and application of information on urban trends and conditions.

Information: In the framework of Habitat follow-up programme of Housing Development Administration, mechanisms will be created to elaborate on priority issues that are identified by Habitat Fora: by funding research to be undertaken by qualified experts; by organizing workshops and other interested Habitat Partners to identify policy guidelines for which consensus can be reached by the participants; and publishing research results, the outcomes of workshops, and working group meetings. The Web page of *The Housing Development Administration* is www.toki.gov.tr and of *The General Directorate of Land Office* www.arsaofisi.gov.tr.

Research and Technologies: Among the objectives of the Habitat follow-up programme activities that is started by HDA (Housing Development Administration) are: Launch and support researches, competitions and projects improving policy development on priority human settlements issues; and facilitate a coordinated approach to the identification of the indicators, data sources and research needed to assess and monitor key housing and human settlements development issues with the participation of all habitat partners.

Financing: The financial bottleneck existing for poor people wanting to attain homes in cities can be emphasized by giving some figures obtained from practical experiences of housing cooperatives producing licensed housing. As of today, each fourth completed housing unit in Turkey is realized by cooperatives. Since the great initial public push created in 1984, housing cooperative's financial crediting power has diminished from a fixed percentage rate of 83% to below 30% in 1995. While the inflation level has prompted the prices of construction materials to grow 154 times within the same time period of 11 years, the housing co-operative's credit allowances have grown only 55 times. So the number of poor people in housing cooperatives has steadily been falling during the last decade, a fact contributing to the increase in slum construction. On the other hand, with the new structural reform, inflation and the interest rates have started to decrease and a suitable economic environment for the realization of an efficient housing finance system is expected to be formed in the very early future.

Since the creation of the Housing Development Fund in 1984, the single most important source of funds for residential mortgage finance in Turkey has been the Housing Development Administration (HDA). HDA funded mortgage loans through commercial bank originators since 1984, however the HDA loans are heavily subsidized and they represent loan-to-value ratios of only 20%. Due to persistent high inflation rates, together with the increase in demand caused the fund become insufficient for meeting the existing demand in the system.

HDA, due to its mission statement, has a leading and supervisory role in the formation of an institutional housing finance system. HDA is working on some tasks about developing policies that will contribute to the development of housing market in the country. In this context, in order to improve efficient mortgage finance system, some legislative works related with mortgage has been provided by the Administration. Additionally, the Contractual Housing Finance System has been designed by HDA, converting short-term savings into long-term loans, which is affordable by the majority of people. The system is planned to take the risk factor in to consideration in utilizing necessary financing tools against inflation.

Cooperation: The Housing Administration has been carrying on its activities in collaboration with its national and international partners especially UNCHS.

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CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

Decision-Making: Responsibilities with regard to integrated decision-making in sustainable development or/and development issues in general could be attributed to: the State Planning Organization; the Ministry of Foreign Affairs; the Ministry Interior; the Ministry of Environment; National Environment Council; Higher Commission of Environment; and Supreme Board of Planning,

Environmental Impact Assessment became a legally required procedure on February 7 1993, and is currently under revision in terms referring an integrated way of thinking.

Turkey has a National Environmental Action Plan (NEAP) for the years 1996-2000. It is a binding document for the public sector and serves as a guidance document for the private sector. In addition, certain sectors such as: tourism; industry; energy; transport; and agriculture are working towards the integration of environmental considerations. In 1995, Turkey launched a preparatory process for the development of a National Agenda 21 under the United Nations Development Programme (UNDP) technical cooperation programme entitled the “National Programme for Environmental Institution and Management in Turkey”. The report, which identifies actions to ensure the integration of social, environmental, and economic concerns and policies at national level, has been prepared. The NEAP; National Programme for EU Integration; and the Eight Five-Year Development Plan (2001-2005) are used as important references in the achievement an integrated decision-making.

A National Committee involving representatives from: all relevant government agencies; NGOs; local authorities; academic institutions; private sector; and the media has also been set up to draft the action plan. Regional workshops have been organized to review drafts.

Programmes and Projects: No information available.

Status: The main objectives of the Eight Five-Year Development Plan (2001-2005) have been implemented, including: accelerating industrial growth; bringing down the chronic inflation rate; increasing the role of the private sector; and giving priority to investments in resource allocation, all within a structure open to international competition. The functions of the State to set and supervise rules with regard to the realization of economic activities through market mechanisms in order to raise welfare were the other objectives during the period. However, the country was not ready to withdraw the State from economic activities, such as production and distribution.

Capacity-building, Education, Training and Awareness-raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information is available.

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CHAPTER 9: PROTECTION OF THE ATMOSPHERE

Decision-Making: The Ministry of Environment is primarily responsible for decision-making related to protection of the atmosphere. The Ministry of Health is responsible for transboundary atmospheric pollution control. Besides, several governmental institutions including: the State Planning Organization; the Ministry of Forestry; the Ministry of Agriculture and Rural Affairs; the State Institute of Statistics; and especially the State Meteorological Service have been participating actively in the activities about climate change and the atmosphere.

The Air Quality Control Regulation, which came into force in 1986, has not been revised in the light of Agenda 21 yet. Regulations related to industrial accidents are being planned. The Environment Law, which came into force in 1983, endorses the “polluter pays” principle and handles environmental issues in a very broad scope. Turkey stresses the importance of environmental impact assessment (EIA) in order to have a less polluting and safer transport system. Safety aspects; cost-effectiveness of alternative systems; and the development of sustainable transport technologies have been addressed in part. In big cities, steps have been taken to establish mass transport systems.

Turkish National Environmental Strategy and Action Plan (NEAP), which was finalized in 1998 and supported by the World Bank, responses to the need for an integrating strategy and supplements the existing development plan with concrete actions for integrating environment and development. In this context, major efforts envisaged can be summarized as follows: increase the use of natural gas in power generation and for heating purposes in the residential sectors; support R&D programmes on renewables and enhancement of geothermal projects; improvements in insulation and heating systems; and increase of alternative fuels in the transport sector.

A Specialized Commission on Climate Change was established under the studies of the Eighth Five Year Development Plan for the period 2001-2005, in 1999. As a result of this positive development, the climate change concern has taken place in the development plans of Turkey for the first time.

The private sector and NGOs have contributed to activities to prevent stratospheric ozone depletion. Moreover, air pollution control issues have been contributed by some of the private sector (for example: cement industry and automobile industry).

Programmes and Projects: In order to protect the atmosphere, the Government of Turkey promotes policies and programmes in the areas of: energy efficiency (UN, EE 2000); environmentally sound and efficient transportation (European Community, EURO 93); industrial pollution control; sound management of marine resources; and management of toxic and other hazardous waste. Turkish universities have carried out studies on air pollution. The most important of these studies are: Monitoring of Heavy Metal Pollution of Traffic Origin in Eskisehir; Atmospheric Lead Pollution in Ankara; and Chemical Composition of Atmospheric Aerosols in Rural Sites of North-West Anatolia.

The project on emission inventory of Turkey (Particularly NO_x, SO_x, SPM, etc.) and the project on the estimation of emission factors of some industries have been prepared by the Ministry of Environment in cooperation with the State Institute of Statistics and TÜBİTAK Marmara Research Centre.

Status: In 1993, a Transboundary Air Pollution Station was established in Cubuk near Ankara. The Government promotes exchange of information in this respect both at the National and international levels. In 1994, ozone observations were begun in Ankara at the Turkish State Meteorological Services. The data are sent to contribute data archive of the World Ozone and Ultraviolet Radiation Data Center for the World Meteorological Organization (WMO). In 1999, a station located in Camkoru, near Ankara was established to measure some parameters including: acidity; chlorine; NO₃; SO₄; and trace minerals from precipitation samples. For the reduction of air pollution from transport, Turkey intends to follow the developments in the European Union. In 1995, production of cars equipped with catalytic converters was initiated with a protocol between the Ministry of Environment and car manufacturers.

Turkey does not participate in strengthening the Global Climate Observing System because the National capacity to predict the effects of emissions on climate or to develop methodologies to identify threshold levels of greenhouse

gases is insufficient. Observations on transport emissions are selective and limited. Currently, there are 73 settlements and 76 provincial centers, which monitor the levels of suspended particles and sulfur dioxide (SO₂).

Capacity-Building, Education, Training and Awareness-Raising: The Government provides training in the area of transboundary atmospheric pollution control. Any regular education or training and awareness-raising programmes on climate change have not been designed so far, except some official training courses. National capacity-building and training to perform observations and assessments is not adequate. The Government provides training in the area of transboundary atmospheric pollution control.

Information: The State Institute of Statistics (SIS) is responsible for preparing National Inventory of Greenhouse Gas Emissions. The basic IPCC methodology is used for the estimates. However, greenhouse gases inventory of Turkey couldn't have been performed for all sectors included in the IPCC Guidelines for National Greenhouse Gas Inventories due to lack of greenhouse gases data base and monitoring and reporting systems. Available information about greenhouse gas emissions of Turkey can be found on the Internet at: <http://www.dpt.gov.tr/cevre/oik548.pdf>.

Research and Technologies: To achieve sustainable energy development and efficiency, the Government considers: the development and use of safe technologies; promotion of R&D relating to appropriate methodologies; public awareness-raising; product labeling; and EIA as the most important means. Industries are encouraged to develop safe technologies to reduce harmful emissions into the atmosphere from industrial activities. The Government gives high priority to: the promotion of R&D relating to appropriate methodologies; EIA within industry as a whole; life-cycle analysis of products; and eco-auditing.

Financing: In 1995, Turkey contributed US\$ 36,912 to the Vienna/Montreal trust funds. In 1994, Turkey received US\$ 6,165,000 for the implementation of ozone-related activities. An agreement on financial assistance of US\$ 14 million through the World Bank is underway. ExCom has already approved two projects, with a financing level of about US\$ 2 Million, where the implementing agency is the United Nations Industrial Development Organization (UNIDO).

Cooperation: Turkey participates in the Cooperative Programme for the Monitoring and Evaluation of Long Range Transmission Air Pollutants in Europe (EMEP), and in the Global Ozone Observing System. Turkey signed the Montreal Protocol in 1991, and the London and Copenhagen Amendments in 1995. The latest report to the Montreal Protocol Secretariat was prepared in 1996. Turkey plans to phase-out completely chlorofluorocarbons (CFCs) and other ozone depleting substances (Annex A and Annex B substances) by the year 2006. Turkey has not been a party to the United Nations Framework Convention on Climate Change (UNFCCC) because of heavy commitments arising from Convention being included in Annexes I and II. Therefore, Turkey has put forward some proposals regarding the amendments to the Annexes since 1992. The last proposal to be deleted from Annex II while keeping her position in Annex I with an accompanying foot note indicating that Turkey should enjoy favorable conditions within "common but differentiated responsibilities", in view of its early stages of industrialization was accepted in the Seventh Conference of the Parties to the UNFCCC (COP-7). Following this positive progress Turkey is going to finalize the ratification process, which she has already started. Turkey does not have an active national focal point for the IPCC assessment process due to the fact that she was not able to participate the IPCC process in the past, she has partly contributed to the IPCC Third Assessment Report through the individual contributions of some scientists. A few scientists and government experts have been participating as the expert reviewer and/or government reviewer to the Report of Scientific Assessment of Climate Change of the IPCC Working Group I.

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CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES

Decision-Making: In Turkey, the State Planning Organization (SPO); the Ministry of Public Works and Settlement; the Southeastern Regional Development Agency (SRDA); local governments and municipalities; the Ministry of Environment; the Ministry of Agriculture; and the General Directorate of State Hydraulic Works are primarily responsible for the planning and management of land resources.

The relevant legislation includes: the Cabinet Decree No. 540 for SPO (1994); the Planning Law No. 3194 (1985); the Environment Law No. 2872 (1983); the Law Villages No. 442 (1924); the Law related to the Administrations of Greater City Municipalities No. 3030 (1984); the Forest Law No. 6831; the National Parks Law No. 2873; the Law on the Establishment and Duties of the Ministry of Forestry No. 3800; the General Directorate of Forestry No. 3234; the National Mobilization Law for Afforestation and Erosion Control No. 4122; and the Hunting Law No. 3167.

In order to develop an integrated approach to the planning and management of land resources, the Government of Turkey has developed policies and policy instruments. Planning and management systems have been improved and public participation has been promoted. Pilot projects to test research findings have been launched and information systems have been strengthened to advance the scientific understanding of integrated land resource planning and management. The Government promotes education and training, and the strengthening of technological and institutional capacity in this field. Turkey also promotes the integration of planning and management of land resources through regional and international cooperation.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 11: COMBATING DEFORESTATION

Decision-making: Turkish forestry has a long history and tradition. Exclusive authority and responsibility for the management of forests are given by law to the State Forestry Organization. The State Forestry Organization has presently been organized under the Ministry of Forestry (MOF). For this reason, in 1991 re-established Ministry is primarily responsible for the forestry sector in Turkey. The State Forestry Organization is a large structure, with different departments specialized in different fields of forestry and wide field units distribution all over the country. The structure of MOF is composed of the Ministry headquarters and four general directorates. These are: General Directorate of Forestry (OGM); General Directorate of Reforestation and Erosion Control (AGM); General Directorate of Forest Village Relations (ORKOY); and General Directorate of National Parks, Game-Wildlife (MPG). OGM is an independent unit and the other three general directorates are main service units. At the regional level, the MOF has two separate regional organizations, one for OGM and another for the other three general directorates' activities. OGM's field activities are implemented by 27 regional forestry directorates, 241 forestry district directorates and forest chief units, while the field activities of OGM, MPG and ORKOY are implemented by nine ministerial regional directorates with chief engineers, engineer unit, national parks and nursery directorates under them. Outside these two regional structures, forest research directorates and forest soil laboratories in the field were established under the Ministry headquarters.

Institutional framework of the forestry sector includes, besides the State Forestry Organization, several other institutions too, including: forest village community's institutions; forestry education institutions (universities); NGOs; and forest industry institutions. The State Planning Organization (SPO) under the Prime Ministry is responsible for developing views and recommendations within the general government policy and establishing coordination among the government agencies in order to carry out planning natural, personnel, and financial resources of country. Effective mechanisms are also: the Higher Board of Environment; the Environmental Impact Assessment Process; the National Forestry Assembly; and the National Environment Action Plan (including forest resources).

Legal framework in connection with forests includes the Constitution, forestry laws (the Forest Law No.6831; the national Parks Law for Supporting Development of Forest Villagers No.2924; the Law on Development of Forest Villagers; the Law for the Establishment and Duties of the Ministry of Forestry No.3800 and the General Directorate of Forestry No.3234; the National Mobilization Law for Afforestation and Erosion Control No.4122; the Hunting Law No.3167; and the Land Cadastra Law; the Specially Protected Areas Law; and the Law for protection of Cultural and Natural assets). In addition to afforestation, erosion control and range improvement measures, the National Mobilization and Erosion Control Act were put into force in 1995. The main objective of the Act is: to ensure participation and contribution of all related governmental and non-governmental organizations, the private sector, and local people; and to provide additional financial resources for combating deforestation and erosion control activities at national level. Besides, various regulations have been put into force concerning the implementation of these laws. International conventions signed by Turkey have the law status and becomes part of the current legislation.

In 1995, a Ministerial Decree was issued for the conservation of Cedar (*Cedrus libani*) forests excluding isolated populations or individuals from other countries. Consequently, all logging practices are forbidden in cedar and juniper forests. On the other hand, a number of Ministerial decrees, directives and circulars regarding silvicultural practices and afforestation activities that favor sustainable forest management and conservation of biodiversity have been issued after 1993. The National Afforestation Law was put into force in 1995. It secures sustainable flow of sufficient amount of financial resources into the Afforestation Fund. It also establishes responsibilities for the involvement of relevant government agencies and provides incentives for private growers in reforestation and afforestation.

Planning activities at macro level of State Forestry Organization include the Special Forestry Reports and Forestry Master Plans. Special Forestry Reports are prepared every five-year to guide determination of forest policies and

strategies in the coming Five Year National Development Plan. They provide the most recent information and data on different forestry issues as well as the assessment of the problems and shortcomings, and medium term development recommendations for the forest policies, strategies and programs.

Forest resources are managed according to the forest management plans since 1956. The first series of management plans were prepared during 1963-1972 period. Revision and renewal of forest management plans every ten-year was started in 1973 and is continuing presently. Even though the present forest management plans provide the necessary tools and guides for decision making in the management of forest resources, their main emphasis and objectives are: focusing on the detailed inventory of the tree and woody vegetation; wood production on a sustainable basis; sufficient regeneration; and building up growing stock. To incorporate other essential aspects in relation to sustainable and multipurpose management and utilization of forest resources, such as: protection of biodiversity; contributions to socio-economic development; and providing protective and environmental functions, a new Forest Management Plan Regulation has been prepared and is now being discussed.

Forest Management Plans prepared by MOF are considered as the basic and the most important planning tool in Turkish forestry. Presently a national consensus seems to have established on the priority need for development and implementation of the Functional (Multiple-Use) Forest Planning. Recently prepared national plans and regional development projects related to natural resources provide specific policies, strategies and recommendations for the conservation, development and utilization of the national and regional nature resources, including forests.

In addition, Turkey pays specific attention to the implementation of the IPF/IFF (Intergovernmental Panel on Forests/ Intergovernmental Forum on Forests) proposals for action. Project of National Forest Programme is now being prepared by MOF in collaboration with FAO taking into consideration IPF/IFF proposals for action. The aim of the project is to renew and update Forestry Master Plan (covering 1990-2009 period), which is among the priorities of MOF. National Forestry Programme and Special Forestry Reports should provide significant contributions in the preparation of the new Forestry Master Plan.

Forest policies implemented basically aim at: (i) conservation of forestlands and resources; (ii) management of great part of forest areas for wood production purposes; (iii) rehabilitation and utilization of vast degraded forestlands by establishment and management of forest plantations; and (iv) establishment and management of national parks and protected areas.

Some initiatives are being taken during recent periods for improving the forestry policies. There are; (i) development and implementation of multipurpose (functional) planning; (ii) management of forest resources by paying increased attention to environmental and socio-economic values and services of the forests; and (iii) promoting involvement and contributions of local people and other stakeholders.

The harmonization process of the Turkish forestry legislation with EU forestry legislation started with the application of Turkey to EU for membership in 1987. It continued in the frame of Turkey's entrance to the Customs Union and improved with the acceptance of Turkey as a candidate for EU membership. During this period the EU forestry legislation has been identified, translated to Turkish, assessed, and compared with Turkish forestry legislation. Taking into account the adaptation guidelines and criteria provided by EU, Turkey has prepared a "National Program for Adaptation to European Union Legislation and Regulations" at the beginning of 2001. This program includes the state of the issues of Turkey and gives a detailed work program schedule including short and long term objectives, by giving special emphasis on the harmonization of Turkish legislation and regulation with EU's on the priority subjects. In this regard required actions in forestry sector include the following:

- Revision of Forest Law 6831, considering protection of environment, public benefit, ecosystem approach and wildlife protection;
- Harmonization of legislation on manufactured forest products;
- Establishment of adequate land cadastral information system, completing forests cadastral works;
- Development of rural development strategies, in harmony with EU policy, and development of institutional structures for this purpose;

- Establishment and strengthening of the statistics and information systems in units of MOF;
- Strengthening of institutional capacities of MOF in nature protection;
- Preparation of the framework Law for Nature Protection, in harmony with related EU directive, development of legislation and regulations in connection with nature conservation;
- Revision/amendment of the National parks Law no. 2873, in accordance with IUCN criteria and status;
- Harmonization with the EU Plant Health system;
- Development of adequate regulations for the conservation of the wetlands;
- Preparation of National CITES implementation regulations;
- Establishment of monitoring systems for the areas under NATURA 2000 program;
- Establishment of national Biosafety system;
- Amendment of the Fisheries Law No: 1380; and
- Establishment of Farmer's Registration system (including forest villagers).

As regards major groups, forest dwellers and local communities have priorities in certain land tenure arrangements. Although not directly tied to post-UNCED progress, new schemes have been devised to increase the recognition of their rights. The most important one is the amendment in Forest Law 6831, Article 2 that makes the selling of non-forest land (previously registered as forest) possible to the related forest dweller. In addition, there are a number of various arrangements in effect. Some of the forestland, which has no tree cover, is given to anyone on condition that one has to plant with trees according to a plan. Giving the protection services to village legal persons, operational activities of coppices by village legal persons are other rights given by the forest authorities. On the other hand, all major groups are encouraged to participate in forestry planning at different levels. The number of private forest owners is insignificant. No compensation is provided for forest owners. They are legally taken responsible for managing their forests sustainably, yet some instruments exist in favor of them.

With the method called *Protection via Legal Entities of Villages*, applied in the protection of game and wildlife areas, it is aimed that the villages will look after such areas and a favor/trouble balance will be provided by extending payments to them in response to such services. Besides, number of the NGO's, involved directly or indirectly in the forestry issues (e.g.: environmental protection; conservation; rehabilitation and management of natural resources, including forests; and poverty alleviation and rural development), have shown a rapid increase during recent years. These NGOs have been playing important roles particularly in public education and awareness-raising on the forestry issues and natural resources conservation in Turkey. Some of them have also been effective in accessing political level decision makers and mass media. At the field level, there are a great number of small local NGO's that may provide important contributions in future.

Private sector institutions in the forestry sector include: forest products industry; private companies involved in forest and tree plantation activities; and preparation of management plans for forest resources. Great majority of forest products industry belong to private sector in Turkey and they have established their own unions for these purposes (e.g., Unions of Timber and Panel Industry). Most of the state wood industry plants have been privatized during recent decades, and the privatization process of the remaining ones (e.g., State Pulp and Paper Mills) is continuing.

Programmes and Projects: The 8th Five-Year Development Plan (1995-1999) prepared by the State Planning Organization provides policies, principles and strategies for the forestry sector emphasizing the basic principles of Sustainable Forestry Management (SFM). For SFM, there are still some steps to be taken in legal terms such as changes in the Forest law No. 6831.

Measures taken to combat deforestation include: tree-breeding activities; establishment of germ-plasma banks; and in-situ and ex-situ conservation programmes. A National Biodiversity Strategy and Action Plan have been prepared. The plan identifies priority issues and actions. Forest ecosystems as well as steppe and wetland ecosystems are included in the plan. For the in situ conservation of plant genetic diversity, a National Plan was also prepared in 1997. With the implementation of the plan, it is expected that forest genetic resources, which are seriously threatened by various factors, will be efficiently conserved and managed in situ. Turkey pays specific

attention to the implementation of the IPF proposals for action. A project regarding the implementation with regard to the national forest programmes is now being prepared. Turkey has got a forestry sector master plan. A project in cooperation with FAO has already been prepared. The aim of the project is to update NFP in accordance with the guidelines established by IPF and FAO.

Production of Wild Animals and Leaving them in Nature: A program has been initiated to release animals to nature, which have the possibility to become extinct, or which are under risk. In the long term, it is aimed to provide support to rural development by extending assistance to game-wild life in encouraging game associations and legal entities of villages. Wild goats; roes; deer; and bald ibises are produced in Wildlife Production Stations, and they are released to nature. Moreover, 23.000 pheasants and partridges produced in Wildlife Production Stations and purchased from private producers were released to nature in 2001 with the cooperation of game associations and legal entities of villages.

Etude Inventory: An etude work has been carried out countrywide, based on availability - unavailability criteria, for the accurate management of game and wildlife. Inventory studies were carried out in 34 Wildlife Protection Areas of 74,273 ha in 2001. These studies have been carried out based on local information in provinces and basins.

Voluntary Game Inspectors: The application of voluntary game inspection has been provided in order to receive support and contributions of hunters and those protecting nature in nature protection activities. Voluntary game inspectors generally perform their duties with the protection teams of the Head Engineer Office staff, but, when necessary, they can also issue official reports, and extend to the Head Engineer Office to undertake required legal proceedings. Moreover, periodical reports including local developments in the game and wildlife are issued.

Protection and Control: Protection and control teams have been established in the structure of 33 Head Engineer Offices, and protection and control activities are underway in the direction of the decisions issued by the Central Game Commission. On the other hand, during recent years, increased efforts have been spent for the preparation and renewal of the management plans for national parks and protected areas. Recently started GEF assisted project on “Biodiversity and Natural Resource Management” is also expected to provide significant contribution in this regard.

Status: According to the current forest inventories and forest management plans (1973-1999), Turkey's forest areas is 20.7 million hectares, which corresponds about 26 percent of Turkey's land area. But only half of the existing forests are classified as normal (productive) forest and the other half as degraded or severely degraded forest at present. The Ministry of Forestry has a legal mandate to manage virtually all of it. Unique and threatened forest ecosystems and the forests located within high slope areas are not subject to forest production. These kinds of areas are classified as protected forests or protected areas. Regeneration by using clear cutting methods in large forest areas has not been implemented since 1992. The natural coniferous, mixed, and deciduous forests of Turkey are extensive and floristically varied. They also vary greatly in condition, ranging from pristine to highly modified or degraded through millennia of human use and occupation. Besides their value for timber or non-wood products, they are biologically important ecosystems, with additional values in watershed protection, wildlife habitat, and natural scenery. Forest ecosystems include high mountains and alluvial forests. Deciduous forests are prevalent and relatively uninterrupted at moderate elevations along northern Turkey. Coniferous forests, depending on the species and locations, are found at varying altitudes from sea level to the timberline. Forest formations of the country include species belonging to different floristic regions, namely Irano-Turanian, Mediterranean and Euro-Siberian. There are approximately 800 woody taxa in Turkey's forests.

According to the Forest Special Report 2001-2005, of 8.2 million hectares of productive high forest, 6.5 million is coniferous. The coniferous high forest has an annual allowable cut (sustainable) of some 9 million cubic meters (45 % annual increment). The predominant species are: *Pinus brutia*; *Pinus nigra*; *Pinus silvestris*; *Abies* spp. (*A. Cilicica*, *A. nordmannia*, *A. Equi-trojani* are unique); *Picea orientalis*; *Cedrus libani*; *Juniperus* spp.; *Pinus pinea*; *Cupressus sempervirens*; and *Pinus halepensis*. Broad-leaved high forests cover an area of 1.7 million hectares and have an allowable cut of nearly 3.2 million cubic meters (48 % of annual increment). The most common

commercial species are: *Fagus orientali*; *Quercus* spp.; *Alnus* spp.; *Castanea sativa*; *Carpinus betulus*; *Ulmus*; *Platanus*; *Styrax*; *Ostrya*; *Sorbus*; and etc. Annual allowable cut in high forest is not reached in recorded felling. Of 10.7 million hectares of other wooded land, which has less than 10% crown, 6.1 million is degraded high forest and 4.6 million is degraded coppice forests. Their total annual increment is 2.3 million cubic meters. Productive coppice forest has an area of 1.8 million hectares and annual cut of about 6 million cubic meters. The most common genus is by far *Quercus* with significant area of *Fagus orientalis* and mixed species.

In 2000, the annual industrial and firewood production in Turkey was 10 million cubic meters and 8 million cubic meters respectively. In terms of export earning, non-wood forest products are more valuable than primary products. They are: resin; styrax; incense; bay leaves; red boxwood; gallnuts; carob; oregano; caper; liquorice; and etc. A great majority of forests in Turkey is natural or semi-natural. In the natural regeneration activities, the areas that are ecologically fragile are protected. Protection zones in particular within mountain forests are set aside against erosion and avalanches. Natural regeneration is the most preferred method of regeneration. The conservation of species diversity is assisted by the silvicultural practices. At sites where natural regeneration is not possible, the seed obtained from the nearest seed stand is used in order to transfer genetic diversity to these sites. Most of the seed used in afforestation and artificial regeneration activities is collected from natural seed stands. Clear cutting in large forest areas has been abandoned. In all silviculture practices, secondary or rare plant species found in association with the main forest tree species are protected. No logging activity is allowed in cedar forests, which have been degraded for centuries due to logging. Similarly, in Juniper forests, a genus represented by 7 species in Turkey, logging is not allowed. To guarantee successful regeneration, the natural regeneration periods for the main forest tree species except Turkish red pine (*Pinus brutia*) have been extended. Some outstanding trees in sites subject to clear cutting degraded forestlands, rehabilitation of such areas using appropriate silviculture techniques is now being practiced in some forest regions. It is likely to extend the techniques into the remaining degraded regions in time based on the experience gained.

<u>Protection Areas</u>	<u>Units</u>	<u>General Area</u>	<u>Forestry Areas</u>
National Park	33	686.631 ha	356.000 ha
Nature Park	16	69.137 ha	39.000 ha
Protection Area for the Nature	35	83.023 ha	24.000 ha

There are 53 protection forests with a total of 738.785 hectares. These forests serve mainly water and soil production cycle and are left out of logging. Moreover 3.042.589 hectares of forested land due to rugged topography including both productive and non-productive forests are managed under a special regime where all production activities are suspended till the updating of management plans. 180 gene conservation forests (GCF) have been set-aside in an area of total 25.274 ha. for 19 native forest tree species. There are 336 Seed stands (45.619 ha.) for 27 forest tree species established to produce high quality seed for regeneration programs and to conserve genetic diversity; and 163 seed orchards (total area 1136 ha.). Under the project "In-situ Conservation of Plant Genetic Diversity in Turkey", Gene Management Zones are now being established for selected native forest tree species to conserve genetic diversity in the long term. All these protected areas are managed by the Ministry of Forestry and incorporated into forest management plans.

Afforestation work is based on field-oriented projects. In this context, soil characteristics; the species to be planted; and other site characteristics are surveyed. Introduced species are used only when their potential negative impacts have been assessed over sufficient time through testing. In order to encourage reforestation and afforestation activities of private growers, free allocation of degraded forestlands for reforestation purposes, technical assistance, free seedling, grants (for village communities) and low interest credits have been introduced a long time ago. In addition to the contribution to afforestation, erosion control and range improvement activities, private sector plantation and nursery establishment achievements have been supported by MOF as technical assistance now. Some

fruits bearing tree species like: walnut; chestnut; almond; and pine nut tree are planted where appropriate in the afforestation activities to provide non-wood forest products to local communities.

There are 7.2 million forest dependent villagers living in or close to the natural forests. For the development and support of various small-scale income generation activities such as: bee keeping; animal; husbandry; carpet weaving; and cooking devices are provided to forest villagers at highly subsidized prices.

The share of the forestry sector in the gross national product (GNP) is shown at official statistics as 0,9 %. It is estimated that undeclared firewood consumption and private sector wood production, if included in these calculations, would increase to 1.8%. Including value-adding secondary forest products (grasses; leaves; mushrooms; pine nuts; thyme; licorice; sage; nut gall; sumac; acorns, etc.) and the sector of recreational services could increase absolute product values. This calculation does not include some significant contributions of forests resources such as: amenity; recreation; and protection of soil and water resources. Various forestry activities (i.e. harvesting; transportation; afforestation; erosion control; nursery production; forest recreation sites works; and protected areas) provide employment. A great portion of the workers employed in these activities are from the forest villages where income levels are relatively low and alternative employment opportunities scarce. There is a direct relationship between forestry and poverty. This relation reflects the relation between forestry and forest villages. Forest villages are the poorest part of the community due to fact that they are only dependent on forests for living and forest areas are mainly drawn back to the higher altitudes and slopes as a result of forest degradation. Forests and people have adverse impacts on each other. These issues have been examined several times. The recent study is the Forestry sector review of Turkey carried out in cooperation with the World Bank. There is a great amount of migration to urban centers due to poverty. The population depending on forests is decreasing dramatically.

One of the most debated issues in Turkey now is related with the use of forest products in place of non-renewable products. The concept of environmental protection is not well understood certainly. Even the new trends, including the NGOs, do not properly address these issues. Public awareness has not been raised sufficiently to encourage the use of forest products instead of ones made of non-renewable materials. On the contrary, there are misconceptions and campaigns encouraging the use of non-renewable materials with the idea that less wood material means less tree felling and consequently better environment. There are discussions on promoting firewood usage of wooden materials instead of other non-renewable ones. There are 345 Seed stands (46266 ha.) for 27 forest tree species established to produce high quality seed for regeneration programs and to conserve genetic diversity; and 187 seed orchards (total area 1239 ha.). Under the project “In-situ Conservation of Plant Genetic Diversity in Turkey”, Gene Management Zones are now being started for selected native forest tree species to conserve genetic diversity in long term. In addition, Turkey is making notable progress in the area of recycling. In 1997 for instance, 2,045,000 tons of paper was consumed and 736,000 tons of recovered paper was used as raw material. Statistics show that 33% of the total use of paper was recovered paper in 1997. It has been estimated that recycled paper rate to be 45% in 1999.

Capacity Building, Education, Training and Awareness-raising: A Hunter Training Protocol was signed between the Ministry of Education and the Ministry of Forestry in order to train hunters and raise awareness for hunters in 2000. Training books and films have been prepared by the Directorate General for National Parks and Game-Wildlife within the framework of this protocol. Trainers have been determined and activities have been carried out for the training of trainers. 713 courses were organized with the cooperation of Game Associations, and 37.220 hunter candidates received Training Certificates by the end of 2001. Hunter Training Programs are being carried out with the cooperation of Game Associations also in 2002. Issues, which have been addressed only in part so far, include: the development of public education in forestry; the identification of research and information exchange linkages; using indigenous knowledge; remote sensing; environmental impact assessment (EIA); carrying out investment analysis and feasibility studies; promotion of small-scale forest based industries; assessment of forest industry efficiency; and promotion of eco-tourism. The number of trained staff working in the field of forestry is adequate at the central planning and grass root levels, but insufficient at the district level. This is mainly

due to the general shortage of trained staff in Turkey. More measures are needed to improve post-graduate education possibilities in forestry.

Information: Necessary studies on adjusting the accepted criteria and indicators for sustainable forest management to national forestry issues are being conducted. Turkey participates actively in regional initiatives on criteria and indicators such as the Pan European Process, and contributes to the Near East initiative. It is an ongoing process and requires more field-oriented work for further development and effective use. Criteria and Indicators (C&I) for SFM are useful tools for reporting, policy development, and policy monitoring. The criteria used that could be useful to assess progress towards sustainable forest management in Turkey are criterion 5 of Protective functions of forests and criterion 6 of Socio-economic function. Information on sustainable forest management is available through: publications; seminars; meetings; symposiums; tele vision and radio programmes; tree-planting campaigns; and in service training alternative income generating activities in forest villages. An Internet web page is under construction.

Financing: The National Afforestation Mobilization Law, enacted in 1995, has been the most significant legal and financial arrangement, securing financial resource flow into the Afforestation Fund and providing incentives for private growers. In order to increase the ratio of private forest ownership, the related articles of Forest Law 6831 (Article 57, 63 and 64) have been changed. The aim is to increase the percentage of private ownership to 10 % in the first ten-year period. The change in the Law allows the individuals and organisations to make afforestation in state-owned lands. In these activities, to grow bushy and herbaceous plants such as thyme, capparitis as well as common tree species is also encouraged for the enhancement of biodiversity. The forestry sector's share of the government budget has become about 1.6% in recent years. The budget for 2001 was US\$ 816 million, and for 2002, US\$ 566 million.

Cooperation: Turkey has signed and adopted the resolutions taken at Strasbourg, Helsinki and Lisbon Ministerial Conferences on the Protection of Forests in Europe, and established a National Follow-up Committee consisting of experts responsible for technical coordination of each resolution. In 1997, the XI World Forestry Congress was held in Turkey. The Forestry Master Plan for the period 1990-2009 will be revised according to results of National Forest Programs (NFP) in the light of our responsibilities arising from international programs, particularly Agenda 21 and Proposals for Action of IPF/IFF. The decision taken at the First Forestry Assembly, which was held in 1993, includes the main objectives expressed in the UNCED Conference, Strasbourg and Helsinki Resolutions. Moreover, Turkey has participated actively in the IPF/IFF process. In addition, Turkey has organized a meeting on the Category III of the IFF under Canadian-Costa Rica Initiative. On the other hand, Turkey is not a member of the International Tropical Timber Agreement (ITTA) yet. The Food and Agriculture Organization (FAO) has funded a project on the development of appropriate methods to be implemented for community forestry. IPF/IFF proposals for action deal with many issues ranging from countries with low forest cover to traditional forest related knowledge. They involve Turkey at varying degrees depending upon the specific conditions of the country. Taking into account the IPF/IFF proposals for action the national forest programme of Turkey is being developed. The process of UNFF considers some pending issues from the IFF and new issues under its working programme. The multi-year programme of work of the UNFF is adequate for international forest policy dialogue.

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CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT

Decision-making: The Ministry of Environment; Ministry of Forestry; and the General Directorate of Rural Services are responsible for combating desertification in Turkey. The Ministry of Forestry is responsible for implementing the National Mobilization Law for Afforestation, Reforestation and Erosion Control entered into force in 1995. The United Nations Convention to Combat Desertification was ratified in November 1996. The measures taken by the Government to combat desertification include: providing early warning information to decision-makers; preparation of drought preparedness and relief schemes; and intensified soil conservation. Public awareness-raising is also considered very important. Managers and technical committees constituting of the representatives of related institutions and NGOs have been established for the purpose of preparing a National Action Programme related to the implementation of the Convention. The Manager's Committee involves desertification specialists. The Technical Committee has identified the draft topics of the National Action Programme by negotiating the subject in two meetings on 18 June 1996 and 5 July 1996. Subsequently, the relevant institutions, universities, and NGOs were asked to submit their own studies under the determined topics by 15 August 1996. The Draft Programme has been prepared by using the collected information and it will be adjusted by managers and technical committees.

The implementation process of UNCCD in Turkey has covered wide range of activities since it has been ratified. Immediately after becoming a party to the Convention, "National Awareness Seminar" was held in İzmir on 20-22nd of May 1998 with participants from governmental and non-governmental organizations and scientists from universities and research institutions. The aim of this seminar was to inform all the participants about the implementation of the Convention and to raise public awareness at all levels about combating desertification. In recent years, Turkey has put intensive efforts to develop a National Action Programme with inclusion taken from the related governmental and non-governmental organizations, institutions and universities. A meeting was held in 1999 in order to draft a National Action Programme. All relevant stakeholders have attended the meeting and an outline for the National Action Program to Combat Desertification and Drought in Turkey was formulated. On the other hand, in accordance with the context of the Convention, National Coordination Body (NCB) has been established in May 2000. The NCB is composed of technical and administrative staff from various institutions that are involved directly in the fields of desertification and drought. These institutions are: the Ministry of Environment; the Ministry of Forestry; the Ministry of Agriculture and Rural Affairs; the General Directorate of Rural Services; the General Directorate of State Hydraulic Works; and the General Directorate of State Meteorological Services for the time being. Additional institutions might take part in this formation in future. The body is aimed to promote and coordinate required actions for the implementation of the UNCCD in Turkey. NCB has initially identified priority issues as preparing a regulation to implement the Convention and finalizing of the National Action Programme, NAP. Major groups participate occasionally in the planning process in this field. Public awareness is one of the key issues for combating desertification. Some Turkish NGOs are also dealing with this subject effectively and they are supported by the Government.

Programs and Projects: The World Bank and the Government of Turkey have financed the Eastern Anatolian Watershed Rehabilitation Project (US\$ 110 million for the upper catchment of the Euphrates). The Food and Agriculture Organization (FAO) and the United Nations Development Programme (UNDP) have financed a Project on Measuring Erosion and Mapping of the Mediterranean Coast (US\$ 50,000). In addition to financial support, these organizations have provided human resources. Another project financed under a UNDP umbrella project is with regard to the implementation of NAP. The project is aiming to provide institutional framework and coordination with the Government of Turkey for the integration of environmental concerns in development policies/programmes/plans in two cross-sectoral areas: sustainable energy & atmospheric protection; and combating desertification which are the two of the priority action areas identified in Turkey's National Environmental Action Plan.

Status: Turkey has 77 million ha of surface area, and of this 20 million ha are located in arid and 31 million ha are located in semi-arid climatic regions. In addition, more than 75% of the land is prone to different levels of erosion. In Turkey, some 109,124 km are deserts, and some 374,441 km are in danger of desertification. These areas are usually inhabited. The impacts of desertification on humans include, for example, illnesses of the respiratory system as well as unemployment because the agricultural land has become useless. Desertification in Turkey is mainly caused by: improper land-use; excessive grazing and fuel wood; and plant collection. Moderate impacts result from improper farming and natural causes such as wind erosion and flooding. Taking into account huge areas affected by soil erosion, more preventive measures and additional financial resources are needed. This is addressed by the 1995 National Mobilization Law for Afforestation, Reforestation and Erosion Control. The Ministry of Forestry started erosion control and anti-desertification activities in 1955. To date, the major activities which have been implemented include: reforestation of 2.5 million ha; erosion control on 284,000 ha; and range improvement for 80,000 ha. Currently, the annual programme is 50,000 ha for reforestation and 25,000 ha for erosion control. However, the number of professional staff responsible for desertification issues is not adequate at all levels of decision-making.

Capacity-Building, Education, Training and Awareness-Raising: The project *Scientific Training for Diminishing Coastal Erosion in Turkey* is carried out under the coordination of TÜBİTAK and aims to increase the number of environmentalist students who live in the coastal zones that are subject to accelerated coastal erosion. Students are trained in and made aware of negative human impacts on coastal erosion as well as about the national and international conventions related to protection of coastal ecosystems. During implementation of the project in the year 2000, lectures supported by visual material have been given to the students of: three primary schools in Kazanlı (Province of Yıcel); six secondary schools in Antakya; three in Samandağ (Province of Hatay); and seven in Anamur (Province of Yıcel). The same training has been provided to a group of adults in Kazanlı by the collaboration of the Municipality. About 2800 student/citizens have been trained through the project in the year 2000. In the year 2001, the same activities have been repeated in the same cities and coastal towns. Local problems have been emphasized during lectures in: three primary schools in Kazanlı (Province of Yıcel); seven secondary schools in Antakya; three in Samandağ (Province of Hatay); five secondary schools; and one vocational school in Anamur (Province of Yıcel). Fruitful cooperation has been achieved among: Governors; District Governors; Mayors; Directors of National Education; and Local Non Governmental Organizations to help bring solutions to the problem of coastal erosion. Likewise, in 2000, a conference with the same title was held for adults in Kazanlı, initiated by the Municipality. About 3000 student/public have been educated through this project in the year 2001. It's expected that anthropogenic negative impact on coasts and related coastal erosion will be diminished in the long run through continuous application of the training programs.

Information: The Web site of the Ministry of Forestry is www.orman.gov.tr; of the Ministry of Environment www.cevre.gov.tr; and of General Directorate of Rural Affairs www.khgm.gov.tr.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: Turkey signed The International Convention to Combat Desertification in Countries Experiencing Drought and/or Desertification Particularly in Africa in 1994 and ratified in 1996.

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CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT

Decision-Making: The coordinating bodies in Turkey are: The Ministry of Forestry; the Ministry of Environment; the Ministry of Tourism; the Ministry of Culture; and the Ministry of Foreign Affairs. In general, the regarded laws and by-laws for the establishment of the coordinating bodies provide the initial base for the activities related with the mountains. In order to provide sustainable management of mountain forests, the Ministry of Forestry has started to implement some pilot projects with the support of international organizations and in collaboration with other related organizations, which are working in the same areas. In the medium term, the Ministry of Forestry will arrange its regulations related to forest management plans in such a way that: agricultural lands; forests; settlement areas; water resources; tourist activities; and endemic and endangered species of flora and fauna are taken into account.

After the completion of the Strategy and Action Plan, Turkey will develop projects and plans of Mountain Ecosystems. At the same time, some projects in Turkey already contain elements of the mountain ecosystems concept to some extent. One such pilot is the Integrated Watershed Management Project, implemented in the upper Euphrates Basins (eastern part of the country) for erosion control. The Project also supports farmers in the catchment basin in order to improve their living standards. The National Biodiversity Strategy and Action Plan have not yet been completed. They will contain three main topic areas: Steppe; Forestry; and Wetlands Ecosystems. Mountain Ecosystems have been included under Forestry Ecosystems. For instance, the pilot project of in-situ conservation of plant genetic resources recognized two mountain areas (Mountain Kaz and Mountain Bolkar) as a gene management zone. On the other hand, Turkey signed the Strasbourg Resolution 4 of the Ministerial Conference on the Protection of European Forests on Adapting the Management of Mountain Forests to New Environmental Conditions in 1990.

Programmes and Projects: No information available.

Status: The greatest part of forestland lies within mountain ecosystems in Turkey. Nearly all forestry activities are subject to the management of mountain development. The main problems of mountain areas are: unplanned settlements; some illegal curing; over-grazing; forest fires; and in some regions, damage caused by insects. Unique, typically representative, and/or threatened forest ecosystems within mountainous areas have been established under different protected area categories. Such protected ecosystems are taken into account in forest management plans and no silvicultural intervention is allowed.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: The year 2002 was proclaimed as International Year of Mountains (IYM) by the UN in 1998 to increase awareness of global importance of mountain ecosystems. The Food and Agriculture Organization (FAO) has been given the role of lead agency in collaboration with national and regional agencies, NGOs and other UN organizations. The Ministry of Forestry has been assigned as the National Focal Point to co-ordinate the IYM related activities at national level. The National Committee of Turkey for IYM has been set up as a collaborative structure with national and international representatives. The Ministry of Forestry as a member of the committee has also been given the task of serving as the secretariat. The other nine members are: the four Ministries (Environment, Tourism, Culture and Foreign Affairs); the Higher Education Board; the Mountaineering Federation; and the FAO Representation in Turkey.

Presently, more than 50 institutions, including NGOs have proposed a great number of activities related to the observation of IYM. After several meetings, the National Committee has put in order all the activities, which have been clustered into five main topics:

- Ecological, biological issues, protection of natural resources;
- Tourism, sports, cultural potentials; opportunities and possible risks in mountain ecosystems;
- Social and economic aspects, development of mountain communities; and
- Multidisciplinary, long term and comprehensive mountain related activities based on an integrated and comparative approach. (National Action Plan for Mountain Areas, Mountain Management Plans etc.).

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CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

Decision-Making: Coordinating or other relevant bodies are: the Ministry of Agriculture and Rural Services; the General Directorate of State Hydraulic Works (DSY); and the General Directorate of Rural Services. The Ministry of Agriculture and the General Directorate of Rural Services are mainly responsible for agriculture and rural development in Turkey. The agriculture sector is working towards the integration of environmental considerations. Legislation and Regulation concerning agriculture, and the bodies involved are as follows:

- General Directorate of Rural Services provides the appropriate use of agricultural areas in accordance with their objective according to the Law No: 3202.
- General Directorate of Rural Services changes soils with stone, acid, alkali or turbid or dried lands into areas suitable for agriculture.
- General Directorate of Rural Services undertakes leveling works for: the use of water available in the agricultural areas under all circumstance and the water taken from irrigation facilities founded by the state in agriculture; extends agricultural irrigation services such as main field channels, in-field irrigation and drainage facilities; and other required services. It also gathers divided, scattered, shapeless agricultural fields, which restrains economic production in accordance with the technical, economic and administration opportunities available.
- General Directorate of Rural Services establishes and administrates facilities for water that has irrigation water needs up to 500 liter/second. It supplies improves develops and administrates established facilities with the same objective (This provision is not valid for the construction of dams and regulators in order to produce electricity. The approval of General Directorate of State Hydraulic Works (DSY) is required for the facilities to be established on waters, which have the industrial consumption above 500 liter/second).
- General Directorate of Rural Services: establishes unions, partnerships and enterprises with revolving fund or legal entity; has its enterprises with revolving fund establish partnerships with units dealing with such issues, companies or enterprises; and performs all kinds of agreements.

Pasture Law No 4342 law provides: the prevention of the use of land out of its purposes; determination of areas and frontiers of lands; maintenance and improvement of lands; direction of public and private sector lands with this aim; and the elimination of legal gaps concerning the protection of the land. Pastures compose 26% of the total lands in Turkey. Pastures are protected and sustainable development for pastures is maintained by this law under legal protection. A Draft Bill on “Producer Unions”, which is currently under evaluation by the Ministry of Agriculture and Rural Affairs, will be prepared as soon as possible.

Integrated work currently undertaken for 16 products have to be executed for more products in a more extensive manner. More importance has to be attached to biological struggle. Integrated Pest Management (IPS) Instructions have to be prepared and applied in a short period of time. These instructions have to be: preferred to the classical instructions used for combating with plant diseases and weeds; applied in a more extensive manner; and developed. The use of chemicals in the natural wetlands and preserved areas has to be limited; the application methods determined; and Biological Combating factors and alternatives with the minimum toxicity or without any harm for the environment used. Application of pesticide from the air by airplanes and helicopters has to be prohibited in order to protect the natural balance, fauna, flora and the human health. Chemical applications related to land equipment have to be carried out under control.

Organic agricultural works are agricultural activities, where no chemical pesticides or fertilizers are used, within the framework of the “Regulation on the Production of Vegetable and Animal Products with Ecological Methods”. The regulation came into force by being published in the Official Journal dated 24 December 1994, No: 22145. The importance of such works has to be emphasized as they make major contributions for preventing chemical pollution of the soil. Within the scope of its services, General Directorate of Rural Services has initiated the necessary work

in order to determine potential puddle areas countrywide in order to irrigate potential fields in Turkey. Strategies are to be developed in order to undertake irrigated agriculture, which is technologically supported.

Programmes and Projects: The projects are undertaken by the Ministry of Agriculture and Rural Affairs, namely the project “We will Make Turkey Green” for a country to live and for sustainable agricultural production; the project “I want to earn my life in the place I was born”; the project “Alternative Crop”; and “Integration of Agriculture and Industry” for a sustainable rural development. There is another project in order to undertake drop and rain systems, based on the principle of common participation with the World Bank, together with Irrigation Unions. Undertaking the administration and maintenance works by Irrigation Unions is another component of the project. The goal of the project is that the level of irrigated agriculture will be increased to 1,650,000 ha. It is planned to implement the pilot project, which is under the preparation stage, countrywide in order to prepare agricultural land use maps.

Status: Vegetable Production: The total area of fallow land in Turkey, which was 6,61 million ha before the implementation of the Research and Publication Project on Narrowing of Fallow Lands, initiated in 1983, decreased to 5,04 million ha in 1999 due to the project.

Fisheries and Aquaculture: In 2000, the production of fisheries and aquaculture amounted to 582.376 tons: 460.528 tons of which was received from marine fishery; 42.824 tons from freshwater fishery; and 70.031 tons from aquaculture. Aquaculture production has a share of 14,3 % in the total production of fisheries and aquaculture. Provided that the necessary sectoral infrastructure is completed in the Southeast Anatolian Region, which composes 17 % of the total inland waters of Turkey, it is estimated that the total production of freshwater fishery will increase 10.000 tons.

Irrigation and Land Protection: The problems brought about by: the unsustainable agricultural applications; leaving animals out to pasture in an excessive manner; treating with fertilizers in an excessive manner; overusing agricultural pesticides and insecticide chemicals intensely; and stubble and burning the leftover of plants present in the fields, are of primary concern. For the problems caused by the use of agricultural lands with purposes other than agriculture, necessary measures and tasks for the protection of and for the use of agricultural land with agricultural reasons, are carried out within the scope of the “Regulation on the Protection and the Use of Agricultural Lands” which came into effect by being published in the Official Journal dated 10 August 2001, No: 24489. Besides, while agricultural lands are used with industrial and settlement purposes other than agricultural ones, meadowlands, pastures, and marginal areas are used as agricultural lands. Suggestions for the solution of the problems, and works undertaken are: to minimize the treatment of soil; to educate the farmers and prepare the necessary publications for minimizing the treatment of the soil; and to treat fields perpendicular to the slope of the field. Concerning raising crops in rotations, works are carried out for the education of farmers and for preparing necessary publications for raising crops in rotations. Moreover, encouragement credits are given to the products, whose production is aimed to increase, and whose production is continued without leaving fields unplanted.

For the burning of the leftover of plants present in the fields, particularly stubble, the “Communiqué on the Prevention of Burning Stubble” (Communiqué No: 1998/26) came into effect in order to prevent burning of stubble by being published in the Official Journal dated 16 December 1998 No: 23555. A circular on the prevention of burning of stubble is also issued and sent to the provincial directorates every year.

Integrated Pest Management (IPS) Instructions will be prepared and applied in a short period of time. These instructions will be preferred to the classical instructions used for combating with plant diseases and weeds. New instructions will become widespread and will be developed. The use of chemicals in the natural wetlands and protected areas will be limited; the application methods will be determined; and Biological Combating factors and alternatives with the minimum toxicity or without any harm for the environment will be used. Application of pesticide from the air by airplanes and helicopters will be prohibited in order to protect: the natural balance; fauna; flora; and the human health. Chemical applications related to land equipment would also be carried out under control.

Almost 90% of the land area of Turkey is affected by water erosion. It is the most severe problem for agricultural areas also, affecting more than 16,000,000 ha of cultivated areas. The following control activities and institutional measures will be taken against water erosion in agricultural areas: contour farming; stubble mulch tillage; rotation practices; strip cropping; terracing, grassed waterways; establishing an organization similar to the Soil Conservation Service in USA; and etc. are on the agenda. The distribution of erosion areas in Turkey (erosion degree ha %) is: none 5,166,627 ha 6.64%; slightly 5,611,892 ha 7.22%; moderate 15,592,750 ha 20.04%; severe 28,334,933 ha 36.42%; very severe 17,366,463 ha 22.32%; rock surface 2,930,933 ha 3.77%; wind erosion 839,630 ha 1.08%; and others 2,790,994 ha 3.59%.

Capacity-Building, Education, Training and Awareness-Raising : No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: The amount of money allocated for the agriculture sector is 27% of the budget of Directorate General of Rural Services (2002).

Cooperation: No information available.

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CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY

Decision-Making: The responsible bodies for decision-making regarding the conservation of biological diversity and genetic resources are: The Ministry of Environment; the Ministry of Forestry; and the Ministry of Agriculture and Rural Affairs; and the Ministry of Culture. Each institution, according to their responsibilities and duties defined by their respective legislation, has the right to declare conservation areas; make plans for these areas; or identify protection-usage principles. An Inter-Ministerial Steering Committee has been established to coordinate National actions under the Global Environment Facility (GEF). A National Scientific Committee on the conservation of natural resources was established in 1995. This Committee supports: research; inventory; extension; protection and sustainable use of biodiversity; and provides better coordination among: universities; government; non-governmental organizations; and the private sector. The Committee membership includes representatives of universities, and related governmental and non-governmental organizations. The conservation of biological diversity in Turkey is supported by decisions of the Central Hunting Commission for animals, birds, and reptiles; and by the establishment of protected areas such as: national parks; nature reserves; nature parks; wildlife reserves; and specially protected areas.

The main legal instruments for this issue are: the National Parks Law; the Hunting Law; the Forest Law; and the Environment Law. Convention on the Conservation of European Wildlife and Their Natural Habitats (Bern Convention) was ratified in 1984. National implementation regulation for the Convention on Biological Diversity is under preparation. European Landscape Convention has been signed in 2000 and ratification process is continuing.

A National Environmental Action Plan and a related Biological Action Plan have been prepared and submitted to relevant Ministries for approval. A National Biodiversity Strategy and Action Plan are under preparation, coordinated by the State Planning Organization, with the financial support of the World Bank and technical support of the Ministry of Environment. The Strategy and Action Plan contain three main topic areas, which are: Steppe Ecosystems; Forestry Ecosystems; and Wetlands Ecosystems. For the conservation and enhancement of biological diversity, natural regeneration remains the preferred method of forest ecosystem regeneration in Turkey. The establishment and conservation of forest species diversity are assisted by the silvicultural techniques practiced under management plans and programmes. In this context, the preservation of taxa, which are naturally associated with those occurring most frequently in the forests, are encouraged. In order to maintain genetic diversity, monoculture is avoided and local provenance is preferred in afforestation projects. Biological control methods are encouraged for combating insects in forests.

A National Committee involving representatives from: all relevant government agencies; NGOs; local authorities; academic institutions; private sector; and the media has also been set up to draft the action plan, and regional workshops have been organized to review drafts.

Programmes and Projects: The GEF has financed an In-Situ Conservation of Genetic Biodiversity Project in Turkey. The project has been conducted between 1993-1998 in three pilot areas, with the total cost of US\$ 5.7 million. National Action Plan for the Conservation of Plant Genetic Diversity has been prepared. Geographical Information Center has been established. Gene Management Zoned (GMZ) has been identified in pilot areas for the target crop and forest tree species during the project. Management plans for GMZs prepared by related research institutions, based on the framework identified by participatory process. Public awareness and participation studies have been conducted in the project areas. Training programmes also has been conducted for the staff of the Ministries involved in the project. The draft regulation on the conservation of GMZs has been prepared as a follow-up activity after the completion of the project.

Since 1993, the GEF has also financed a three-year project for the Environmental Management and Protection of the Black Sea (BSEP) with total costs of US\$ 32.60 million. The BSEP has three primary objectives: (i) to strengthen and create regional capacities for managing the Black Sea ecosystem; (ii) to develop and implement an appropriate policy and legal framework for the assessment, control, and prevention of pollution and the maintenance and enhancement of biodiversity; and (iii) to facilitate the preparation of sound environmental issues.

A project on “Biodiversity and Natural Resources Management” prepared by the Ministry of Forestry in collaboration with the World Bank and financed by the Global Environment Facility (GEF) was put into affect as of August 1, 2000 with the signature of the Treasury of the Prime Ministry and the World Bank, and it will continue for 6 years. The total budget of the project is US \$ 11,5 million. The project-implementing agency is the General Directorate of National Parks and Game-Wildlife and the other counterparts are: the Ministry of Environment; the Ministry of Culture; and the Ministry of Forestry.

Status: Turkey bridging Europe, Asia and Africa, surrounded from 3 sides with seas of different ecological characteristics with altitudes ranging from sea level to above 5000 meters resulting in a variety of climatic conditions through the country has a biological wealth incomparable to any of the neighboring countries. The ecological mosaic of several different ecological characteristics provides nesting and breeding areas for thousands of plants, animals, their species and populations. Another factor that increases this wealth is that two of the four migratory routes of West Palaearctic Region pass across Turkey. There have been above 9000 plant species identified in Turkey, more than one third of those being endemic species. It is believed that animal species are around 80000. At the same time, Turkey is one of the most important gene centers in the world. Of the total land in Turkey, 28 % consists of grasslands; 20% forests; and 2% are wetlands. There are 250 wetlands with a total area of approximately one million ha. More than 420 species of native and migratory birds nest in these wetlands, and 9,000 plant species, of which 3,000 are endemic, have been recorded in the various regions of the Country. Besides, there are: 32 National Parks; 35 Natural Protection Areas; 15 Nature Parks; 54 Natural Monuments declared to National Parks Law; 699 Natural Sites, declared according to the Law on Protection of Cultural and Natural Assets; 13 Specially Protected Areas declared according to the Law Decree on Specially Protected Areas; and 118 Wildlife Protection Areas declared according to the Hunting Law. Moreover, 9 of the internationally important wetlands have been added to RAMSAR Convention List. As is the case in all developing countries, industrialization, agricultural modernization, urbanization and infrastructure investments in Turkey, especially since 1950s, caused at least a partial loss of natural areas of the loss of ecological characteristics of those. Despite these and several other negative impacts, Turkey stands among one of the very few countries that retained its natural structure. There are still many species that forcibly survive through special artificial means in other countries, which are found living in their wild and native forms in Turkey. Habitat destruction, as a challenge to the country, is the most serious cause of the loss of flora and fauna. Over-harvesting and pollution cause moderate losses. In addition, moderate fauna losses result from forest fires, and moderate flora losses from urbanization.

Capacity-Building, Education, Training and Awareness-Raising: *Use of Turkish National Parks for Environment Education:* The project carried out under the coordination of the scientific and technical Research Council of Turkey (TÜBİTAK) by collaboration of the General Directorate of National Parks & Wild Life, and by the contribution of the universities nearest to the national park location. The purpose of the project is to provide environmental training to the high school and university students in the natural environment of a national park, where the nature is used as a laboratory. University staff; experts of national parks; and non-governmental organizations constitute the training team. Teaching is carried on in a natural atmosphere by: incorporating social, historical, scientific, ethical, and cultural aspects of the park; and by observing, touching hearing and sensing the environment. The project also aims to increase awareness of the local, regional and global nature and the related environmental issues. The first training program took place in the Termessos National Park near Antalya in the summer of 1999 and repeated in the years 2000 and 2001. Kaçkar Mountains national Park (located at the Eastern black sea region) was also included in the project as a second training park in the year 2000. Training there was repeated also in the year 2001. In each year, two periods of training with 20 students in each period is carried out. Since, the year 2001 an additional third period is being applied for the professional tourist guides in Turkey, to increase their knowledge about biological and cultural diversity of the country. Publication of a popular book about Environmental Education in the Termessos National Park is planned by TÜBİTAK to be made available to the public in 2003.

Information: No information available.

Research and Technologies: Turkey has carried out a comprehensive baseline survey on the state of the biodiversity.

Financing: The GEF; the United Nations Development Programme (UNDP); and the World Bank have financed some in situ and ex situ projects. Financial support has also been received from: the World Conservation Union (IUCN); the Plant Genetic Resources Research Institute; and the World Wildlife Fund (WWF).

Cooperation: In Turkey, the Convention on Biological Diversity was signed in 1992 and ratified in 1996. The Convention on International Trade in Endangered Species of Wild Fauna and Flora was ratified in 1996. Also in 1994, Turkey became the eighty-third contracting party of the RAMSAR Convention on Wetlands of International Importance Especially as Wildlife Habitat. Turkey has signed and approved the decisions taken by the Helsinki Ministerial Conference on the Protection of Forests in Europe that includes a resolution on the Conservation of Biodiversity of European Forests. In 1994, five wetland sites (Goksu Delta; Seyfe Lake; Burdur Lake; Kus-Manyas Lake; and Sultan Marshes) were included in the RAMSAR Wetlands List. On the other hand, three international symposiums, namely for *cedrus libani*; *pinus brutia*; and in-situ conservation of plant genetic resources, have been organized since the United Nations Conference on Environment and Development (UNCED).

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CHAPTERS 16 AND 34: ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY AND TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING

Decision-Making: The TÜBİTAK Marmara Research Center (MAM); Research Institute for Genetic Engineering and Biotechnology; and the Ankara University Biotechnological and Implementation Center are mainly responsible for biotechnology research and development in Turkey. There are no specific policies or plans to promote the use of biotechnology in Turkey.

Programmes and Projects: The most significant projects in the field are the following: Biotechnology Techniques in Turkey by: the TÜBİTAK-MAM; Research Institute for Genetic Engineering and Biotechnology (US\$1.2 million), with the support of the North Atlantic Treaty Organization (NATO) Science for Stability (SFS) Programme (US\$950,000); The Establishment of Hybridoma, Recombinant DNA and Transfer Technologies at TÜBİTAK Gebze by the TÜBİTAK Marmara Research Center, Research Institute for Genetic Engineering and Biotechnology (US\$430,000), with the support of the United Nations Development Programme (UNDP) and the United Nations Industrial Development Organization (UNIDO) (US\$188,000); and, The Establishment of a Molecular Biology Laboratory by the Bogazici University Department of Biology (US\$310,000), with the support of the UNDP and the United Nations Educational, Scientific and Cultural Organization (UNESCO) (US\$268,000).

Status: No information available.

Capacity-building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 17: PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES

Decision-Making: The Undersecretariat of Maritime Affairs; the Ministry of Foreign Affairs; The Ministry of Environment; the Ministry of Tourism; the Ministry of Interior (Coast Guards); the Ministry of Transport; the Ministry of Health; Turkish General Staff; and local authorities are responsible for decision-making related to oceans and coastal areas.

Although, Turkey is not a party to the United Nations Convention on the Law of the Sea, the articles of the Convention are taken into consideration to the extent that they reflect customary international law. However, it should be emphasized that States, while strengthening the legal framework for international cooperation and coordination, will observe the provisions of those international treaties to which they are parties and the principles emanating therefrom, and their respective rights will not be adversely affected by any international convention to which they are not parties.

Turkey signed Barcelona Convention and its Protocols, on which the Mediterranean Action Plan is legally based in 1975. The Convention on the Conservation of European Wildlife and Natural Habitat, also known as the Bern Convention, came into force in Turkey in 1984. It placed the Government under the obligation of protecting endangered marine turtles as well as their breeding and nesting grounds along the Mediterranean Coastal System. In addition, these species are protected by the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution under which an Action Plan has been adopted for the protection of the sea turtles. Within the framework of these Conventions, the Marine Turtles Monitoring Commission was set up in 1990 under the coordination of the Ministry of Environment in order to conserve the marine turtles in Turkish Mediterranean coastal areas. The Environmental Management Plan has been designed for the same important coastal areas. Studies have been started aimed at protecting these coastal areas, the endangered sea turtles, and their nesting areas. The MARPOL International Convention for the Prevention of Pollution from Ships (73/78) and its Annexes I, II and V have also been adopted. The Under-Secretariat for Maritime Affairs is the operational focal point of the Regional Marine Pollution Emergency Response Center for the Mediterranean Sea (REMPEC), and the National Focal Point of the Emergency Response Activity Center for the Environmental Management and Protection of the Black Sea, under the Black Sea Environment Programme (BSEP). From a general perspective, Turkey's national policy on oceans and marine environment is based on sustainable and integrated management of marine resources and environment aiming to protect marine environment and biodiversity while making sustainable use of them to contribute national economic and social development targets. In this regard, Turkey has fully engaged in all regional seas programmes where Turkey is one of the coastal states.

Programmes and Projects: Turkey has access to technology to identify the major types of pollution from land-based sources within the framework of: the Mediterranean Pollution Monitoring and Research Programme (Med-Pol); the BSEP; and Mediterranean Environmental Technical Assistance Office (METAP) projects. It is a party to the Convention and five Protocols related to protection of the Mediterranean Sea and will soon ratify the recent amendments and protocols. It endorsed the creation of the Mediterranean Committee on Sustainable Development and fully engaged in the activities to carry out the Mediterranean Action Plan. In 1997, a project was started namely, "the Project for Preparing National Action Plan for Land-based Sources and Activities" by the Ministry of Environment aiming to define the priorities according to the regions and industrial sectors. In 1993, Turkey played a leadership role in launching an international environmental programme for the Black Sea Region. A Convention and three Protocols concerning protection of the Black Sea were adopted in Bucharest, in 1992. The Global Environment Facility (GEF) has financed this BSEP project at a total cost of US\$32.60 million. It had three primary objectives: (i) to strengthen and create regional capacities for managing the Black Sea ecosystem; (ii) to develop and implement an appropriate policy and legal framework for the assessment, control, and prevention of pollution; and the maintenance and enhancement of biodiversity; and (iii) to facilitate the preparation of sound environmental activities. In this regard, The Programme Coordination Unit (PCU) was established in Istanbul in 1994. It is assisted by a pollution-monitoring network involving universities and other public institutions. The

project has been completed in 1999. The preparation of a new project/programme with regard to the reduction of nutrient load in Black Sea is continuing. With regard to the sustainable use and conservation of marine living resources of the high seas, Turkey attaches vital importance to the UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks and plans to take into consideration the principles established by this Conference. It also considers the Food and Agriculture Organization (FAO) Code of Conduct of Responsible Fishing an important development for the sustainable use and conservation of marine living resources under National jurisdiction; and plans to develop National policies in harmony with the Code. International support is needed in terms of monitoring, and technical and financial support for: the inventory of pollution from land-based sources and for the control of all kinds of waste from maritime transport; combating oil spills at sea and in ports; and for contingency plans in case of accidents at sea. On the other hand, the establishment of an integrated coastal area management programme, within the context of the Exclusive Economic Zone (EEZ) defined in the Black Sea, is planned.

Status: Turkey has 8333 kilometers of coastline. There are over 160 Turkish islands and a 237 000 km² EEZ (Exclusive Economic Zone). The Sea of Marmara (663 kilometers on the Asian side) is entirely under the Turkish sovereignty. The length of the Black sea coastal areas is 1659 kilometers and the length of Mediterranean shoreline 1577 kilometers. Marine pollution and over fishing are straining fish resources; 84 per cent of the Turkish fish catch originates in the Black Sea, which is in a poor environmental state. A draft convention is in preparation on Black Sea fisheries and the Conservation of its Living Resources. Turkey's extensive marine waters are under pressure from: heavy domestic maritime traffic; the very significant transit traffic in the Turkish Straits; and marine pollution from land based sources. As nearly 17 million people live near sea. Coastal waters are polluted by land-based sources which releases untreated or poorly treated wastewater. The very degraded environmental condition of coastal waters in the early 1990s was the result of: inadequate sanitary infrastructure; rapid urban and industrial growth; booming tourism; expanding agriculture; and increasing maritime traffic.

Challenges: The already dense maritime with dangerous cargo in the Straits could further increase particularly due to economic development of the Black Sea countries and increasing oil and gas production in the countries of the Caucasus. In this regard, Turkish Straits should not become a major oil transport route, owing to the risk to the population and the deterioration of maritime safety in the event of this increased traffic. Although, industrial wastewater discharge has been greatly reduced, pollution from Small and Medium Sized Enterprises (SMEs) is still an important source of concern. Further progress is highly dependent on the availability of state funding for sewerage and wastewater treatment, taking into account the rapidly growing pollution load.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: National databases contain information on the periodic measurement of main pollutant parameters at: sea; goods transported by sea; a register of ships and seafarers; information on ship accidents and ports; activities in the coastal areas; and marine degradation caused by sea-based activities.

Research and Technologies: Turkey participates in the following international scientific programmes: the Black Sea International Oceanographic Research Programme (COMSBLACK) with the Intergovernmental Oceanographic Commission (IOC), la Commission International pour l'Exploration de la Mer Méditerranée (CIESM), and the North Atlantic Treaty Organization (NATO); the Physical, Biological and Chemical Oceanographic Research Programme (POEM BC) with IOC; the Modeling for Black Sea Ecosystem project (TU-BLACK SEA); the Regional Cooperation Programme of Oceanography Institutes in the Black Sea with NATO; the Monitoring of Selected Traces for Transportation and Flux Modeling in the Black Sea with the International Atomic Energy Agency (IAEA); and the Comparative Assessment Programme for Primary Production, Transportation and Coastal-High Sea Interaction in Accordance with Seabirds and Coastal Zone Color Scanner (CZCS) Data with NATO. Turkey also participates in: the development of socioeconomic and environmental indicators; systematic observation systems; the Global Ocean Observing System; and in the mussel watch programme, but not in clearing-houses.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 18: PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES

Decision-making: Main coordinating bodies for freshwater issues are: the State Planning Organization; General Directorate of State Hydraulic Works; General Directorate of Rural Services; the Ministry of Environment; the Ministry of Health; the Ministry of Tourism; the Bank of Provinces; and Greater Municipalities.

According to the Constitution, all water rights to both ground and surface waters, with the exception of some privately owned springs are vested in the State. The 1071 Law on Water Resources (as amended in 1986) stipulates that private withdrawal of ground and surface waters requires licensing by the State. By law, priority is given to drinking water provision, although there have been cases where other uses, such as irrigation of hydropower generation, have been given precedence. The 1988 Regulation on Water Pollution Control sets out principles for classifying ground and surface water quality planning. This regulation aims at both conserving the quality of water resources in ecosystems and protecting and improving water quality to meet national requirements. It prescribes protection zones and land use strategies in regard to reservoirs and lakes used for drinking water. Principles for discharging effluent to ground and surface waters, and for treating wastewater, are also contained in the regulation. General and specific objectives for urban and rural infrastructure development, related to water resource management are:

- Drinking water needs of settlements with no or insufficient drinking water shall be met; all villages shall receive drinking water; works to meet cities' long-term water requirements shall be completed;
- Water losses shall be reduced to reasonable levels and the efficiency of water use in agriculture shall be improved;
- Water supply and wastewater treatment pricing shall cover operational and maintenance costs and generate fund for new investments; water and sewerage administrations shall be established in cities with over 100 000 inhabitants;
- Rural infrastructure shall be developed and irrigated land extended by 735 000 hectares;
- Transfer to users of irrigation facilities shall be accelerated, and recovery of public investment shall be established;
- Rehabilitation of lakes and rivers threatened by pollution shall be given importance; and
- Water management by river basin shall be given priority.

Programme and Projects: the Ministry of Environment has prepared several protection projects in different water basins. The main target of the projects is to prevent pollution and protect fresh water and drinking water resources. Among these projects: "Protection of Sapanca Lake as a Drinking Water Resource"; "Protection of the Eđirdir Lake as a Drinking Water Resource"; and the "Protection of Existing and Potential Drinking Water Resources in Istanbul" have been completed. With regard to the drinking water resource management; a project titled "Protection Sapanca Lake as a Drinking Water Resource" has been implemented by the Ministry of Environment. The philosophy of the project was the integrated management of potable water resources, and beneficial use and protection of the basin. On the basis of the project, a plan has been prepared for the beneficial use and protection of the basin and presented as 1:25,000 scale maps. These maps, which included land use limitation criteria, will be used by land use planners during the preparation of a 1:25,000 scale basic land use plan. On the other hand, the Southeastern Anatolia Project (GAP) aims to develop an area of more than 7 million hectares within the basins Dicle (Tigris) and Fýrat (Euphrates) which constitute 30 Per cent of Turkey's total river flow. It includes 13 sub-projects to be completed over a period of ten years; 1.7 million hectares will be irrigated of which 10 Per cent (175 000 hectares) has already been put under irrigation. The Atatürk Dam has a capacity to irrigate 882 000 hectares.

Status: Overall, Turkey has extensive water resources, which are unevenly distributed, throughout the country. Mean annual precipitation is about 643 mm (or 501 billion cubic meters), of which 55 Percent is lost to

evapotranspiration. The mean annual surface run-off of Turkey's 26 river basins is 186 billion cubic meters, of which half is considered technically and economically exploitable. More than half the surface flow originates from six major river basins: the Dicle (Tigris); Fýrat (Euphrates); Eastern and Western Black Sea; Antalya; and Western Mediterranean. The Fýrat (Euphrates) basin (15 Per cent of Turkey's total area) is the largest. The second largest in terms of surface flow is the Dicle (Tigris) with 22 billion cubic meters. Nine rivers flow for over 500 kilometers within Turkey. Annual discharge by Turkish rivers is approximately 41 billion cubic meters to the Black Sea and 36 billion cubic meters to the Mediterranean. Some 200 natural lakes (of which 50 have an area greater than 5 km²) occupy almost 1 million hectares, or 1 Per cent of the country's total area. Lake Van in Eastern Anatolia (374 000) and Lake Tuz in Central Anatolia (128 000 hectares) are the largest. There are about 250 wetlands. The 195 dams built to date have created artificial lakes occupying about 380 000 hectares. Total annual aquifer recharge is 41 billion cubic meters, of which 12 million is estimated to be technically and economically exploitable. Eight billion cubic meters is currently exploited (55 Per cent for irrigation, 45 Per cent for drinking water and industrial purposes). A quarter of available groundwater reserves is found in the Fýrat (Euphrates) and the Sakarya river basins. On the other hand, major sources of pollution are domestic and industrial wastewater discharges and agricultural run off. Approximately 70% of the population is adequately served, while 7% of the population has no continuous supply. Water quality is monitored throughout Turkey by local health inspectors within a national programme. Inspectors have the authority to prosecute polluters with a broad range of regulations until the contamination is eliminated. Erosion is among the worst problem having impacts also on rivers and lakes. The Electricity Survey Administration (EIEI) has estimated that 500 million tones of sediment are delivered to rivers and lakes every year, along with 9 million tones of nutrients.

Capacity-Building, Education, Training and Awareness-Raising: No information available

Information: No information available

Research and Technologies: No information available

Financing: Sewerage systems began to be designed and constructed in the late 1960s in provinces supplied with potable water under the leadership of the Bank of Provinces. Over 250 municipalities, which have made sewerage project proposals, are waiting for these projects to be included in the Bank of Provinces' investment programme. The largest share in the financing of municipal water supply, sewerage, and treatment facilities comes from the central administration through the Municipalities Fund, which is under the authority of the Bank of Provinces. On the other hand, since 1950s, the Government has invested heavily in irrigation infrastructure. In the last decade, annual investment has averaged US\$ 500 million. Eighty percent of the initiatives come from the public sector, while private initiatives by farmers cover the rest. In the mid-1990s, 58 percent of the 2800 municipalities had a drinking water supply network served by the Bank of Provinces and the Ministry of Tourism. 4 percent of these municipalities had drinking water treatment facilities. Some progress has been made in privatizing municipal water supply using the build-operate-transfer (BOT) model.

Cooperation: No information available

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CHAPTER 19: ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS

TOXIC CHEMICALS

No information available.

WASTE AND HAZARDOUS MATERIALS

Decision-making: In Turkey, the Ministry of Environment promotes policies and programmes in the area of solid and hazardous waste management. The Ministry of Health and municipalities are also among the other coordinating bodies.

New industrial waste regulations have been approved. Industrial wastewater is of much importance due to high loads and the toxic nature. Only 20% of industries have proper treatment facilities. *The Regulation on Control of Solid Waste Management* was published in the Official Paper dated 14 March 1991 (No. 20814). According to this regulation, municipalities are responsible for the collection, transportation, recycling, and disposal of solid waste. Deposit schemes and recycling rates are being applied effectively on packaging waste, and recycling rates of up to 65% are being achieved.

The Regulation on Hazardous Wastes Control and Management was prepared and published in the Official Paper of 27 August 1995 (No. 22387). Under this regulation, the import of all kinds of hazardous waste to Turkey is prohibited. In this context, the import of waste scraps which have economic value for important industrial sectors and used textiles are being controlled in accordance with the “Notice on Substances Controlled for the Purpose of Protecting the Environment”. This notice was published in the Official Paper on 1 February 1996.

The Regulation on Medical Wastes was prepared and published in 1993. According to the Regulation, essential method to dispose of medical waste is incineration. There are six incineration facilities in Turkey, which are located in Ankara, İstanbul, Antalya, Sivas and Muğla. However, huge portion of medical waste is disposed with domestic (municipal) wastes.

In Turkey, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was signed in 1989 and ratified in 1994. In addition, the Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal was signed on 1 October 1996.

Programmes and Projects: In order to tackle the main problems encountered in solid waste management the Ministry of Environment has been taking some steps in strengthening municipal institutions to generate revenue, coordinating efforts and measuring performance. Besides, in order to regionalize solid waste control/disposal; and to develop technology for recycling, recovery and waste minimization, the Ministry of Environment undertakes some projects. These projects are planned so as to create a national institutional structure to support the local and regional waste management with technological development options. These projects are given as follows: Institutional Strengthening Technical Assistance Project (completed); Study on Appropriate Solid Waste Management Practices (completed); Trabzon-Rize Solid Waste Management Project (completed); Adana-Mersin Solid Waste Management Project (completed); and Turkish-German Technical Co-operation Environmental Management System Approach Project (on-going).

Since 1995, the World Bank in conjunction with the Mediterranean Technical Assistance Program (METAP) has financed the Ministry of Environment for developing a national solid waste management throughout Turkey. The objectives of the project are: to take a broad view of Turkish solid waste management institutions, policies, and systems for administration and control; to identify barriers and constraints to the successful implementation of solid waste management; and to propose strategies for removing those barriers and constraints in order to achieve consistent and improved practices and standards.

On the other hand, the Ministry of Environment is the competent authority for the Basel Convention, and it promotes policies and programmes in the area of sound management of hazardous wastes. On the basis of the Convention, after the ratification of the Basel Convention, the notification system has been applied for the export of hazardous wastes for recovery and recycling. According to the notification forms: 450 tons of anode slime; 250 tons of x-ray and photographic film containing silver base PET/CTA; 55 tons of Cu-Anode slimes; and 30 tons of polychlorinated biphenyls (PCB) transformers have been exported since 1994.

Status: Solid waste production in Turkey amounts to 61,137 tons/day in 1,974 municipalities. About 1% of this waste is deposited in sanitary landfills; 1.71% is composted; approximately 81% is dumped into municipal dumping sites; and approximately 16% is dumped into water bodies. Industrial solid waste production is estimated to be 5,379,000 tons per year. Out of 34 million people living in urban areas, only 6% are served with proper treatment facilities. Istanbul, Ankara, and Izmir have begun sewage treatment projects by establishing a collection system in each city and building waste treatment plants.

The incineration of the wastes is not feasible for Turkey since approximately 66.45 % of the waste composition is damp wastes and garbage of which calorific value is low (800-900 kcal).

Rapid growth of the urban population is a challenge because it is leading to uncontrolled wastewater generation and pollution loads.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: See under **Cooperation**.

Cooperation: Turkey contributed to the Basel Trust Fund US\$ 1,882 in 1994; US\$ 10,050.00 in 1995, and US\$11,609.00 in 1996.

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CHAPTERS 20 TO 22: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS, SOLID AND RADIOACTIVE WASTES

Decision-Making: No information available.

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Programmes and Projects: No information available.

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Status: No information available.

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Information: No information available.

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Research and Technologies: No information available.

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Financing: No information available.

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Cooperation: No information available.

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

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CHAPTERS 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS

Women: Decision-Making: General Directorate on the Status and Problems of Women (DGSPW) has been established and it has four main departments namely: Educational and Social Affairs; Economic Affairs; Documentation-Publishing and Statistics; and Foreign Relations. Information Inquiry Bank provides information in legal and psychological consultancy regarding violence towards women as well as providing marketing facilities for women's home-based products. The Women's Documentation Center is progressing to become a centre, which provides domestic and foreign sources on the subject of women. Since Directorate General on the Status and Problems of Women does not have any provincial agencies, works have been initiated in order to establish women consulting services in other provinces to offer consulting services for the solution of problems of women. Women's Status Units have also been established in the provinces of: İstanbul; İzmir; Adana; Erzurum; Trabzon; Bursa; Diyarbakır; Van; Antalya; and Sivas by providing necessary official contacts. The number of Women's Status Units amounted to 14 with the units established in the provinces of Gaziantep, Muğla and Çel in 1999, and in Nevşehir in 2001.

After the foundation of the Republic of Turkey in 1923, women's citizenship rights were secured by the Constitution in the context of a broader reconstructing of the society. However, these reforms haven't ensured continuous improvements. Today, when we look at the status of women in Turkey, in terms of social indicators such as education, health and employment, the situation leaves much to be desired. DGSPW was established in 1990 as an affiliated institution with the Ministry of Labor and Social Security. It became affiliated with the Prime Ministry in 1991 and with the Undersecretariat of Women and Social Services founded in September 1993 with a Decree in the Power of the Law. However, the Authorization Law serving as a basis for the Decree in the Power of the Law was annulled in October 1993. Undersecretariat of Women and Social Services was founded again in June 1994 but the Authorization Law was in turn annulled again in July 1994. A Draft Bill on the Establishment of DGSPW has also been submitted to the Turkish Grand National Assembly to be taken up in one of the General Sessions. The first international UN Women's Conference in 1975 and the other UN events, forced countries to review their policies on women on an international platform. Turkey has adopted the *Nairobi Forward Looking Strategies* and ratified the Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW) (The Optional Protocol was signed as well in September 2000) and acknowledged women's issues in the fifth and the sixth Five Years Development Plans. Thus, the establishment of a national machinery concerning women's rights has become necessary. Within this framework, the DGSPW was established on October 25th 1990 as the lead institution aiming to develop relevant policies and promote the advancement of women and having the responsibility on the international level as well. It is administrated by the Prime Ministry and it is waiting for the ratification law that is still being discussed at the National Assembly. By this law, it would be possible to expand the scope and the structure of the institution. Turkey has made progress in improving the equality between women and men. Most notable is the adoption of the new Turkish Civil Code on 22 November 2001. The new law eliminates discriminatory clauses in line with articles 15 and 16 of CEDAW. Now the national machinery for women's affairs (DGSPW) is actively disseminating information about the new law and sponsoring nation-wide debates to ensure that women become informed of their new rights and other actors in society become sensitized to these significant changes.

In recent years, the Government of Turkey, in particular the State Ministry for Women, has pursued strengthening the national institutional machinery for the advancement of the status of women. Curricula and educational material have been assessed, reviewed, and revised with a view to promoting dissemination of gender-relevant knowledge. The problem of inequalities between men and women is experienced almost in all countries in the world in different types and levels. This issue has been taken as a problem due to the initiatives of the United Nations and it has been transferred to the international platform. Four World Women Congresses held by the United Nations in the last 25 years have played a significant role to bring the issue of social gender inequality into the global agenda. UN Congresses were held in: Mexico City in 1975; in Copenhagen in 1980; in Nairobi in 1985; and in Beijing in 1995. These congresses joined the countries in the world on an international platform around the common objectives of social gender equality and development and peace. National public mechanisms have been founded in several

countries to establish a political will in order to achieve such objectives to initiate implementations. The United Nations presented the texts of conventions, which were created after a series of international meetings on the elimination of all forms of discrimination against women in order to provide equality of men and women, to the approval of the Member Countries. Turkey signed the CEDAW in 1985, and the Convention went into effect in 1986. Often described as an international bill of rights for women, the Conventions entering into effect have become a turning point for Turkey. The obligations and duties brought about by the Convention on “the Elimination of All Forms of Discrimination Against Women”, and the decisions taken in the international platforms resulted in the development of new approaches and new organizational styles for the subject of “women” particularly at the national level. A formal organizational structure on women has been included in the Sixth Five-Year Development Plan for the first time. On the other hand, although significant achievements have been made for women since the proclamation of the Republic in Turkey, it is observed that women are not at the preferred level regarding fundamental indicators such as their participation in the mechanisms of education, health, employment, and decision-making.

The management and personnel who have staffed the Directorate since its inception have a keen feminist perspective. They maintain open dialogue with national women movement and academics and follow-up international developments closely in this regard. This approach has contributed the Directorate’s enhanced capacity to shape gender policies and set the national agenda on gender equality. DGSPW carried out the preparatory and follow-up activities for the Fourth World Women Conference in Beijing. Two meetings have been organized with Women of Eurasia before and after the Conference in this network. Among the pledges that Turkey has made in Beijing were organized with Women of Eurasia before and after the Conference in this framework. Among the pledges that Turkey have made in Beijing in 1995, were: a decrease the mother and child mortality rate by 50%; to raise the mandatory education period up to eight years (which was realized in 1997); to increase the female literacy rate to 100%; and to increase the funds allocated to the national machinery until the year 2000.

Programmes and Projects: In 1992 “*The National Program for the Enhancement of Women’s Integration in Development Project*” was established and it is an ongoing co-project run by the DGSPW and the United Nations Development Program (UNDP). The Project, in its efforts to change the negative image of women in all fields of life displayed in the statistics, has the following priorities:

- Integrate women’s issues in development and sector plans by creating policies for women’s participation in development;
- Develop a gender-base data providing information to develop policies which will enhance the women’s integration in development;
- Support and monitor the activities to improve the legal, economic and social status of women by strengthening the national machinery (DGSPW);
- Create gender-sensitive human resources through educational programs; and
- Provide support for research and pilot projects of NGO’s and voluntary women’s organizations.

The Project has also assumed the following tasks: collect and publish research material on women’s issues and make it available for the users; prepare handbooks and manuals to ensure an effective communication network between institutions; and document all activities related with the Project. Within the framework of the above stated priorities, the project activities can be grouped as: educational programs; research projects; pilot projects; and statistical/publication activities. This integrated project has been extended up and has become active with several projects from NGOs and Universities.

Women’s Employment Promotion Project, one of the components of “the Employment and Education Project”, carried out and financed by the World Bank and the Government of Republic of Turkey and put into effect by being published in the Official Journal dated 4 May 1993, was initiated on 5 April 1994. Undertaken by the General Directorate on the Status and Problems of Women, the project was completed at the end of 2000. The objective of the Women’s Employment Promotion Project is to provide required information and skills and make these widespread in order to provide women with better occupations and vocational opportunities in all fields, including the fields where men are traditionally dominant. In this framework, activities in the following four basic areas in

project were carried out: the Research Fund was used; results of the research became widespread and public information activities were carried out; a documentation center was established; and social gender education materials were formed.

United Nations National Program Project for the Promotion of Women's Integration in Development (UNDP): The National Program Project for the Promotion of Women's Integration in Development has been implementing by DGSPW with the technical aid of United Nations Development Program (UNDP) since 1993. Within the framework of the Project undertaken, in order to improve and increase the organizational capacity of the General Directorate on the Status and Problems of Women, a national mechanism has been established in order to provide equality of women and men. Additionally, support has been provided voluntary institutions in their activities to improve the integration of women's in development. The final term objectives of the project started to be implemented in the East and Southeast Anatolia Regions are in the direction of the same principles. Moreover, it is aimed to organize educational programs in order to develop voluntary organizations in this period. United Nations Population Fund (UNFPA) 2001-2005 3rd Country Program Presentation Defensive Sub-Program Project is implemented by the General Directorate on the Status and Problems of Women. In this framework, a Steering Committee has been established for the coordination of the activity components, and one representative from the following public institutions and organizations has been included in the Committee: the Ministry of National Education; Ministry of Health; State Planning Organization; State Statistics Institute; Social Security Authority; Family Planning Association of Turkey; Family Health and Planning Foundation of Turkey; and Hacettepe University Research and Implementation Center for Women's Problems. Main objectives of the project are: providing the support of policy makers managing policies and strategies which support reproductive health, social gender equality, population and development issues; providing the extension of correct and effective messages in reproductive health and social gender equality, population and development issues to the national and local media; providing the extension of correct and effective messages in reproductive health, social gender equality, population and development issues to non-governmental organizations and public institutions and organizations.

Status: When data on the main indicators of development such as education, health, employment, and decision-making mechanisms are taken into consideration, it can be said that the status of women is not at the desired level regarding the equality of women and men. Education of women is the area where the indicators are worst. 25 women (in one thousand) in Turkey is literate, which is around 6.000.000 in figures. Rapid population increase is still a problem in Turkey as in other developing countries. According to the latest data, the total prolificacy rate per women has been calculated to be 2,6. This rate is 4,2 in the eastern provinces of Turkey, and 2 in the west of Turkey. No doubt that education is the most significant factor, which affects prolificacy. The infant and maternal mortality rate is high in connection with the high rate of prolificacy. While 54 women (in one hundred thousand) die during giving birth or due to complications in connected with giving birth, 43 infants (in one thousand) die before the age of one. The term of compulsory primary education was extended from 5 to 8 years in 1997. This is a very important development. The rate of girls' attendance to the sixth class increased 48% when compared to the previous year. The rate of increase in the 1999-2000 academic year was 69 %, but this figure is 162 % in villages. However, in spite of these good developments we know that girls are not sent to schools, or are taken from school by their parents before they complete their education in rural areas, particularly in East and Southeast Anatolia Regions. Moreover, they get married before they complete physical development at the ages deemed children by the laws. According to the results of 1990 census, 1.094.351 girls between the ages 12-14, and 1.517.000 girls at the age of 15 are married. Moreover, women's participation in employment is decreasing in years. The rate of women's participation in employment is 23%. 60% of women participating in employment work in the agricultural sector, and 97% of them work without receiving any wage as a family worker. An intense immigration towards urban areas is observed in Turkey where women either do not work at all in urban areas, or work in informal sectors with low salaries and without all kinds of social security. Only 14 % of those included in social security program are female. Women are not represented in decision-making mechanisms in a sufficient way in line with their level of education and their employment status. For instance, the number of female deputies in the Turkish Parliament is 22, which is a significant indicator of this situation. However, the number of women working in different sectors in Turkey is increasing and they have achieved significant success. The rate of female instructors in universities is 36 %, and the rate of female professors is 25%. 31% of the architects; 29 % of the doctors and operators; and 26 % of lawyers working in Turkey are women. In Turkey 28% of the women population has an

income recipient job. This rate is 69.5% for men. Decision mechanism for using income is following: 49% of women population has the authority to use their income; 29% of women makes decision by their husband and 15% of women do not have any idea about the mechanism how money is used.

Many works are underway in the education, health, and employment fields at the institutional and legal levels. However, it is thought that women cannot make use of such services in a sufficient manner. One of the main obstacles for women in making use of such services is the traditional standard of judgment, which is currently dominant in certain regions in Turkey. Although it is difficult to change the traditional standard of judgment in a short period of time, undertaken works, aiming to change the conscious in a continuous manner will accelerate this transformation. Providing coordination in the services extended by the State, and helping female have this level of information and conscious for making use of such services are significant as well.

Capacity-Building, Education, Training and Awareness-Raising: The DGSPW carries out its activities by organizing meetings, panels, conferences, and by publishing books for establishing public opinion on the policies with regard to the gender issues and creating a social consciousness. These activities are often carried out by receiving contributions and supports of local administrations, universities and non-governmental organizations.

Social Gender Education material has been prepared to be implemented for public and private sector, and non-governmental organizations in Turkey. The main objective of the material is to develop sensitivity against social gender roles and discrimination in the working life, and providing equal roles and shares by women and men in planning, monitoring and evaluation processes at all levels. Pilot implementation of the material has been initiated in certain public institutions and organizations, local administrations and occupational organizations.

Women 2000 Meetings have been held with the cooperation of: research and implementation centers on women problems of universities; voluntary women organizations; and 81 governor offices in order to: put the problems of women in Turkey in the agenda of the public; to provide participation of women living in all regions in the discussions; and to produce solutions. The meetings held in 81 provinces and in certain few districts have been organized mainly by voluntary women organizations and research and implementation centers on women problems of universities. Several subjects with regard to women have been taken within the context of these meetings, like: education of girls; violence against women; the Law on the Protection of the Family; human rights of women; relative marriages; women health; entrepreneurs; place of women in decision-making stages; and participation in the politics.

Civil Code Presentation Campaign: Modern amendments providing equality between spouses in the new Turkish Civil Code have been made in order to help women take their places in the social life as modern individuals with equal rights in the direction of the principle that “spouses enjoy equal rights”; and taking the articles on “equality” and articles prohibiting “inequality between genders” in the Constitution and the international initiatives in which our State is included (CEDAW) as a basis. A series of meetings will be organized with the cooperation of governor offices, universities, and voluntary women organizations in 2002 in order to publicize the amendments in the new Turkish Civil Code concerning the equality of women and men countrywide.

Information: Information-Document Centre established in the scope of Women’s Employment Promotion Project has a quite rich archive. Being the most significant women library of Turkey, this center has books, articles, thesis, and seminar and conference documents. A web site for Directorate General on the Status and Problems of Women has been established in order to provide access to domestic and foreign source of information via internet address:

www.kssgm.gov.tr. **Research and Technologies:** 16 researches have been carried out within the framework of

Women’s Employment Promotion Project. The following two researches have been carried out in order to determine the problems of women on employment in rural areas: participation of women in employment in rural areas; and impact of Employment Education for Women Living in Rural Areas in İzmir. **Financing:** Within the State Institute of Statistics “Social Structure and Women Statistics Unit” has been established in order to provide a database on gender issues within the framework of “the National Program Project for the Promotion of Women's Integration in Development” undertaken by the General Directorate on the Status and Problems of Women and implemented with the cooperation of the Government of Republic of Turkey and the United Nations Development Plan. Small financial contributions are provided for pilot projects on women prepared within the framework of the same project. **Cooperation:** Turkey ratified The Convention on the Elimination of All Forms of Discrimination Against Women on 20 December 1985. A particular importance is attached to the cooperation between: the public institutions and organizations; local administrations; non-governmental organizations; and all social sections in the

works undertaken. Cooperation in the field of women is held with the United Nations Organizations, the World Bank and other international organizations at the international level.

Children and youth: No information available.

Indigenous people: No information available.

Non-governmental organizations: No information available.

Local authorities: No information available.

Workers and trade unions: No information available.

Business and industry: No information available.

Scientific and technological community: Status: In Turkey, the scientific community has already established the ways in which to address the general public and deal with sustainable development.

Farmers: No information available.

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CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS

Decision-Making: Significant financial measures adopted in Turkey include the Decree Concerning State Aids for Investments and Environmental Protection Investments Granted by Incentive Certificates. Under the Decree Concerning State Aids for Investments and Environmental Protection Investments Granted by Incentive Certificates, a loan facility of 50% of the total fixed amount of investments may be granted from the Fund sources within the scope of the principles set forth on the portion of the investments for the protection of the environment within the scope of an Evaluation of Environmental Effects Report. The loans cover existing investments located in developed regions (Provinces of Istanbul and Kocaeli, and areas within the boundaries of the Greater Municipality of Ankara, Izmir, Bursa, and Adana); and existing investments or investments to be realized in other regions by Municipalities, Provincial Private Administrations, enterprising committees of Organized Industrial Zones, or relevant companies.

The increase in domestic interest rates and mounting public deficits has accelerated the inflow of hot money and led to excessive appreciation of the Turkish lira in real terms. Together with this development, the real increase in labour costs, and the decrease in direct and indirect incentives have caused the Turkish economy to lose its competitiveness. The rapidly deteriorating internal and external balances caused a serious crisis in money, capital, and exchange markets in early 1994. Because of this development, *the Economic Measures Implementation Plan* was put into effect on April 5, 1994 to stabilize the economy.

The developments during the Sixth Plan period made it clear that consumption-based growth, backed by public sector deficits and short-term capital inflow, is not sustainable. This underlined the need for implementing monetary and fiscal policies in harmony with each other, as well as the importance of developing domestic macro policies in the context of an international economic environment characterized by liberal foreign trade and capital movements.

Programmes and Projects: No information available.

Status: In the 1990-1993 period, the GNP growth rate reached an average of 6% annually, but in an unstable manner. During the same period, high public deficits and the expansion in domestic demand backed by an inflow of short-term capital formed a driving force for growth. As a result of the stability measures, the GNP at fixed prices decreased by 6% in 1994; and the ratio of public sector borrowing to GNP, which rose to 11.7% in 1993, came down to 8.2%. Thus, in the Sixth Five-Year Development Plan Period, fixed GNP grew by an average of 3.5% annually. In 1990-1993, the average price increase was about 60%.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information is available.

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CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT

Decision-Making: Turkish Institute of Scientific and Technical Research (TÜBİTAK) is the main coordinating body for scientific and technical issues in Turkey.

Programmes and Projects: No information available.

Status: It is a well-known fact that sustainable development can only be achieved through scientific competence and innovative capabilities of nations. Developed world and many developing nations strive today to build their futures by developing their scientific and technological base. Tomorrow's society will definitely be science based information society can't part in determining: the national science and technology policies; developing human resources to be employed in R&D through contests, awards and scholarships; promoting, funding and monitoring scientific research and technological development; carrying out research and technological development activities in line with the economic priorities of the country; fostering international Science and Technology (S&T) cooperation with special reference to cooperation within the EU; and providing facilities to assist R&D activities; publishing scientific books and periodicals as well as those that aid popularization of science and technology in the country. In 1995, there were no plans to revise and modify the legislation or national policies for the natural and social sciences to better meet the objectives of Agenda 21 in Turkey. Today, TÜBİTAK also acts as the secretariat of the Supreme Council for Science and Technology (BTYK). BTYK is the highest policy making body in Turkey in S&T, chaired by the Prime Minister. It is formed of eight ministers of science and technology related ministries as well as the heads of the other concerned institutions. TÜBİTAK is charged with preparing the agenda of the meetings of BTYK and formulates the draft resolutions to be discussed at its meetings. TÜBİTAK is currently involved in a top-level mission assigned to it by the BTYK, which concerns drawing up of a science and technology policy document for the period of 2003 to 2023 that coincides with the centennial of the Republic. This activity is centered on the "Vision 2023" project currently in progress to be completed and submitted to the BTYK, by the end of 2002. The Turkish Academy of Sciences (TUBA) also exists for scientific improvement in the field of social and natural sciences, which functions in much the same way as its counterparts in other countries. Both of these institutions aid in maintaining sustainable development in Turkey based on scientific achievement.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: The Web site of TÜBİTAK is: www.tubitak.gov.tr and the Web site of TUBA: www.tuba.gov.tr.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

Decision-Making: The Ministry of Education is primarily responsible for the education activities in Turkey. The Institutional and Training Council of the Ministry of Education is responsible for the preparation of curricula. The Ministry of Education and the Education and Publication Department of the Ministry of Environment, which are responsible for education on sustainable development, are preparing a common National Strategy on Education.

Activities with priority in the field of environment will be determined; coordination between the relevant groups in the implementation stage will be provided; and importance will be attached to the social reconciliation for the solution of problems. Efforts will be spent in order to provide policies to be implemented and the strategies to be developed in order to solve environmental problems in the middle term and long term in line with EU norms and international standards by taking the realities of the country into consideration as well.

NGOs and local authorities play an important role by organizing various information campaigns and other activities to raise public-awareness on sustainable development.

Programmes and Projects: The Education and Publication Department of the Ministry of Environment, which are responsible for education on sustainable development, are preparing a National Strategy on Education. They also undertake measures to encourage: partnerships; mobilize resources; provide information; and assess the needs of different population groups.

Status: According to 1999 data, the literacy rates for the population age 12 and over were 77 and 94 percent, for females and males respectively. In 2001-2002 period there are about 12,9 million students and 529 thousand teachers in 52 thousand public and private primary and high schools. However the share of private schools in student numbers is only about 2 percent. As regard to the informal education activities, about 3.2 million people have been trained at 7261 public and private institutions. In 2001-2002 education period, enrollment rates are 9.3 percent in pre-school education, 10.1 percent in primary education, 69.7 percent in secondary education of which 22.3 percent in vocational technical schools and 47.4 percent in standard high schools. Enrollment rate is 28.0 percent in higher education of which 17.8 percent is in formal education. The total student enrollment in the 1992-1993 school year was 12,186,619 of which 6,956,810 (57.1%) were males and 5,229,809 (42.9%) were females. Of Turkey's total labor force: some 78% have primary education or less; about 7% have graduated from junior high school; 9.7% from high school; and only 5.2% are university graduates.

The curricula for the primary school level has been revised to better address environment and development as a crosscutting issue. Measures are being taken to revise the curricula for the college and university level. In 1995, there were no plans to review the curricula at the secondary school level and in vocational schools. The total literacy rate is 80.5%, with 88.8% for males and 72% for females of the population. For the period 1985-1990, the schooling rates were: 5.1% in pre-school education for the 4-6 year-old age group; 100% in primary schools; 65.6% in junior high schools; 53% in high schools; and 26.7% in higher education, including 12.5% in formal higher education. When comparing schooling rates according to gender, there is a significant difference between the male and female population.

According to the 1990 Population Census, 55.26% of the eligible male population and 59.6% of the eligible female population was in primary school. In junior high schools, the rate was 10.85% for males and 7.57% for females. In high school, the percentages shift to 10.74% of the males and 8.28% of the females, and in higher education, 4.47% of the eligible male population was enrolled as compared to 2.57% of the female population.

The term of compulsory primary education was extended to 8 years in order to raise the level of education of the society with the Law No: 4306, which came into force in 1997. Required additional resources were provided with the same Law. In the direction of the Law No: 4702 which came into force in 2001, a structure, which takes the type of curriculum instead of the type of school, as a basis in the secondary school education has been adopted, and the share of vocational and technical education in the secondary school education has been increasing.

Illiterate population rate is 14.2% and there is an inequality between men and women with respect to education rate. But after transmission to 8 years in primary education, an improvement has been monitored in girls' education. Improving the quality and productivity in every stage of the education starting from the elementary school education, shifting towards education with computers, providing every school with Internet access, and developing curriculums is important. After the Law No: 4306 that came into force in 1997, works on improving the quality of education by enhancing its content and methods employed stepped up.

Curriculum development works are carried out continuously in a dynamic manner according to changes in the fields of individual, society and relevant matter. Sustainable development policies based on the integration of the environment and economy are attached importance in line with the developments in the world. In this context, certain subjects such as: environmental consciousness; human health; ecological balance; and preservation of historical and aesthetic values are included in the course subjects with interdisciplinary approaches, and activities in order to prepare books and education materials and to educate teachers are carried out in this direction.

Subjects related to the environment are included in curriculums of several courses given in the pre-school elementary and secondary education institutions, namely: Elementary School Natural Science and Social Studies Course; Elementary School Social Sciences Course; Science Course; Elementary School Citizenship and Human Rights Course; Elementary School Physical Education Course; Elementary School Selective Agriculture Course; High School Biology Course; High School Geography Course; High School Turkish Geography Course; High School Turkish Social and Economic Geography Course; High School Environment and Humans Course; and High School Physical Education Course.

Works for updating the Education Regulation for the Primary and Secondary School Institutions are underway. It is planned to establish children and environment clubs in the regulation.

Challenges: Education in Turkey is beset by serious problems, and the major factor underlying the shortfall is the high population growth. The educational level of the country's population is still insufficient.

The enrollment of students, which graduate primary school in secondary education level, is one of the main problems that Turkey's education system is dealing with. Arrangements have been inadequate for: creating the required environment to provide the possibility of equal education opportunities and to provide the possibility for education and training to everybody; preventing the piling up in transition to higher education; and establishing an effective guidance system.

The balance of employment-education couldn't have been realized and it is a crucial subject for sustainable development.

Capacity-Building, Education, Training and Awareness-Raising: No information available

Information: The Web page of The Ministry of Education is: www.meb.gov.tr and the Web page of Council of Higher Education (YOK): www.yok.gov.tr.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES

This issue has been covered either under **Chapter 2** or under the heading **Cooperation** in the various chapters of this Profile.

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CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

This issue deals mainly with activities undertaken by the UN System.

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CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

This issue has been covered under **Cooperation** in the various chapters of this Profile.

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CHAPTER 40: INFORMATION FOR DECISION-MAKING

Decision-Making: In Turkey, the following ministries and other institutions are primarily responsible for information for the different dimensions of sustainable development:

- Economic dimension: Agriculture (Ministry of Agriculture and Rural Affairs, State Institute of Statistics, State Planning Organization); Industry (Ministry of Industry and Trade, State Institute of Statistics, State Planning Organization); Transport (Ministry of Transport, State Institute of Statistics, State Planning Organization); Energy (State Institute of Statistics, Ministry of Energy and Natural Resources, Turkish Electricity Authority, State Planning Organization); Tourism (Ministry of Tourism, State Institute of Statistics).
- Social dimension: (State Institute of Statistics, Prime Ministry Family Research Authority).
- Environmental dimension: Atmosphere (State Institute of Statistics, Ministry of Environment); Inland Waters (State Hydraulic Works, General Directorate of Electrical Works, Study and Administration, General Directorate of Village Affairs, State Institute of Statistics, Ministry of Environment); Marine Environment (The Scientific and Technical Research Council of Turkey, Prime Ministry Undersecretariat for Maritime, Ministry of Environment); Land Resources (State Institute of Statistics, General Directorate of Rural Services, Ministry of Environment); Forests (Ministry of Forestry, Ministry of Environment); Flora and Fauna (Ministry of Environment, Universities); Solid Wastes (State Institute of Statistics, Ministry of Environment); Noise Abatement (Ministry of Labor and Social Security, State Institute of Statistics); Risk Abatement (Ministry of Public Works and Settlement) and Radioactive Wastes (Turkish Atomic Energy Authority, Ministry of Environment).

Programmes and Projects: Being aware of the importance of the information base in sustainable development, The National Academic Network and Information Center (ULAKBIM) has been established by TÜBİTAK under which it operates. The main function of ULAKBIM is to establish and operate a computerized information network that enables interaction within the institutional elements of the national scientific research and innovation system. Through special agreements, ULAKBIM makes scientific and technological information that exists in international databases available to its subscribers in a rapid and readily usable format. It also provides information networking expertise to aid scientific institutions applying for such support. In addition, TÜBİTAK's Information Technologies Research Institute (BILTEN) supports the technological context of information science. It operates in the Information Technology domain with emphasis on the technology of systems of information processing and communication.

On the other hand, the Ministry of Environment is planning to cooperate with the State Planning Organization and the State Institute of Statistics to integrate environment and development information in the near future. Turkey has carried out inventories of existing databases relevant to sustainable development. Data usually collected in the field of sustainable development include information about: socioeconomic issues (population, urbanization, agriculture, industry, tourism, energy, transport, resource exploitation, waste management); water resources (withdrawals and use, restitution and discharge, quality and treatment); soil and land-use (land-use, resources and production, salinization and erosion); and biodiversity (state of habitats, threats, evolution, protected and/or sensitive areas). Information is also collected about households, including their income-consumption expenditure, waste generation, and consumption patterns.

Moreover, Turkey is planning to develop national indicators on sustainable development as an inter-departmental effort (Ministry of Environment, State Planning Organization, and State Institute of Statistics) as soon as the Turkish Environment and Development Observatory has been established under the Mediterranean Action Plan Programme.

Status: The availability and quality of sustainable development information at the national level can be summarized as follows:

Agenda 21 Chapters	Very good	Good	Some good data but many gaps	Poor
2. International Cooperation and trade			X	
3. Combating poverty		X		
4. Changing consumption patterns				X
5. Demographic dynamics and sustainability			X	
6. Human health		X		
7. Human settlements			X	
8. Integrating E&D in decision-making			X	
9. Protection of the atmosphere			X	
10. Integrated planning and management of land		X		
11. Combating deforestation				X
12. Combating desertification and drought				X
13. Sustainable mountain development			X	
14. Sustainable agriculture and rural development		X		
15. Conservation of biological diversity			X	
16. Biotechnology			X	
17. Oceans, seas, coastal areas and their living resources		X		
18. Freshwater resources		X		
19. Toxic chemicals		X		
20. Hazardous waste		X		
21. Solid wastes				X
22. Radioactive wastes			X	
24. Women in sustainable development		X		
25. Children and youth			X	
26. Indigenous people			X	
27. Non-governmental organizations				X
28. Local authorities		X		
29. Workers and trade unions		X		

30. Business and industry			X	
31. Scientific and technological community			X	
32. Farmers				X
33. Financial resources and mechanisms		X		
34. Technology, cooperation and capacity-building		X		
35. Science for sustainable development				X
36. Education, public - awareness and training			X	
37. International cooperation for capacity-building			X	
38. International institutional arrangements			X	
39. International legal instruments			X	
40. Information for decision-making			X	

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: The relevant Web pages concerning information for decision making are:

- State Institute of Statistics: www.die.gov.tr;
- TÜBİTAK: www.tubitak.gov.tr;
- TUBA: www.tuba.gov.tr;
- State Planning Organization (SPO): www.dpt.gov.tr;
- General Directorate of Electrical Works, Study and Administration: www.eie.gov.tr;
- the Ministry of Environment : www.cevre.gov.tr;
- the Ministry of Forestry: www.orman.gov.tr;
- the Ministry of Agriculture and Rural Affairs: www.tarim.gov.tr;
- the Ministry of Tourism: www.turizm.gov.tr;
- the Ministry of Industry and Trade: www.sanayi.gov.tr;
- the Ministry of Transport: www.ubak.gov.tr;
- the Ministry of Energy and Natural Resources: www.enerji.gov.tr;
- the General Directorate of Meteorology: www.meteor.gov.tr;
- the State Hydraulic Works: www.dsi.gov.tr;
- the Undersecretariat of Maritime Affairs: www.denizcilik.gov.tr;
- the Family Research Authority: www.aile.gov.tr;
- the General Directorate of Rural Services: www.khgm.gov.tr;
- the Ministry of Labor and Social Security: www.calisma.gov.tr;
- the Ministry of Public Works and Settlement: www.bayindirlik.gov.tr; and
- Turkish Atomic Energy Authority: www.taek.gov.tr.

Research and Technologies: With regard to the technological capacity for sharing information electronically, only a few computers have access to international telecommunication lines. This is due to the high costs of

telecommunication and to the insufficient number of trained personnel. Concerning capabilities to access remotely sensed data, the State Institute of Statistics has capacity to access data about annual crop yields.

Financing: No information available.

Cooperation: No information available.

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CHAPTER: INDUSTRY

Decision-Making: The Ministry of Industry and Trade is mainly responsible for preparing necessary legislation to provide necessary environment for the industrial activities in Turkey.

The Ministry of Industry and Trade has prepared the law No 4562 on “Organized Industrial Zones” which was published at the Official Gazette dated 15 April 2000 and numbered 24021, and the law No 4691 on “Technology Development Zones” which was published at the Official Gazette dated 6.7.2001 and numbered 24454 in order to promote sustainable development and to prevent the activities which are not environmentally-sound.

The Government gives high priority to environmental impact assessment (EIA) within industry in order to protect the atmosphere, the Government of Turkey promotes policies and programmes in the areas of energy efficiency, industrial pollution control, and management of toxic and other hazardous waste.

The main strategy of the Ministry of Industry and Trade for the environmental pollution control is to collect all enterprises together under the framework of Small Scale Industry Sites and Organized Industrial Zones.

The industrial sector is working towards the integration of environmental considerations. Among the Major Groups, Industrialists, environmental protection organizations and the organizations of Environment and Cultural Inheritance are working together for the protection of environment. Among this involvement of the major groups, voluntary agreements could be given as an important example between industrial enterprises and the Ministry of Environment.

Programmes and Projects: No information available.

Status: By the end of the year 2001, the number of Small Industrial Estates and Organized Industrial Estates constructed were 349 and 65 respectively. At present, the number of ongoing projects of Small Industrial Estates and Organized Industrial Estates are 141 and 210 respectively. Some Organized Industrial Estates have wastewater treatment facilities. The main objective of the Ministry of Industry and Trade is to have constructed wastewater treatment facility in all Organized Industrial Zones.

Challenges: Under the preparations for the full membership to the European Union, sustainable development objectives taken place in the National Program will be given priority.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: The Web Site of the Turkish Ministry of Industry and Trade is: www.sanayi.gov.tr.

Research and Technologies: To reduce harmful emissions into the atmosphere from industrial activities, industries are encouraged to develop safe technologies. The Government gives high priority to the promotion of R&D relating to appropriate methodologies, life-cycle analysis of products, and eco-audits. Besides, environmental management systems such as ISO-14000 are being increasingly applied through the auditing of Institute of Turkish Standards.

Financing: The Ministry of Industry and Trade provides about 90% of investment expenditures (land, infrastructure, tax and duties exemption, etc.) of Small Industrial Estates and Organized Industrial Estates with giving low interest-long term credits.

Cooperation: The Ministry of Industry and Trade has been working in cooperation with the Ministry of Environment and industrialists in the framework of sustainable development objectives.

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CHAPTER: SUSTAINABLE TOURISM

Decision-Making: The Undersecretariat of State Planning Organization (SPO), under the Prime Ministry of Turkey is the central authority carrying the responsibility of: preparing Five Year Development Plans and yearly implementation of programs of public sector investments; stating basic policy decisions for tourism sector; and allocating the necessary budget. The SPO is responsible for the coordination of national and regional development at the highest level. Through its central, provincial and overseas units, the Ministry of Tourism carries out the following tasks for which it is responsible:

- providing infrastructures and public services in accordance with the yearly implementation programs;
- the elaboration and approval of land use plans in tourism areas and centers;
- the promotion of the country abroad;
- the researches and the collection of the statistical data;
- **the vocational training in tourism;**
- the follow-up the intervention of governmental bodies, local administrations, professional associations; and unions and non-governmental organizations.

The Ministry of Tourism; Ministry of Public Works and Resettlement; and the Ministry of Environment are responsible for the coordination of Land-Use Plans as well as Environmental Impact Assessment studies to ensure a physical development in harmony with environment. The three ministries have their provincial units which work under the coordination and authority of the provincial governor. They have to follow-up the implementation of investments and reinforce the legal framework. The Ministry of Culture has the authority of declaring “Historical” and “Natural” sites where special measures of protection and preservation are reinforced. The Ministry of Tourism is primarily responsible for tourism development.

Turkey has gradually put in action a body of legislation concerning tourism in order to: regulate the establishment and operation of tourism operators; promote tourism development; protect and preserve certain vulnerable areas; and provide financing for certain projects requiring heavy investment. “Tourism Encouragement Law” of 1982 is one of the most important legislative and financial instruments, which is indicative for a new era. This Law has attempted to overcome lack of coordination between various tourism-related organisations. Formalities and requirements for the allocation of state owned land have been simplified reducing the number of involved bodies. On the other hand, Law no 2863 for the protection of historical assets, Coastal Law No 3621 and Special Environmental Protection Areas by-law No.383 are among the important legislative measures to establish the links between tourism, environment and national/regional development. The main purpose of the Law of Coast is the protection and conservation of coastal areas, particularly from indiscriminate and illegal constructions. These Laws are supported by a number of specific regulations. The regulation on qualifications for tourism investment and accommodation facilities has numerous environmental protection provisions: the documentation and information needed to obtain an investment certificate such as land-use plan, road access map or connection to main sewerage; monitoring and control; and environmental protection and safety measures for drinking water, waste water treatment; and etc. Besides, Environmental Impact Assessments (EIAs) is compulsory in Turkey for tourism investment projects.

Governmental decrees define “Special Environment Protection Areas” proposed by the Ministry of Environment; “Tourism Areas” and “Tourism Centers” proposed by the Ministry of Tourism and “Historical or Natural Sites” proposed by the Ministry of Culture. Once discussed and approved by Interministerial Committees, relevant ministries control and coordinate the development of the areas under their respective jurisdiction.

The Ministry of Tourism, in coordination with other sectoral associations, is carrying out studies for the institutional re-structuring of the tourism sector for the adaptation to globalization, maintenance of total quality, effective and efficient management and sustainable development. Besides, some modifications in “Tourism Encouragement Law” and the “Law on Travel Agencies Union”, Draft Laws such as “Law on the Union of

Tourism Professionals” and “Law on the Regional Tourism Service Unions” are on the agenda. The approval of regulative matters (Laws, By-laws and Regulations) is the main task of the National Parliament.

For over three decades Turkey has continued using five-year plans as a major instrument of overall development, although the content (goals, priorities, tools) and the public private balance kept changing. Parallel to these macro level changes, in tourism, emphasis shifted from the “pioneering” role of the State in all aspects of tourism activity to a greater role assumed by the private sector, NGO’s and new combinations of various organisations in joint cooperative action. These professional sector organisations were instrumental in the partial transfer of some functions previously conducted by public bodies. In many fields these organisations have been proved to be capable and representative actors to cooperate both with public bodies at various levels and NGOs.

In the current 8th Five-Year Development Plan (2000-2004) emphasis on tourism goals and policy began to shift to: improved quality (both in facilities and services); environmental sustainability; and more egalitarian approach in spreading the beneficial effects of tourism particularly to the less developed areas. The new goals of Turkish tourism have become to create an efficient tourism sector with high international competitiveness, to ensure the preservation and enhancement of the country’s natural cultural and historical environment in a sustainable manner and to create an efficient private sector with a high international competitiveness.

Tourism in Turkey is based on country’s natural beauty and historical and cultural heritage. Turkey will continue to implement projects to preserve the environment and its cultural identity.

The protocol signed in 1998 between the Ministry of Environment and SPO for the implementation of “National Environmental Action Plan” (NEAP), describes the responsibilities of both parties to: increase environmental awareness; and to achieve improved environmental management, and sustainable economic, social and cultural development.

Turkey, has been facing a challenge in tourism and hence in the process of search for a new division of labor between different levels of the state; private sector; non governmental organizations; and professional and voluntary organizations. As a general trend in Turkey, parallel to macro-level developments in the political, economic and social spheres, there has been a gradual transformation from a basically state-sponsored and managed development to different forms of public-private cooperation, even partnerships in specific cases. The State Planning Organization increasingly builds coordination between ministries into its strategies, in particular for transport, employment, environment, culture and industry. Cooperation with regional and local authorities has also gained ground. This has led emergence of new “actors” as well as new patterns of cooperation between different layers of state and non-governmental organizations. During the preparation of Five Year Development Plans, SPO formally invites: the representatives of tourism sector (the Ministry of Tourism, Association of Tourism Investors, Union of Travel Agencies, Turkish Hotel Associations); Universities; Local Administrations; and all related NGO’s to a round table discussion and state of affairs, problems and remedies of tourism industry is determined cooperatively.

Programmes and Projects: “Low-cost Imaging based Mapping System Development for the Observation of Natural and Anthropogenic Changes in Coastal Zones” is a project whose aim is the detection, via digital aerial photography, of coastal morphology and erosion trends on coastal regions due to negative human activities. This will be the first time a study of this nature to be conducted in Turkey. Previous studies of this type have used images from Landsat and SPOT satellites. Among the various landscapes, the ones that change fastest are the ones on the coast. For example, where rivers not regulated by dams meet the sea deltas are created. On the other hand, when dams are built on delta generating rivers, delta regions diminish. Another factor that influences coastal change is erosion caused by excavation and removal of coastal dunes by aggregate merchants, to be used as aggregates for concrete. The situation has been deteriorating due to excessive intervention by such excavators on the coastal sand and gravel deposits and also due to building of new dams on the rivers. Another factor that affects the morphology of the coastal regions is the increase in the sea level due to global warming. Although not as yet an advanced level, this factor would also contribute to increased coastal erosion.

In order not to lose the coastal regions that will be used for recreational purposes in coming years and to prevent the buildings from collapsing in coasts, it has become a necessity to follow up closely the changes and trends in the coastal regions.

In previous projects supported by the Turkish Scientific and Technical Research Organization (TÜBİTAK), the changes in the coastal regions have been detected through aerial photographs taken by the Military Command of Cartography, on different dates, and from the maps generated from them. More recent changes have been detected by hand measurements. In recent years, with the advance in digital photography and digital photogrammetry, natural and anthropogenic changes in the coastal regions can be determined in a faster manner and more frequently. However, obtaining the maps of a region by using photogrammetric methods is still an expensive process. In this survey, the maps of the area studied will be obtained in a cost effective manner by using aerial photography, and subsequently evaluation of the maps obtained by using the Geographic Information System (GIS). This method constitutes an easy and less costly way of receiving updated information about coastal erosion.

The Ministry of Tourism (MOT), in 1992 became instrumental in Turkey's application to be a member of the Foundation for Environmental Education in Europe (FEEE), running the Blue Flag Campaign, but soon after, the Turkish Foundation for Environmental Education has carried out the Blue Flag Campaign with technical and financial supports of the Ministries of Health and Tourism. Another project carried out by the Ministry of Tourism is "Mediterranean-Aegean Tourism Infrastructure and Coastal Zone Management" (ATAK) which covers 130 settlements on 4000 km of coastline, aiming to complete the infrastructure needs concerning water supply; and wastewater and solid waste collection and disposal. The project provides also a new institutional arrangement for private sector participation. In Çeşme-Alacatı (İzmir), a sub- project of ATAK, involved municipalities formed a union for the implementation of environmental infrastructure and received a foreign loan from the World Bank. This is an example of small and medium sized municipalities receiving a foreign loan and making arrangements for the involvement of private sector in operational phase.

The South Antalya Project implemented in the province of Antalya, selected by the World Tourism Organization as one of the six best-integrated tourism development projects in the world, is a good example of sustainable tourism and development. Infrastructure facilities have been completed by financing from the general budget and through the World Bank loans and the bed capacity (around 65 thousand beds) has been created by the private sector.

First example in Turkey for private sector participation in environmental infrastructure services is Antalya Metropolitan Municipality, receiving a World Bank loan to finance water supply and wastewater treatment investments. A ten-year service contract was signed in 1996 with a French operating company for the operation of environmental infrastructure developed.

"The Prevention of Marine Pollution" is an environment-oriented project, which is being carried out on Turkish coastline extending almost 8 thousand kilometers. Turkey takes part in MARPOL Protocol and fines for pollution caused by ships and yachts in harbors.

To encourage and reward environmentally conscious facilities, an anchor symbol is awarded to successfully managed marinas: a dolphin for yachts; and a pine tree for accommodation facilities.

The Ministry of Tourism works in cooperation with the Ministries of Culture and Forestry as well as Local Administrations for restoration and evaluation of historic buildings, natural sites and national parks. An eco-tourism master plan study for Kazdağları and Araitha in Aegean Region is carried out through bi-lateral cooperation of Greece and Turkish governments. Turkish Ministry of Forestry is also involved in this project.

There were several other initiatives and efforts that helped further demonstrating the intimate relation and interaction between tourism and environment.

Status: As mentioned above tourism sector is working towards the integration of environmental considerations. Preservation and development of the environment has been increasingly a priority issue for members of tourism industry in Turkey. The MOT has been careful requiring "environmental impact" studies for each investment ever since the inception of the state land allocation scheme. Similarly the Tourism Bank, and later, the Turkish Development Bank, have insisted on the inclusion of the environment factor in all feasibility studies, as well as

undertaking “carrying capacity” surveys for regions. Preservation of natural and cultural heritage has been achieved through the enforcement of legal framework, physical planning and monitoring.

Capacity-Building, Education, Training and Awareness-Raising: Environmental education is provided in school programs. Turkish universities offer courses on ecology and laws and policies related to environment finds place in their curriculums.

The Ministry of Tourism and Ministry of Environment both carry education, training and awareness-raising programs and projects. The Development and Education Foundation and Boğaziçi University in İstanbul also have some training programs certified by World Tourism Organization.

As already stated in programs and projects section, Turkey participates in international “Blue Flag” Campaign and information and awareness campaigns initiated by the Ministry of Tourism seek to encourage and reward environmental responsibility.

Information: The Ministry of Tourism is still the main actor in country image building and tourism promotion abroad. The MOT performs this function through 24 bureaus in 21 countries. The web site of the Ministry of Tourism is www.turizm.gov.tr. Also some of the cities governance, regional and abroad tourism offices have their own web sites providing tourism information.

Research and Technologies: The use and dissemination of new information and communication technologies are highly supported by the Ministry of Tourism and projects are implemented to this end. The network infrastructure of the Ministry of Tourism is restructured. In order to promote Turkish tourism better, on the agenda are: the GIS Project; Euro-Mediterranean Information Society (EUMEDIS) Project; and a cyber project of “Museums with no Frontiers”.

In the context of survey on inbound tourism of the Med-Tour project, the Ministry of Tourism and the State Institute of Statistics conducted the “Foreign visitors Survey” in 2001. This survey enables to implement Tourism Satellite Accounts. Within the framework of standardization of tourism statistics along with the EU regulations, studies are going on within the context of Med-Tour Project with related institutions.

Financing: After 1983 all state investment in touristic accommodation has been stopped and preparations to privatize existing establishments have been started. The practice of price setting has been discontinued, allowing to market mechanisms to function. An elaborate incentive system, using the Ministry of Tourism and Tourism Bank as main instruments has been introduced.

The tourism investor to be entitled to incentive privileges has been expected to obtain an “encouragement certificate” from the State Planning Organization (now Treasury) as well as “investment certificate” from the Ministry of Tourism. As a result of these efforts the number of MOT licensed establishments, which was around 62.000 in 1982 increased to 364.000 in 2001.

Financing of the infrastructure projects has been through General Budget Allocations but in some recent tourism development projects such as Belek Tourism Development, land has been leased to private investors and they have shared 1/3 of the infrastructure costs as well as construction costs.

Cooperation: To inform and propose to the government on improving relations with international economic institutions and carrying out contacts and negotiations with these institutions in accordance with the principles and targets of development plans and annual programs are among the duties and functions of State Planning Organization.

Turkey is a founding member of OECD. Turkish Ministry of Tourism coordinates the activities of Tourism Committee with related Turkish institutions.

Turkish Ministry of Environment coordinates the activities among all related Turkish agencies and institutions with the Secretariat of Mediterranean Action Plan (MAP).

Turkey is also a member of World Tourism Organization. The Ministry of Tourism coordinates the activities among the related Turkish institutions and the World Tourism Organization.

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