

II. NATIONAL REPORT of TURKEY

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ACRONYMS

| | |
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| MOE | Ministry of Environment |
| MOF | Ministry of Forestry |
| MARA | Ministry of Agriculture and Rural Affairs |
| SPO | State Planning Organization |
| TBMM | Turkish Grand National Assembly |
| GDSHW | General Directorate of State Hydraulics Works |
| GDSMS | General Directorate of State Meteorological Service |
| GDRS | General Directorate of Rural Services |
| NAP | National Action Program |
| NCB | National Coordinating Body |
| RAP | Regional Action Program |
| NGOs | Non-Governmental Organizations |
| GIS | Geographical Information Systems |
| UN | United Nations |
| UNCCD | United Nations Convention to Combat Desertification |
| RIANMC | Regional Implementation Annex for the North Mediterranean Countries |
| UNDP | United Nations Development Program |
| FAO | Food and Agricultural Organization |
| NEAP | National Environmental Action Plan |
| FYDP | Five-Year Development Plan |
| OECD | Organization of Economic Cooperation and Development |
| IULA-EMME | International Union of Local Authorities, Section for the Eastern Mediterranean and Middle East Region |
| HCP | Higher Council for Planning |
| TEMA | The Foundation for Combating Erosion, Aforestation and Protection of Natural Assets |

SUMMARY

The United Nations Convention to Combat Desertification was adopted in Paris on 17 June 1994 and opened for signature on 14-15 October 1994. The Convention was signed in 1994 in Paris by Minister of Environment on behalf of Turkish Government and approved in November 1996 by Environment Commission in Turkish Parliament. The Convention was ratified by the Grand National Assembly of Turkey with law number 4340 on 11 February 1998. The stated objective of the Convention is *“to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in affected areas”*.

Within this framework, many initiatives have been launched and undertaken for the implementation of the Convention and combating drought both governmental and institutional levels. After being Party to the Convention, “A National Seminar on Enhancing Awareness on the Convention” was held in İzmir on 20th-22th of May 1998 with broad participation of technical and senior staff and scientists from public and research institutions, universities and NGOs. Additionally, a meeting was held in Bolu-Gölköy from 8 to 9th of July 1999 in order to determine an outline of National Action Programme of Turkey. The representatives of all relevant ministries, institutions, universities and NGOs were convened together in this meeting to discuss specific problems related to desertification and drought in affected areas and particularly, local communities in these areas. It was clearly addressed that there is a need to develop an effective and integrated soil-water management approach to combat desertification both local and national levels. As a result of the two-days meeting, an outline for National Action Program to Combat Desertification and Drought in Turkey was formulated (Annex I).

In accordance with the provisions of the Convention, National Coordinating Body (NCB), composed of technical and administrative staff of key institutions directly responsible for combating drought and desertification, was established for preparing NAP in carrying out the obligations pursuant to article 5 in May 2000 in a consensus with the high level representatives of MOE, MARA, MOF, GNRS, GDSHW, GDSMS and the Ministry of Foreign Affairs. In addition to establishment of NCB, Head of Plant Protection and Combating Erosion Department of MOE is designated as national focal point.

Pursuant to article 9, affected developing country parties shall prepare a national action program. Turkey gives a great importance for the implementation of UNCCD at all levels and is aware of NAP is the key operational tool for transforming the provisions of the Convention into concrete actions and measures to combat desertification. As it is mentioned above, the outline of National Action Program was formulated in a short time and a draft document which identify existing situation of Turkey relevant to erosion, drought and poverty, and compile all relevant information, was prepared at the end of 2001 and sent to approximately 20.000 person by e-mail to take their contributions and views till end of March 2002. Now, it is under revision. On the other hand, Turkey has involved actively in RAP studies, undertaken within the Regional Implementation Annex of the Northern Mediterranean s (RIANMC- Spain, Greece, Portugal, Italy and Turkey).

The Program, entitled “National Program on Environment and Development”, were launched in 1999 by MOE in the financial and technical supports of UNDP in order to cooperate with the Government of Turkey for the integration of environmental concerns in development policies/programmes/plans in two cross-sectional areas: sustainable energy & atmospheric protection and combating desertification, which are the two of the priority

action areas identified in NEAP and in line with Turkey's national follow up commitments within the framework of the regional and international agreements. The program is designed in two subsequent phases. Phase I is aimed for (i) establishment of the Program Coordination Unit (PCU). It was designated by UNDP in close cooperation with MoE in 2001; (ii) initiating a consultation process among national stakeholders with a view to ensuring their participation and contributions to the program activities as per the Program Support Objectives (PSOs). PSOs of National Initiative for Combating Desertification are to develop a NAP and to formulate and implement small-scale demonstration projects for implementation of the NAP particularly in rural and least developed regions of the country; (iii) conducting a comprehensive needs analysis in the selected program thematic areas; (iv) subsequent formulation of the sub-projects; (v) implementation of a selected number of sub-projects which are of priority as determined by the Program Steering Committee (PSC); and (vi) resource mobilization for Phase II of the program. On the basis of Phase I, Phase II will aim for realizing all program objectives through increased number of sub-projects and implementing agencies. Program activities under Phase I will be initiated with UNDP/TRAC resources of US\$ 200,000 and cost sharing by the Ministry of Environment in the amount of US\$ 200,000. It will be finalized at the end of 2002.

In Turkey, activity for combating erosion was initiated in 1955 for the first time in order to protect Tokat Province from flood by the MoF. Activities related to the prediction of drought, erosion control, improvement productivity of land, the rehabilitation, conservation and sustainable management of land and water resources are listed below:

- Construct check dams in the gullies to prevent further cutting;
- Construct soil saving dams at such intervals of such heights to fill up and restore themselves;
- Construct cross-check in channel to prevent bed erosion;
- Construct training walls;
- Planting the eroded area to some form of vegetation;
- Cover planted area with mulch, brush, straw or other suitable material to hold the loose soil in place, and help to keep soil moist;
- Construct a system of terraces having protected outlet and drops;
- Aforestation with terraces on devastated hillside;
- Establish meteorological stations and facilities to make meteorological observations and prepare weather forecasting and data;
- Establish a radar and automated weather station network for the demand for now-casting of severe weather and early warning of other of climatic-related natural hazards;
- All kinds of forestation and precautions to prevent floods, landslides, soil corrosion and erosion, and to rehabilitate rivers and their sources within the borders of national forests;
- Zero tillage, proper seed bed preparation and contour ploughing in sloped lands;
- Prevent the burning the post-harvest mulches,
- Use environmental-protective models during the arrangement and rehabilitation of grasslands and making seasonal arrangements, where possible;
- Conserve biodiversity;
- Minimize chemical use, promote new techniques that help sustainability of environment;

- Encourage organic agriculture;
- Form wind-breaker structures;
- Rehabilitate and restore salinated lands;
- Apply proper and efficient watering methods, and improve drainage conditions;
- Monitor all agricultural activities by using GIS;
- Formulate and carry out rural development projects;
- Realize arrangements for providing means of settlement for the refugees, migrants and for those whose land have been expropriated, both within and outside the agricultural areas;
- Provide credits to the farmers for the purpose of developing soil and water resources and to prepare technical aid projects;
- Provide soil protection services and other services related to the construction of facilities such as ponds, pumping stations, reservoirs and channels for the purpose of supplying water for irrigation and potable water for animals;
- Realize the collection of lands, render in-field development services and construct individual drainage systems,
- Make research for development soil and water resources.

All those activities have been carried out through past years in Turkey. Our benefits from being Party to the Convention will be to establish coherence by bringing together all key actors to support anti-desertification activities, to promote policies and strengthen institutional frameworks that will enhance cooperation and coordination at national level, lastly and more important, to put bottom-up approach into the agenda to mitigate drought effects and combat erosion.

Legal and regulatory framework on erosion and desertification in Turkey are listed below:

1. Law on Establishment and Duties of Ministry of Forestry
2. Law on Forestry
3. Law on Mobilization for Aforestation and Erosion Control
4. Law on Support of Forest Villagers for Their Development
5. Decree Law on Establishment and Duties of Ministry of Agriculture
6. Law on Grazeland
7. Law on the Aid to Farmers Affected By Natural Disasters
8. Law on the Aid to Farmers Affected By Natural Disasters
9. Law on Establishment and Duties of General Directorate of Rural Services
10. Law on Establishment and Duties of General Directorate of State Meteorological Service
11. Law on Establishment and Duties of General Directorate of State Hydraulics Works
12. Law on Environment
13. Law on Establishment and Duties of Ministry of Environment
14. Directive on Utilisation of Agricultural Lands for Non-Agricultural Purposes
15. Notice for Prevention Burning Post-harvest Mulches

1. OVERVIEW

Turkey, with an area of 779 452 km², straddles Europe and Asia across the Sea of Marmara and Istanbul and Çanakkale Straits. Turkey is bordered on the northwest by Bulgaria and Greece, on the east by Georgia, Armenia, Azerbaijan and Iran, and on the south by Iraq and Syria. Turkey's 8 333 km coastline extends along the black Sea, the Sea of Marmara, the Aegean and the Mediterranean.

Turkey contains 75% of the plant species found in Europe. Cherries, apricots, almonds, figs, and tulips all originated in Turkey, as did domestication of plants. Flora includes many wild relatives of important commercial crops such as wheat, chickpea, lentil, apple, pear, and pistachio. Among continental countries, Turkey ranks ninth in terms of richness of biodiversity; over 33% of its flora are endemic species (Anonymous, 1997). Studies indicate that there are 163 plant families covering 1,225 types, which in turn cover about 9,000 species. These grow naturally and about one third are endemic. Of the total of 2,748, 46 may become extinct, 183 are prone to be harmed, 1,701 are scarce, 5 are safe, 798 are scarce and safe, 49 are vague as to their status, and on the remaining 282 species there is insufficient information. Turkey has about 120,000 invertebrate, 410 fish (192 of which in inner waters), 414 bird, 8 turtle, 49 lizards, 36 snake, about 20 frog and 155 mammal species. The Biodiversity Strategy prepared in collaboration with the World Bank (1997) classified four of the mammal species and 13 bird species as threatened by extinction; in 1996, the OECD classified 10% of the known species of mammals, 9% of the birds and 4% of the fish as threatened. There are relatively few major protected areas covering only 2,700 km.² (1990), with another 2,000 km.² classified as scientific reserves and national parks. Protected areas totaled 0.3% of the national territory, compared to an OECD average of 7.8%. The geological structure, topography, climate, wildlife, and plant cover are diverse, and the country is divided into four coastal units (the Black, Marmara, Aegean, and Mediterranean Seas) and three mountainous areas. Nearly 63% of the land has slopes steeper than 15% in average, even in the coastal areas. Average altitude is 1,132 m and only 10% of the country is less than 250 m above sea level. High mountains are concentrated in central and eastern Anatolia. Earthquakes, some quite powerful, occur mostly along the north Anatolian fault that runs from the Dardanelle Strait through the Eastern Black Sea Mountains, paralleling the Black Sea coast. The mountainous terrain restricts agricultural development; only 24% of the land area is suitable, and nearly three-quarters of it is prone to erosion.

Turkey is one of the fortunate countries in which all four seasons and various climate types are present. Large plains, highlands, mountains and deep valleys mainly characterize her geography. Turkey lies between the temperate zone and the sub-tropical zone. These peculiarities are causing different seasons to be lived at the same time, over the different climatic regions of the country. Turkey divides into five basic climate regions: Mediterranean Climate, Black Sea Climate, Semi-humid Marmara Climate, Steppe Climate and Continental Eastern Anatolia Climate.

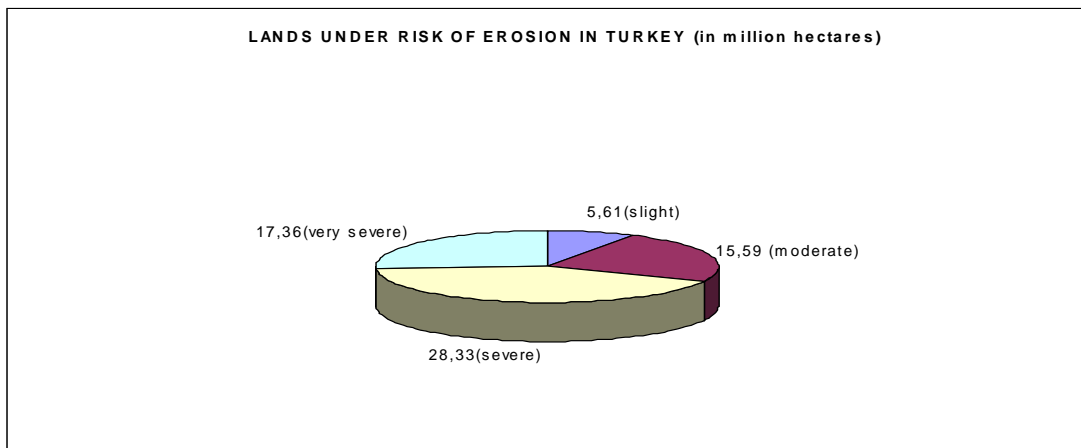
Nearly 63% of the land has slopes steeper than 15% in average, even in the coastal areas. Average altitude is 1,132 m and only 10% of the country is less than 250 m above sea level. High mountains are concentrated in central and eastern Anatolia. The physical landscape is closely linked to environmental conditions:

- Turkey's location translated into rich biodiversity, sensitive ecological habitats and a wealth of cultural and historical resources;
- The extensive shoreline and access to four seas that creates difficulties for managing coastal zones and marine resources;
- Earthquakes that are important natural hazards;
- The mountainous and steeply sloped topography that causes soil erosion and require special agricultural techniques;
- Region-specific, heavy rainfall that enhances the risk of landslides and floods while aridity combined with human activity, leads to desertification;

- Uncontrolled exploitation of mineral resources that causes landslides, contaminates groundwater, and threatens the safety of miners; and
- Significant hydrological resources that offer opportunities for water management but create environmental concerns.

According to the projections of State Institute of Statistics (SIS) and State Planning Agency (SPO), the population estimate is 63.7 million for 1997, with an annual rate 1.6 %, the highest of all OECD countries (OECD, 1996). SIS projects that the population will raise to 66.8 million in 2000, and annual growth rate will drop to 1.5% (SIS, 1995). It is expected that by 2000, 70% of the population will live in urban areas, with over a third located in settlements of more than one million people (SPO, 1995).

Erosion is one of the most severe rural environmental problems affecting 81% of the total land surface in varying levels of severity. About 73% of the cultivated land and 68% of the prime agricultural land (Classes I-IV) is prone to erosion. Stream bank erosion affects 57.1 million ha while wind erosion degrades another 466,000 ha. As a result, about one billion tons of soil is carried away each year. Proportion of areas prone to erosion is at a "critical" level in some provinces of the country where forested land is also relatively high. This indicates that agricultural land in these provinces mostly consists of difficult-to-hold soils of steep slopes where agricultural plots have been created through deforestation. The share of severe erosion is also relatively larger in areas where agriculture is practiced without any soil conservation measures. Erosion has other negative impacts, such as reducing the life of dams through siltation. Although abatement programs were initiated 25 years ago by the Ministry of Forestry, DSI and GDRS, they have only been applied to 2.2 million ha area.



2. STRATEGIES AND PRIORITIES ESTABLISHED WITHIN THE FRAMEWORK OF SUSTAINABLE DEVELOPMENT PLANS AND POLICIES

The sustainable development policies and plans, and strategies and priorities established within the framework of these plans are as follows:

- Five-year Development Plans
- Turkey Environmental Action Plan
- National Agenda 21
- Local Agenda 21
- Energy-Environment Policies And Position Of Turkey In Climate Change
- Biodiversity Strategies And Position Of Turkey In Biodiversity

2.1 FIVE-YEAR DEVELOPMENT PLANS

The Prime Minister or the Minister concerned instructs the State Planning Organization to prepare the development plan and annual programs within the framework of the principles and targets adopted by the Council of Ministers. The High Planning Council meets within a week following the submission of the development plan to the Prime Ministry. The Council examines the plan and reports to the Council of Ministers whether the plan is consistent with the main targets adopted. Following the adoption of the plan by the Council of Ministers it is submitted to the Turkish Grand National Assembly for approval.

The Undersecretariat of the SPO works in close cooperation with the ministries, public institutions, the State Economic Enterprises, establishments having the nature of public institutions and high level private institutions in compiling information, preparing the plans and monitoring their implementation.

The SPO determines the data required at the stages of preparing, implementing and monitoring the development plans and annual programs, the purpose and time intervals for the compilation and evaluation of these data and the form of presentation of them.

The economic, social and cultural targets and the principles for the determination of policies are decided by the High Planning Council. The Council of Ministers discusses the principles determined and reaches a conclusion.

Annual Programs are prepared by the Undersecretariat of the State Planning Organization and then submitted to the High Planning Council. The Council examines the programs and reports to the Council of Ministers. The programs adopted by the Council of Ministers gain certainty. Medium - term estimates are also submitted with the programs. Annual programs are prepared before the budgets and working schedules. While preparing the budgets and working schedules, the principles adopted within the annual programs are taken into account.

During the discussion of the budgets at the Turkish Grand National Assembly Plan and the Budget Commission, the principles and procedures laid down in Article 2 of the Law, no 3067, on Putting the Development Plans into Effect and Protection of Their Entirety shall be taken as a basis for adding the multi-year investment projects which are closely related with the entirety of the Development Plan and Annual Programs.

With a view to accomplishing smoothly the macro policies included in the annual programs, evaluation reports are submitted to the Council of Ministers.

Five-Year Development Plans have been prepared since 1963 and lastly IIX. Five-Year Development Plan (2001-2005) was approved in 2000. After the Stockholm Conference on Environment, national environmental policy was first articulated in the Third Five Year Development Plan. It was previously developed by separate public organizations, especially local governments, so it was not national in scope.

The relationship between environment and economy took the place under the title of “Environment and Settlement” in the VI. Five-Year Development Plan for the first time (more information, see pages 5-9 of I. National Report of Turkey). The VII. Five Year Development Plan currently embodies national policy in all key sectors, including the environment.

2.2 NATIONAL AGENDA 21

In line with Turkey’s commitments at the UNCED (Rio de Janeiro, 1992), the Government of Turkey has decided to initiate a programme for the preparation of a “National Agenda 21”. Upon review of existing policies, plans as well as studies previously made, including the NEAP, the National Agenda 21 will be prepared during the course of the proposed sub-programme giving due consideration to the environment and development issues at the local, national and global levels.

The study will review existing environmental problems, the priority attached to them at present, assess environmental and other policies and their mutual interaction, and establish the basis for action; set the objectives for sustainability and identify the activities to be undertaken to achieve these objectives. The Draft National Agenda 21 try to address problems of concern to all major groups of the society and will be prepared through a participatory process, thus be a guide to the government, private sector, all social groups and individuals in the global pursuit to achieve sustainable development.

The Final Draft National Agenda 21 prepared in May 2000 after the discussion at the central level. After the discussion at the central level MoE have decided to disseminate and evaluate the Final Draft NA 21 at local level having in mind participatory principle on AGENDA 21.

At this point, MoE and IULA have worked together to take the local contribution for NA 21 within the Local Agenda 21 organisations. And MoE and IULA have started “Discussion of Draft National Agenda 21 at Local Level Project”.

With this Project

Our aims are;

1. to provide the participation of all kind of stakeholders at local level,
2. to built strong relationship between NA 21 and LA 21,
3. to develop co-ordination between institutions and NGO studies at central and local level.

Criteria for the Identification of Cities:

1. being LA 21 project partner,
2. represent different region in TURKEY,

3. having LA 21 working groups
4. just started to establish working groups.

In those cities, “Informative and Evaluation of NA 21 Meeting” have been realised in two steps. At the first step, with the distribution of Draft NA 21 Report, promoting of NA 21 meetings have been realised. At the second step, representative of the central government, participants from local authorities and local NGOs have discussed and evaluate the Draft NA 21 Report.

As a conclusion, after the meetings local contribution have been taken and been integrated to the Report and Draft NA 21 finalised. Now, NA 21 is ready to be accepted by the Minister Council.

2.2.1 LOCAL AGENDA 21

Agenda 21, endorsed by the United Nations 1992 Rio Conference, constitutes an action plan to pave the way for “sustainable development”, aimed at interlocking environment and development.

In Chapter 28 of *Agenda 21* local authorities in each country are called upon to undertake a consultative process with their populations and achieve a consensus on a *Local Agenda 21* for their communities.

As a response to this global mandate, a project entitled the “Promotion and Development of *Local Agenda 21s* in Turkey” was developed with the initiative of IULA-EMME – International Union of Local Authorities, Section for the Eastern Mediterranean and Middle East region, to support the local authorities in Turkey commencing their respective *Local Agenda 21* processes, particularly following the Habitat II Conference. This project, conducted with the support of UNDP – United Nations Development Program, was launched in late 1997 and completed as of the termination of the past century, following an implementation period of about two years.

The project entitled “Implementing Local Agenda 21s in Turkey”, designed as the second phase of the above-mentioned project, is also being coordinated by IULA-EMME, and conducted under the auspices of UNDP. The second phase activities, commencing in January 2000, are anticipated to be completed by the end of the year 2001.

The purpose of the Project is to strengthen local “governance” by ensuring that civil society participates in decision-making and influences local investment.

The project, coordinated by IULA-EMME, manifests one of the most extensive and impressive illustrations of “partnerships” at the national as well as international levels. UNDP’s support to the project constitutes an outstanding example of “global partnership” between UN agencies and local actors.

During the first phase, respective processes were launched in a total of 23 cities. Currently, project partner cities amount to 47. Partners include the Union of Mediterranean Municipalities, the Union of Eastern Black Sea Municipalities, the Union of Aegean Municipalities, the Union of GAP Municipalities, and the Union of Municipalities of the Marmara Region.

Project partners that provide multi-faceted support to the project include ICLEI – International Council for Local Environmental Initiatives, WALD – World Academy for Local Government and Democracy, and the

Metropolitan Municipality of Istanbul. Another project partner, the Youth for Habitat International Network, coordinates youth activities.

Respective activities in partner cities that have launched their *Local Agenda 21* processes are far from being constrained within the boundaries of a predetermined model, but conducted via apparently different structures and methods, reflecting the particular characteristics, values and priorities of each city. On the other hand, the prevalence of many common characteristics, as well as similar and complementary processes and outputs can be observed.

Displaying colorful differences, and each more impressive than the other, the City Councils or similar platforms, established particularly with the initiative of project partner metropolitan cities, function as effective participatory mechanisms bringing together on a regular basis the representatives of different institutions around common goals and objectives. Similar mechanisms also function as effectively and impressively in many other partner cities of differing sizes and characteristics. Measures to ensure the adequate representation of all partners in these platforms, to develop methods for overcoming the unbalanced representation between individual participants and representatives of organizations, and to secure the representation of unorganized groups as well as the working groups continue to be developed.

The Working Groups or “caucus” established in project partner cities continue to function as a primary mechanism for channeling the dynamic enthusiasm of the volunteers from all sectors and all groups to the priority areas of concern of the respective city. Special attention is devoted to ensure the effective participation of the women and the youth in these groups, to secure the adequate representation of disadvantaged community groups, and to establish coordination amongst the deployed working groups.

Organization of public meetings under the umbrella of *Local Agenda 21* in neighborhood communities started to become a widespread practice. A notable development in this respect is the establishment of “community centers” with the initiative of a number of municipalities. Strongly facing the challenge of being the first of their kind, these neighborhood-level centers established with the support of those municipalities prioritizing the neighborhoods, display successful case studies of municipalities reaching out to their communities via their community education programs, health facilities, cultural activities and other services.

Implementation in Turkey, as well as in the whole world, has manifested that the success and sustainability of *Local Agenda 21* depends on the active involvement of women and youth in this process. An increasing number of Women Platforms continue to work towards promoting the active involvement of women in urban life. Special emphasis is placed upon incorporating the gender issues in local governance, and the visualization of gender equality in shaping the future. On the other hand, the Youth Councils, established in the majority of project partner cities, constitute the driving force behind the *Local Agenda 21* processes. The youth are determined not only to be the successors, but also the architects of the future.

In a large number of partner cities special councils and task forces were established for the elderly, children, and the disabled. The emphasis of the project partners on policies and practices geared toward the physically and mentally handicapped, the elderly (“senior citizens”) and vulnerable children manifest that local authorities are increasingly becoming conscious of the protection and expansion of urban rights.

The preparation and publication of a spectrum of materials on *Local Agenda 21* process continue along unbroken lines. The numerous reports and other publications prepared by project partners document the level of progress in the respective *Local Agenda 21* processes in partner cities. Reports on the description of the existing situation in each partner city, reflecting the existing state of social, economic and environmental development, have been completed in the majority of cities.

The preparation of local action plans and the identification of priority demonstration projects addressing local sustainable development issues are continuing in partner cities. Many cities have already started to implement their priority projects developed under the umbrella of *Local Agenda 21*.

The significant contributions by partner local authorities to support their respective *Local Agenda 21* processes paved the way for the establishment of “*Local Agenda 21 Houses*” in the majority of partner cities to serve their communities, which continue to function as a venue for local partners to meet and collaborate.

The respective activities are coordinated by *Local Agenda 21 Secretariats* established in project partner cities. The outstanding performance of these special units has constituted the driving force behind the nation-wide momentum and success of the Project. In a significant number of the project cities, Description of Existing Situation are completed. The working groups established. In addition to this, women and youth platforms continue to work promoting the active involvement in urban life. In a large number of partner cities special councils and task forces were established for the elderly, children and disabled.

The preparation of local action plans and the identification of priority demonstration projects addressing local sustainable development issues are continuing in partner cities. Many cities have already started to support their priority projects. **The Project has been evaluated as the most successful project among the other 50 projects supported by Capacity 21 Programme** (more detail information, see <http://www.iula-emme.org>).

2.2 NATIONAL ENVIRONMENTAL ACTION PLAN

The National Environmental Action Plan (NEAP) was prepared in May 1998, under the coordination of the State Planning Organization and with the technical assistance of the Ministry of Environment and the financial support of the World Bank.

Until the Turkey’s Seventh Five Year Development Plan (1996 - 2000) environmental issues have not been adequately incorporated into economic and social decisions. It recognizes this inadequacy and calls for development of a national environmental strategy. The Development Plan is the main instrument for coordinating government policies, including those for environmental management. The National Environmental Action Plan (NEAP) responds to the need for a strategy and can supplement the existing Development Plan with concrete actions for integrating environment and development.

In NEAP Turkey’s major environmental problems concern the urban environment (air quality, water supply and wastewater, and solid waste management), natural resource management (water resources, soils and land, forests, biodiversity), marine and coastal resources, cultural and natural heritage, and natural as well as man-made environmental hazards (more detail information, see <http://www.cevre.gov.tr> or <http://www.dpt.gov.tr>) (Annex II).

2.4.ENERGY-ENVIRONMENT POLICIES AND POSITIOIN OF TURKEY IN CLIMATE CHANGE

Turkey has not yet signed the United Nation Framework Convention on Climate Change (UNFCCC) as she was included among the countries of the Conventions Annex I and II. Although, Turkey is a member of OECD, she is at the early stage of industrialization based on main indicators about the economic performance of Turkey. GDP per capita is nearly (US\$ 2300) one tenth, CO₂ emissions per capita (2,78 tonnes), total primary energy supply per capita (1,07 tonnes oil of equivalent) and electricity consumption per capita (1473 kWh) are nearly one forth of OECD countries average level. None of these indicators are above the lowest levels of any other Parties included in Annex 1 to Convention.

Despite these facts, Turkey is ready to undertake the commitments and comply with the responsibilities embodied by the Annex I countries to the Convention. Because she do believes that on the basis of equity and in accordance with common but differentiated responsibilities and respective capabilities, she should implement the policies and measures to protect the climate system and shoul promote sustainable development.

As a result of informal consultations during the last COP 7, held in Marrakech on 29 October-6 November 2001, COP invites the parties to recognize the special circumstance of Turkey, which place, after becoming a Party, in situation different from that of other Parties included Annex I to the Convention. The request of Turkey that its name should be deleted from Annex II to the Convention, was accepted and this decision took into place final decision report.

Turkey has supported the Convention's overall objective to stabilise greenhouse gas concentrations in the atmosphere. In the interim, a wide variety of greenhouse gas emmissions reduction policies and measures are available in the Turkish energy sector.; energy efficiency and conservation measures, increasing the shares of new and renewable energy sources in its energy supply base, fuel switching from high to low carbon fuels (e.g. from coal to gas), adoption of emission reduction systems (e.g. cogeneration, clean coal and improved combustion technologies, combined cycle power plants), limiting the use of energy (e.g. limiting the use of central heating systems in winter and the application of summer-winter hours) and preventing losses from energy distribution systems.

The options for prospective measures and actions regarding energy and environemnt issues listed in the NEAP are in Table 1.

Table 1: Options for the Production and Consumption of Energy

| Areas of Action | Options |
|-----------------|---|
| Policies | <ol style="list-style-type: none"> 1. Measures to encourage wider use of natural gas; 2. Substitution of alternative energy sources for wood as a source of energy and spread of the practice of forest management for energy; 3. Support the utilization of clean and renewable energy sources as well as passive solar energy applications; 4. Membership in the European Standard Experiment System (PASSYS); updating existing standards accordingly; elimination of deficiencies 5. Decentralization in energy generation; 6. Optimizing sustainability of energy supply and environmental costs 7. Setting integrated energy consumption targets for Organized Industrial Zones; 8. Prohibiting import of petro-coke; |

| | |
|-------------------------------|--|
| Institutional Reform | 9. Establishment of an Energy Observatory; 10. Organization of energy crisis management units at national and regional levels; 11. Formation of certified consultant bureau for monitoring the energy-based pollution caused by public and private enterprises. |
| Legislative Arrangements | 12. Enforcement of regulations and other arrangements to regulate the energy efficiency of domestic appliances; 13. Implementation of Heat Insulation Regulation |
| Education-Training | 14. Organization of energy conservation training at adult education centers; 15. Introducing energy conservation in formal education 16. Organization of training for households in mass housing & rural areas. |
| Participation | 17. People's participation to design and implement energy conservation programs; 18. Formation of energy management units by entrepreneurs in organized industrial zones and small scale industrial sites. |
| Economic & Financial Measures | 19. Incentives for use of high quality coal (tax reductions, etc.); 20. Introduction of emission taxes in the pricing of fuels; 21. Application of real estate property taxes by considering the limits of energy consumption to be determined with respect to areas; 22. Support for the spread of energy-efficient and low emission techniques and technologies; 23. Incentives for improving quality of domestic coal; 24. Support for reducing sulfur in diesel, fuel oil and heating fuel. 25. Determination of value added tax rates linked to the energy efficiency of vehicles and equipment; 26. Differentiation in energy prices between urban and rural areas; 27. Encouraging R&D on cleaner technologies; 28. Encouraging wider use of co-generation and central heating; |
| Techniques | 29. Widespread use of high quality (low sulfur, low ash, high heating value, low humidity) coal; 30. Encouraging the use of stack scrubbers, desulfurization and other systems; 31. Utilization of the residues from scrubbing and other control systems; 32. Encouraging the use of high efficiency - low emission energy transmission systems (e.g. stoves, boilers, etc.) 33. Minimizing losses and illegal uses in transmission and distribution network for power 34. Promoting the diffusion and efficiency of central heating systems; 35. Wider use of process energy (e.g. co-generation); 36. Technical support for energy efficient technology transfers in industry; 37. Improvement of techniques for energy consumption calculations in buildings; 38. Support the replacement of appliances with low energy efficiency; 39. Organization of fixed and mobile measurement stations; 40. Establishment of energy management systems in enterprises consuming more than 2000 tons petroleum equivalent energy annually; 41. Use of fluidized bed boiler systems in power plants and industries; 42. Facilitating mass transportation 43. Introducing renewable energy sources for energy supply in rural areas; |
| R & D | 44. Identification and planning of research priorities in energy field 45. Development of techniques and technologies that increase energy efficiency; 46. Inventory of carbon emissions; 47. Investigating the correlation between emission/air quality, combustion techniques and air pollution abatement measures; 48. Research on costs and benefits of improving the quality of domestic coal. |

2.5. BIODIVERSITY STRATEGIES AND POSITION OF TURKEY IN BIODIVERSITY

Turkey is one of the country Parties of the Convention on Biological Diversity (signed in 1992 and ratified in 1996). Several institutions such as MoE, MoF, MARA and Ministry of Culture are responsible for decision-making regarding the conservation of biological diversity and genetic resources. 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. MoE has duty to coordinate all efforts for the conservation of biological diversity and sustainable use of biological resources.

The National Biodiversity Strategy and Action Plan have been prepared by the coordination of the SPO with the financial support of the World Bank and technical support of the MoE. The Strategy and Action Plan contains three main topic areas: Steppe Ecosystems, Forestry Ecosystems, and Wetlands Ecosystems. The goals of the Strategy are to conserve and use in a sustainable manner, to develop ecological management and resource management capacities, to enhance public awareness and train public and technical staff, to make legal arrangements, to develop international cooperation, and to implement the strategies on this issue.

The major threats on biodiversity are industrialization, agricultural modernization, urbanization and infrastructure investments. Despite these and several other negative impacts, Turkey stands among one of the very few countries that retained its natural structure.

The options for prospective measures and actions regarding biodiversity issues listed in the NEAP are in Table 2.

Table 2: Options for Forest Management and Protection of the Vegetative Cover

| Areas of Action | Options |
|--------------------------|---|
| Policies | <ol style="list-style-type: none"> 1. Giving priority to the development of villages settled in or near forests; 2. Determination of the purposes of utilizing areas considered as "forest" at national and regional levels and as specific forest ecosystems 3. Revision of forestry sector policies and plans 4. Redefining "public benefit" concept in the legislation. |
| Institutional Reform | <ol style="list-style-type: none"> 5. Reorganization of the Ministry of Forestry; 6. Resizing and transformation of the State Forestry Enterprises to autonomous structures based upon fields of expertise in order to ensure the functional and local integrity of forest services; 7. Modification of the expert personnel composition of forest cadastry and forest management commissions to conform with the requirements of the science of forestry; 8. Introduction of semi-autonomous management structures for national and natural parks to facilitate the participation of local people in decision-making mechanisms. |
| Legislative Arrangements | <ol style="list-style-type: none"> 9. Revision of Articles 169 and 170 of the Constitution; 10. Revision of Act no. 6831, particularly Articles 1, 7-11, 16,17, 18, 52 and 57. 11. Amendment of Article 8 of Act no. 2873 on National parks; 12. Revision of Act no. 2924 on the Support to the Development of Forest Villages; 13. Prevention of the practice of conducting forest cadastry under the Cadastry Act no. 3402; 14. Rearrangement of Article 8 of the Act no. 2634 on Incentives to Tourism; 15. Enactment of Law on Ranges; 16. Making arrangements for the allocation of at least 5 % of the territory of each province as a "natural reserve area"; 17. Legal arrangements for furnishing forest villagers with social security benefits; 18. Updating Game Law. |

| | |
|-------------------------------|---|
| Economic & Financial Measures | <p>19. Increasing revenues of the funds for Afforestation, Forest Villages Development, and National parks;</p> <p>20. Increasing the general budget share of afforestation and forest conservancy works ;</p> <p>21. Implementing the monetary sanctions of Act no. 4122 on National Mobilization for Afforestation and Erosion Control;</p> <p>22. Corporate tax exemption for the state forestry enterprises</p> <p>23. Enabling financial support for projects on harvesting aquaproducts and forest by-products for promoting development of forest villages</p> <p>24. Encouragement of forestry personnel by rewarding good practices..</p> |
| Education-Training | <p>25. Updating higher education in forestry and making it more relevant to the existing realities in the field of forestry;</p> <p>26. Introducing vocational programs at middle level education;</p> <p>27. Initiation of training centers for forestry workers to conduct area-specific training activities;</p> <p>28. Development and implementation of in-service training programs in the attached organizations of the Ministry of Forestry to provide information on regional forestry conditions.</p> |
| Participation | <p>29. Form a unit to promote stakeholder participation in the processes of decision making on the conservation, expansion and improvement of forests;</p> <p>30. Strengthening the public relations units of related organizations;</p> <p>31. Endowment of the forest village development cooperatives with relevant rights, duties and responsibilities to cooperate with the State as stipulated in Article 170 of the Constitution;</p> <p>32. Raising awareness and ensuring the participation of local people in activities for the in-situ protection of plant gene resources by supporting them with economic incentives.</p> |
| Techniques | <p>33. Formation of a multi-dimensional forestry data base;</p> <p>34. Production and mapping of information on "growth habitat" within the scope of forest inventory work;</p> <p>35. Arrangement of forestry management plans in time and in line with the principle of multi-purpose utilization of forests;</p> <p>36. Wider utilization of techniques to manage forest pests;</p> <p>37. Institutionalization of EIA for investments in afforestation, road construction, etc. and introduction of biodiversity considerations, socio-economic assessments, and green accounting concepts into EIA procedures;</p> <p>38. Equipping relevant units with assessment, monitoring and mapping devices to facilitate the observation of changes in the quality and quantity of forests through geographical information systems;</p> <p>39. Development of techniques to prevent any damage to important plant species during pest control;</p> <p>40. Supply and demand management of wood as a raw material</p> <p>41. Development of pilot projects on harvesting aquaproducts and forest by-products for promoting development of forest villages.</p> |
| R & D | <p>42. Preparation of seed improvement programs;</p> <p>43. Risk classification and mapping for forest fires together with relevant risk studies;</p> <p>44. An inventory of insects and fungi that exert harmful influences on forests;</p> <p>45. Monitoring of the effects of acid rain in Western Black Sea and Western Anatolia;</p> <p>46. An inventory of environments and entities that have the characteristics of "nature preserve", "natural park", and "natural monument";</p> <p>47. Implementation of programs for finalizing species inventory basing upon the new classification developed by the IUCN;</p> <p>48. Development of functional classification maps for forest;</p> <p>49. Development and application of performance measures for sustainable forest management.</p> |

As it is stated in the UNCCD, Turkey do believe that providing synergy between all UN Conventions is very important to promote sustainable development. With the parallel of decisions on this issue at the international fora, Turkey are planning to take measures to provide synergy all those Conventions. MoE has coordinated all efforts for their successful implementation in the country.

3. INSTITUTIONAL MEASURES TAKEN TO IMPLEMENT THE CONVENTION

Pursuant to article 9, affected developing country Parties shall prepare a national action programme. The purpose of the NAP, as stated in articles 9 and 10 of the Convention, is to identify the factors contributing to desertification and practical measures necessary to combat it and/or mitigate the effects of drought. Within this framework, a meeting was held in Bolu-Gölköy from 8 to 9th of July 1999 in order to determine an outline of Turkish National Action Programme. The representatives of all relevant ministries, institutions, universities and NGOs were convened together in this meeting to discuss specific problems related to desertification and drought in affected areas and particularly, local communities in these areas. It was clearly addressed that there is a need to develop an effective and integrated soil-water management approach to combat desertification both local and national levels. Additionally, a draft document, which identifies existing situation of Turkey and compiles all relevant information, was prepared and sent to approximately 20,000 persons by e-mail to take their views and contributions till end of March 2002. Now, the document will be revised in the light of views. We plan to hold a national forum, which would specifically serve to:

- facilitate the establishment of consensus on the objectives, scope and vision of the NAP, as well as the priority actions and measures to be undertaken in support of its implementation;
- clarify the contributions of the various parties at national level to foster active support for the implementation of the Convention;
- identify and agree on measures to ensure coordination of financial and technical cooperation consistent with the objective of the Convention.

To establish a forum at national level a number of steps/measures would be needed.

Step 1: Designation of a national coordinating body or focal point for the coordination and advancement of the NAP process. As it is stated in the I. National Report, in Turkey, National Coordinating Body (NCB) was designated for preparing Turkish national action programme in carrying out the obligations pursuant to article 5 in May 2000 in a consensus with the high level representatives of MOE, MARA, MOF, GNRS, GDSHW, GDSMS and the Ministry of Foreign Affairs. Before that date, a permanent committee constituted by senior staff and technical experts of the said institutions, except for The Ministry of Foreign Affairs, was responsible to implement the Convention in Turkey. The committee members were assigned by their Ministers with giving them full authorities. This situation is still valid for NCB. State Planning Organization has been just included in NCB due to its duties such as preparing long-term development plans and annual programs conforming to the targets determined by the government, and coordinating activities of the ministries and public institutions concerning economic, social and cultural policies, and ensuring efficient implementation and advise the government regarding policy issues etc. MOF, MARA, GDSHW and GNRS are mainly responsible institutions for combating land degradation and erosion (more detail information, see pages 12-18 of I. National Report of Turkey).

At the stage of establishment of NCB, its representatives took a decision in a consensus that the chairman of NCB will be changed every year among NCB institutions. With the parallel of this decision, focal point will also be performed by each institution represented in NCB and MOE will carry out the coordination and secretariat duties.

The senior staff of MOE performed focal point and the chairman duties till 2001 and transferred these duties to the representative of GNRS. He carried out his duties successfully in his period. However, some difficulties have been appeared such as compilation of relevant information, lack of coordination, etc. Now, MOE are responsible from all duties including focal point, coordination and secretariat. We give this tentative stage very importance as we gained a lot of experience to establish operational mechanism to implement the Convention.

MOE has been studied on a Notice to have a legal status for NCB. This draft Notice will also include its functions and mandate. We are still in the stage of providing consensus among the NCB institutions.

NCB does not has financial autonomy due to our legal structure. To carry out all obligations and combat drought and erosion, NCB try to solve financial problems in a logical way. One way is to prepare working annual programmes for combating drought and erosion. Each responsible institution will allocate its budget accordingly to these programmes. This is under discussion due to some difficulties such as different priorities of each institution, political decisions etc.

All information on the Convention have been compiled in the web page in Turkish (<http://www.ccdturkiye.gov.tr>). The ways and means of communication among members are usually formal letters and fax messages. E-mail messages are used informally in urgent situations. (more detail information, see pages 19-20 of I.National Report of Turkey).

Step 2: Identification of the key participants to the forum at national level and preparing representatives of land users and local communities for their participation in the forum meeting. An inventory of all technical staff and scientists engaged in this issue were prepared in 2000.

Step 3: Sensitization /awareness raising/training activities in the context of a convening a forum at national level. “A National Seminar on Enhancing Awareness on the Convention” was held in İzmir on 20th-22th of May 1998 with broad participation of technical and senior staff and scientists from public and research institutions, universities and NGOs. Now, we are planning to undertake awareness raising/sensitization activities through local meetings to develop a common understanding of the Convention and to identify key issues on erosion and land degradation in the most affected regions that are selected in accordance with desertification criteria defined by ANNEX IV countries and represent the five regions of Turkey: Eastern Anatolia, Western Anatolia, Central Anatolia, Southern Anatolia and South-eastern Anatolia. These local meetings will be financed under the UNDP project, mentioned in the summary of this Report. A draft brochure to inform local communities on the Convention were prepared and has been reviewed by the NCB. It will be made multiple copies and disseminated to all relevant stakeholders before these local meetings.

Step 4: Identification of key issues of concern for the first forum meeting. Country’s priorities on this issue are identified in IIX. Five Year Development Plan, Agenda 21 and National Environmental Action Plan. However, there is a need to identify gaps/weaknesses and coherence and proposals on ways to reorient them in line with the objective of the Convention. The outstanding taking from local meetings will also very important input to identify country’s priorities.

4. OTHER ACTIVITIES CARRIED OUT FOR COMBATING DROUGHT AND EROSION

There has been considerable efforts put by each institution of NCB through years. GDSMS has become priority of Turkish State Meteorological Service (TSMS) to set up a network of radar and automated weather stations that will lead to early of warning of climate-related natural hazards at regional and sub-regional level. By the time the radar network is completed, it will be also possible to link the ETA model to make quantitative precipitation forecasting using the radar-estimated rainfall data. TSMS has been planning to install HRPT receiving station to utilize NOAA/AVHRR data in meteorological and hydrologic applications and expand use of INTERNET services for more efficient dissemination of meteorologic information and data.

Another project, which will improve the TSMS's capability for early warning of severe weather, is MEDEX. The endorsement of the MEDEX by WMO, however, is not completed yet. TSMS already declared its intention for future collaboration in further stages involved in the implementation of MEDEX. The MEDEX project will allow us understanding and prediction of heavy rain and strong wind events in the Mediterranean, characterisation of the Mediterranean cyclones to which hazardous weather events have been associated, and studying of cyclonic disturbances and other circulation patterns originated from Western Mediterranean region which produce cyclone development and high impact weather over the Central and Eastern Mediterranean.

The studies on drought and desertification carried out at TSMS have three main components:

1. Preparation of a report on "Drought and Desertification Process in Turkey". It is hoped that this work will be a substantial contribution for the preparation of the "National Action Programme".
2. Use of Standardised Precipitation INDEX (SPI) to determine and monitor dry and wet spells in Turkey in spatial and temporal terms and lead to some conclusions about desertification vulnerability.
3. Use of AVHRR-derived NDVI (Normalised Difference Vegetation Index) data in order to identify the areas where vegetation-cover change and land degradation, occur and monitor the desertification process in the degraded lands of Turkey.

To combat desertification and drought, some duties and authorities of relevant institutions are as follows:

- to control erosion and sediment in river beds and the upstream of dam reservoirs,
- to build protective works against floods and torrents,
- to build irrigation systems; to make or have made maps and plans showing the whole or parts of the existing plots and to have the cadastra prepared,
- to examine, approve and supervise the water supply and sewage designs for cities and towns, to provide the technical organisation and supervision for water supply projects of villages, and to train personal by giving them the necessary knowledge for working on these projects under the Directors of Public Works,
- to improve streams and make navigable those which are deemed necessary,
- to make suggestions to help farmers and countryman to apply contour farming, contour ploughing, strip cropping, rotations, range improvement measures, range seeding, proper use and deferred grazing,
- to promote rural development,
- to provide continuity in agricultural production,
- to prevent erosion, particularly soil erosion, by planting agricultural fields regularly,
- to train farmers and trainers who train farmers,

- to promote participation of farmers in decision-making on formulating projects for preventing desertification,

5.PROJECTS CARRIED OUT BY INSTUTIONS REPRESENTED IN NCB TO PREVENT DROUGHT AND EROSION

GDSHW

| Project Name | Total Area (ha) | Forestation and Range Improvement (ha) | Number of Structural Measures | Start-End Date |
|--|-----------------|--|-------------------------------|----------------|
| Bursa-Doğancı Dam Reservoir Erosion Control | 3475 | 2710 | 147 | 1978-2003 |
| Altınapa Dam Upstream Improvement | 58900 | 31400 | 246 | 1996-2002 |
| Manisa-Gediz Erosion Control II. Stage | 86161 | 5463 | 1545 | 1996-2006 |
| Erzincan-Right Bank Tributaries Upstream Imptovement | 46300 | 11434 | 1281 | 1979-2003 |
| Aydın-B. Menderes Tributaries Upstream Imptovement | 171463 | 11036 | 3405 | 1965-2002 |
| Erzincan Dam Upstream Imptovement | 7700 | - | 5 | 1996-2003 |
| Aydın-Çürüksü Tributaries Upstream Imptovement | 13206 | 9668 | 127 | 2002-2002 |
| Muğla-Eşen River Tributaries Upstream Imptovement | 97650 | - | 15 | 2002-2002 |
| Bozdoğan Plain Irrigation Tributary Upstream Imptovement | 24521 | - | 10 | 2002-2002 |
| Uluborlu Dam Upstream Imptovement | 4630 | 3405 | 37 | 1995-2002 |
| Çivril-Gümüşsu Tributaries Upstream Imptovement | 3375 | - | 26 | 1998-2002 |
| K.Maraş-Kartalkaya Dam Upstream Imptovement | 27400 | - | 34 | 1995-2003 |
| Sivas-Gazibey Irrigation Upstream Imptovement | 3590 | - | 38 | 1999-2003 |
| Kürtün Dam Erosion Control | 60000 | 2340 | 11 | 2000-2004 |
| Ayvalı Dam Upstream Imptovement | 10941 | 2221 | 4 | 2000-2004 |
| Atikhisar Dam Upstream Imptovement | 1012 | 160 | 4 | 1999-2003 |
| Kemer Dam Upstream Imptovement | 310000 | - | 269 | 1991-2005 |

MOF

| | | | | |
|--|----------------------------------|---|---|-----------|
| Adana-Çakıt River Erosion Control Project | 14052 200 ha for 2001 year | 3270 5800 (pasture rehabilitation) 6200 (grazing animals) | Food and fertilizer aids have been made to local communities within the framework of World Food Programme | 1982- |
| Izmir-Karşıyaka Erosion Control Project | 2146 | - | - | 1995-2000 |
| 10 Billion Oak Seed Project in cooperation with TEMA | - | 3432 (192 tones oak have been planted) | - | 1998- |
| | | | | |

| | | | | |
|---|--------|---|---|-----------|
| Dune Identification Studies | 10657 | - | - | |
| Trabzon-Uzungöl Avalanche Control Studies | 160 | Number of 89600 various type of young plant | | 1997- |
| Erosion Control Studies | 445798 | - | - | 1955-2001 |
| Eastern Anatolia Water Basin Rehabilitation Project in cooperation with MARA and GDRS | | | | |

MARA

- The Project, entitled “ Making Turkey Green”
- The Project, entitled “I Wanna Be Satiated in My Hometown”
- The Project, entitled “Making Investigation and Becoming Widespread of Second Product”
- The Project, entitled “Making Investigation and Becoming Widespread for Reducing the Number of Uncultivated Fields”
- The Project, entitled “Alternative Products”

6. LEGAL AND REGULATORY FRAMEWORK ON EROSION AND DESERTIFICATION in TURKEY

| THE NAME OF LAW | NUMBER OF LAW | APPROVAL AND ISSUED DATE | CONTEXT |
|--|---------------|------------------------------------|--|
| Law on Establishment and Duties of Ministry of Forestry | 3800 | 21/5/1992 4/6/1992, No:21248 | General Directorate for Aforestration and Erosion Control of MoF is charged in taking all measures to prevent erosion by this Law |
| Law on Forestry | 6831 | 31/8/1956 8/9/1956, No: 9402 | Erosion control activities within the boundaries of forestry areas or areas, need to transform into forestry regime are replaced into the article 58. |
| Law on Mobilization for Aforestration and Erosion Control | 4122 | 23/7/1995 26/7/1995, No:22355 | The main aim of Law is to facilitate aforestration and erosion control activities and to determine how and from where required financial resources will be obtained . |
| Law on Support of Forest Villagers for Their Development | 2924 | 17/10/1983 20/10/1983, No:18197 | |
| Decree Law on Establishment and Duties of Ministry of Agriculture | 441 | 7/8/1991 9/8/1991, No:20955 | |
| Law on Grazeland | 4342 | 25/02/1998 28/02/1998, No:23272 | - use grazelands according to their using criteria - define boundaries and areas of grazelands - rehabilitate and upkeep grazelands -re-orient private and public lands for |

| | | | |
|---|------|-----------------------------------|--|
| | | | transforming them into grazelands -remove legal gaps and weakness on protection of soil |
| Law on the Aid to Farmers Affected By Natural Disasters | 2090 | 20/6/1977 5/7/1977, No:15987 | The aim of the Law is to determine procedures and basis related with required aids and technical supports to be given by Government to farmers and agricultural production cooperatives whose farms, agricultural products, livelihood stocks, and production means and facilities are damaged or completely vanished because of fire, earthquake, storm, flood etc. |
| Law on Establishment and Duties of General Directorate of Rural Services | 3202 | 9/5/1985 22/5/1985, No:18761 | GDRS is charged in combating desertification by the Law. |
| Law on Establishment and Duties of General Directorate of State Meteorological Service | 3254 | 8/1/1986 14/1/1986, No:18988 | |
| Law on Establishment and Duties of General Directorate of State Hydraulics Works | 6200 | 18/12/1953 25/12/1953, No:8592 | |
| Law on Environment | 2872 | 9/8/1983 11/8/1983, No:18132 | Article 9 |
| Law on Establishment and Duties of Ministry of Environment | 443 | | Articles 10 and 14 |
| Directive on Utilisation of Agricultural Lands for Non-Agricultural Purposes | | 2002 | |
| Notice for Prevention Burning Post-harvest Mulches | | 2001 | |

ANNEX I

THE OUTLINE OF THE NAP on COMBATING DESERTIFICATION AND DROUGHT IN TURKEY

1. Current Situation and Process of Desertification In Turkey
2. Driving Forces of Desertification
 - 2.1. Physical Factors
 - 2.2. Biological Factors
 - 2.3. Socio-Economic Factors
3. Activities For Combating Desertification in Turkey
 - 3.1. Sectoral Studies
 - 3.1.1. The Governmental Institutions (Minitries, Relevant Institutions, Universities)
 - 3.1.2. NGOs
4. Gaps And Weakness Points in Combating Desertification
 - 4.1. Legislative Issues
 - 4.2. Financial Issues
 - 4.3. Technical and Administrative Issues
 - 4.4. Physical Issues
 - 4.5. Social and Cultural Issues
5. National Policies and Strategies on Combating Desertification
 - 5.1. Legal Arrangements
 - 5.1.1. Law on Soil
 - 5.1.2. Law on Grazeland
 - 5.1.3. Law on Basin?
 - 5.2. Field Studies
 - 5.2.1. Protection of Natural Ecosystem
 - 5.2.1.1. Protection and Development of Forest Areas
 - 5.2.1.2. Prevention of Forest Fires
 - 5.2.1.3. Protection and Improvement of Meadow and Pasture
 - 5.2.1.4. Protection of Wetland
 - 5.2.1.5. Protection of Biodiversity
 - 5.2.2. Rehabilitation of Plant Vegetation (Afforestation, Re-Planting)
 - 5.2.3. Sustainable Management of Water and Soil
 - 5.2.3.1. Use of Land in accordance with Quality Of Soil

- 5.2.3.2. Decrease in Soil Productivity and Fertility
 - 5.2.3.2.1. Excessive Irrigation
 - 5.2.3.2.2. Salinity
 - 5.2.3.2.3. Unplanned Fertilisation
 - 5.2.3.2.4. Intensity of Agricultural Activities
 - 5.2.3.2.5. Use of Herbicide and Pesticide
 - 5.2.3.2.6. Technical Failure Land Use
- 5.2.3.3. Erosion Control and Protective Measures
- 5.2.3.4. Use of Groundwater and Agricultural Irrigation Technique
- 5.2.4. Participation of Local Public
 - 5.2.4.1. Farmers Company and Cooperatives
 - 5.2.4.2. Local Administrators
- 5.3. Research and Development
 - 5.3.1. Drought Forecasting
 - 5.3.2. Improvement of Drought Early Warning Systems
 - 5.3.2.1. GIS and Remote Sensing
 - 5.3.3. Establishment of Desertification Data Base
 - 5.3.3.1. GIS and Remote Sensing
 - 5.3.4. Monitoring of Changes in Vegetation
 - 5.3.4.1. GIS and Remote Sensing
 - 5.3.4.2. Determination of Imposing Forest Areas of High Risk of Forest Fires
 - 5.3.5. Evaluation of Demographic Data
 - 5.3.5.1. Increasing of Population
 - 5.3.5.2. Migration
 - 5.3.5.3. Unplanned Urbanisation
 - 5.3.6. Formulation of Pilot Projects
 - 5.3.7. Establishment of Monitoring Network For Soil
- 5.4. Institutional Framework
 - 5.4.1. Ministries, Institutions, Organisations And Universities
 - 5.4.2. Ngos
- 5.5. Socio-Economic Policies
 - 5.5.1. Migration
 - 5.5.2. Poverty
 - 5.5.3. Alternative Livelihood Resources
 - 5.5.4. Participation
 - 5.5.5. Education/Training
- 5.6. Financing Mechanism
 - 5.6.1. General Budget
 - 5.6.2. Fund, Donation
 - 5.6.3. International Donor Organisations
 - 5.6.4. Credits
 - 5.6.5. Sponsor
- 6. Co-Ordination and Co-Operation of Regional and International Level
- 7. Priority Action Programme
 - 7.1. Legal Arrangements
 - 7.2. Institutional Re-Organisation aimed to Implementation of Convention
 - 7.3. Benchmarks and Indicators connected with Desertification and Drought
 - 7.3.1. Physical Indicators
 - 7.3.1.1. Degree Of Erosion
 - 7.3.1.2. Salinity (Soil, Water)
 - 7.3.1.3. Low Fertilisation
 - 7.3.1.4. Organic Materials
 - 7.3.1.5. Sedimentation
 - 7.3.1.6. Flood Of Water
 - 7.3.1.7. Climatic Benchmarks
 - 7.3.1.8. Soil Pollution
 - 7.3.2. Biological Indicators
 - 7.3.2.1. Biodiversity
 - 7.3.2.2. Ecospher And Biospher

- 7.3.2.3. Productivity
- 7.3.2.4. Vegetation
- 7.3.2.5. Indicators of Species Decrease
- 7.3.2.6. Flexibility and Tendency to Rehabilitation
- 7.3.3. Socio-Economic Indicators
 - 7.3.3.1. Poverty
 - 7.3.3.2. Migration
 - 7.3.3.3. Degree of Death
 - 7.3.3.4. Age Ratio of Public
 - 7.3.3.5. Sex Ratio of Public
 - 7.3.3.6. Increasing of Population
 - 7.3.3.7. Importance of Agricultural Activities
 - 7.3.3.8. Education
 - 7.3.3.9. Development Level
 - 7.3.3.10. House, TV, Telephone Etc.
- 7.4. Determination of Areas High Tendency to Desertification
- 7.5. Improvement of Pilot Basin Projects
- 7.6. Monitoring and Evaluation of Results in Project Areas
- 7.7. Training and Increasing Awareness
 - 7.7.1. Training within the Institutions
 - 7.7.2. Training of Stakeholders
 - 7.7.3. Seminars for Local Administrators
 - 7.7.4. Media
- 7.8. Compilation of Traditional Knowledge
- 7.9. Provide Alternative Livelihood Resources for Forest Villagers

ANNEX II

Table 3: Options for the Protection and Management of Land/Soil Resources

| Areas of Action | Options |
|--------------------------|---|
| Policies | <ol style="list-style-type: none"> 1. Diffusion and planning of rural development policies 2. Agricultural support policies integrated with efforts to preserve land resources 3. Preparation of action plans for the prevention of soil erosion, desertification and pollution, especially in the GAP region; 4. Using soils according to their suitability classification |
| Institutional Reform | <ol style="list-style-type: none"> 5. Reorganization of the central and peripheral units of the Ministry of Agriculture and Rural Services and the Ministry of Forestry 6. Making public research agencies and routine analysis laboratories more efficient and effective 7. Ensuring that the service delivery by the General Directorate of Rural Services is carried out by a separate organization than those in charge of research, data collection and training 8. Formation of basin management units and executive boards 9. Rearrangement of the rights, duties and responsibilities of the Union of Chambers of Agriculture 10. Redefinition of the rights, authority and responsibilities of village administrations; strengthening of village unions; democratization of administration 11. Preparation of soil conservation and land improvement action plans at the regional level 12. Establishment of a unit in charge of research, control of techniques and equipment as well as calibration of equipment which are used for agricultural combat. |
| Legislative Arrangements | <ol style="list-style-type: none"> 13. Amendment of Articles 44 and 45 of the Constitution; 14. Enactment of Soil Conservation and Land Improvement Laws; 15. Enactment of Regulation on the Control of Soil Pollution; 16. Revision of Acts nos. 4070, 4071, and 4072 17. Revision of the Act on Cooperatives; 18. Updating of the Village Act; 19. Revision of the articles of the Land Act and Civil Code that permit the fragmentation and non-agricultural use of agricultural lands; 20. Revising the Act on Mining to ensure that mining enterprises prepare and implement land rehabilitation programs after their extraction activities; 21. Revising the institutional laws of the DSI, GDA, and GDRS to permit integrated work at the catchment basin level |

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| Economic & Financial Measures | <p>22. Ensuring farmers' contribution to land improvement investments</p> <p>23. Seeking the contribution of mining industries for land rehabilitation</p> <p>24. Charging land improvement fees to polluters</p> <p>25. Ensuring that monetary incentives introduced by Act no. 4122 are first channeled to soil conservation and land improvement works in water catchments</p> <p>26. Reconsideration of incentives for pesticide use.</p> |
| Education-Training | <p>27. Development and wider use of soil conservation related in-service training programs in related public organizations and agencies</p> <p>28. Giving soil conservancy and land improvement training to village group technicians</p> <p>29. Support to professional and voluntary organizations in their activities for soil conservation and land improvement</p> <p>30. Diffusion of extension activities in line with the cultural and social conditions of the region concerned; conduct of joint training programs with farmers; implementation of advanced techniques</p> <p>31. Attachment of extension units to research institutes; coordinated work performance of research-extension-agricultural combat units</p> |
| Participation | <p>32. Institutionalization of cooperation between the related ministries and professional and voluntary organizations</p> <p>33. Participation of the farmers of a region in the planning and implementation of integrated eco-basin management plans by exercising specific rights and undertaking duties and responsibilities</p> <p>34. Strengthening of the committee stipulated by the Regulation on Pesticide Licenses with specialists from different fields</p> |
| Techniques | <p>35. Establishment and use of remote sensing/geographical information systems;</p> <p>36. Diffusion of land compacting works;</p> <p>37. Expansion of the scope of EIA to cover the assessment of the infrastructure investments of public organizations;</p> <p>38. Monitoring and supervision of land and agricultural input use</p> <p>39. Expansion of the scope of EIA to cover the issue of non-agricultural use of agricultural lands</p> <p>40. Limitation of area under tobacco cultivation;</p> <p>41. Control of the use of phosphorous fertilizers;</p> <p>42. Preparation and implementation of programs designed for the encouragement of integrated pest management; establishment of early warning schemes;</p> <p>43. Inspection of agricultural pesticide producers and dealers;</p> <p>44. Expansion of fodder crop culture;</p> <p>45. Control of the importation and use of hormones and carcinogenic substances;</p> <p>46. Abandonment of the practice of fallow with the exception of localities where this practice is scientifically proven as necessary</p> <p>47. Elimination of differing practices in the field of chemical residue limits</p> |
| R & D | <p>48. Updating land capacity classifications;</p> <p>49. Identification of tilling techniques and the methods of agricultural inputs (water, fertilizers and pesticides) with respect to land characteristics and local levels not to harm soils and development of environmentally friendly technologies;</p> <p>50. Supervision of the producers of agricultural pesticides and equipment</p> <p>51. Identification of fertilizer compositions suitable to local conditions and environmental impacts of fertilizers specific to locations</p> <p>52. Development of techniques in order to use drainage water for irrigation purposes.</p> |

