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TURKEY'S NATIONAL REPORT  
ON THE IMPLEMENTATION PROCESSES OF THE CONVENTION

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## 1) SUMMARY

Turkey is an affected developed country that approved and ratified the Convention to Combat Desertification in 1996 and 1998 respectively. The idea of Turkey for accession to the convention is not only because of promotion the implementation of measures needed at national level but also is an expression of solidarity with other affected countries and of its will to co-operate with all stakeholders in the field of key global issues. In this content, Turkey belongs particularly to those countries of the Regional Annex for Northern Mediterranean which constitutes the Annex IV of the Convention. Turkey therefore have also regularly participated to the Regional and Sub-regional Action Programs (RAP and SRAP) which are being conducting in a collaborative manner among the respective countries of Annex IV in addition to the other Convention related activities both national and international.

Presently, the Ministry of Environment and Forestry (MEF), Turkey is responsible for the coordination of activities on the implementation of the Convention at national level. By doing this, the Ministry closely cooperates with other relevant institutions and stakeholders as well as the National Coordinating Body (NCB). The Ministry is also aware to give momentum on promoting public involvement at all levels on the implementation, maintenance and strengthening the Convention related activities.

The NCB which composed of representatives of key institutions such as several ministries, government institutions and NGOs, was established for coordinating the Convention related national activities. It has also served as a consulting and coordinating body on preparing National Action Program (NAP) pursuant to the article 5 of the Convention. In order to effectively, coordinate the Convention related issues a specific Division, Directorate of Combating Desertification was also established in the MEF serving as the secretariat of the NCB's activities in a close contact with the National Focal Point.

The NAP was finalized in the mid of 2004 as a result of several meetings and consultations participating of all related institutions, academicians, NGOs and experts. The program was approved by the Ministerial Decree and then it was printed and disseminated.

The Anatolia peninsula, the mainland of Turkey, has witnessed a long historical background that a variety of civilization passed through centuries so that the natural resources therefore have been overexploited and degraded. Moreover, rapid population increase and industrialization progresses have made great pressure on those resources. These progresses have resulted in increasingly loss of soil quality and fertility, agricultural productivity and of natural habitations. Consequently, the country as a whole became more and more sensitive for desertification/drought and easily affected by the arid and semi-arid climatic conditions.

Total territory of Turkey is about 78 million hectares including inland water surfaces. Some 28, 1 million hectares (36 %) is agricultural land while the total area under the forest regime is about 21 million hectares (27 %). Total rangeland together with the alpine meadows consists of 21, 5 million hectares (27 %). Although the total arable land potential for irrigated agriculture is about 8, 5 million hectares, only about 4, 7 million hectares of it has effective irrigation systems at present.

Turkey is one of the richest countries in the region in terms of biodiversity consisting of about 9,000 species. Turkey contains 75% of the plant species found in Europe. Some important species such as *cherries, apricots, almonds, figs, and tulips* all originated in Turkey. Over 33% of its flora species are endemic. The Biodiversity Strategy prepared in collaboration with the World Bank in 1997 classified that 4 of the mammal species and 13 bird species as threatened by extinction.

Turkey has two basic types of climates; the *Mediterranean climate* with high temperature and dry summer and mild and wet winter, and, the *Temperate climate* with more rain and moisture in all seasons that are formed by the Mediterranean climatic systems. Mountainous topography and sudden changes in altitudes also create variety of local micro-climatic conditions over the country. These climatic

characteristics and other specific hydrological, topographic conditions make Turkey quite sensible to desertification phenomenon.

In terms of the water resources, Turkey is a quite poor country comparing with the world averages, but it is the richest country in the Mediterranean and the Middle East regions. However, the distribution of water is generally irregular and costly. Turkey is therefore seriously being affected by dryness conditions especially in the summers.

Erosion is one of the most acute land degradation problems affecting the 75% of the total land surface in Turkey. 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 is severely affecting another 0.5 million ha of land. The portion of severe erosion is also relatively larger in areas where agriculture is being practiced. Although erosion preventing programs initiated several decades ago, the control measures have been applied only in 2.2 million hectares of area so far.

## **2) THE CONSULTATIVE PROCESSES AND PARTNERSHIP AGREEMENTS**

### **2.1) Strategies and Priorities within the Framework of Sustainable Development Plans and Policies**

As general framework of national development policies, the following tools and means address the overall strategies and priorities which are highly associated with the development plans of the country on the protection, maintenance and sustainable management of natural resources of the country:

- **Five-Year Development Plans:** The National Development Plans, prepared mainly five-year periodical basis, consist of long-term and sustainable development strategies, the growth of employment, and achievement of social, economic and regional harmony with the international and regional development processes/initiatives since 1963. In order to specify the development targets and strategies, policies and the means of implementation of the Plan, the perspectives of government institutions, private sector as well as of social and ecological identities are broadly reflected in the Plan preparation process. The relationship between the environment and economic development programs took place firstly under the title "Environment and Settlement" in the Sixty Five-Year Development Plan (1990-1995).

- **National Environmental Action Plan (NEAP):** A number of environmental conditions is closely linked the physical landscape of Turkey such as biodiversity, sensitive ecological habitats, cultural and historical resources, extensive shoreline and marine resources, important natural hazards, mountainous and topography, hydrological resources and so on. These links and the conditions which need to be maintained were all addressed in the NEAP. The NEAP was prepared in 1998 that includes overall strategies for responding to the major environmental problems of Turkey.

- **National Biodiversity Strategy and Action Plan:** Turkey signed The Convention on Biological Diversity in 1992 and ratified in 1996. Appropriate legislative tools are prepared in a broadly participatory manner. The goals of the Strategy are to conserve and sustainable use of the biological diversity of the country, develop resource management capacity and to enhance public awareness, training, legal arrangements, international cooperation at all levels. The MEF is coordinating all related activities on the conservation of biodiversity and sustainable use of biological resources.

- **National Forestry Program (nfp):** The Turkish National Forest Program (nfp) was completed in 2003 through active participating of all interested parties including a great number of representatives from forest villagers, NGOs, academics, variety of forestry disciplines and professionals, other governmental agencies as well as private sector. The nfp reaffirmed that the *participatory, multi-purpose and ecosystem approaches* are the core principles for the sustainable management of country's forests. The National Forest Program has underlined the main issues as priority concerns of Turkish forestry in such: poverty alleviation; combating to soil erosion, desertification and reclamation of degraded lands; promoting integrated, participative watershed programs; decentralized planning and decision making; management of

protected areas and biodiversity; criteria and indicators for sustainable forest management and development of appropriate legislative and institutional tools/mechanisms for sustainable forest management.

- **National Action Program (NAP-D) for combating to desertification:** Turkey has realized that the outline of NAP should address and identify the existing situation of Turkey regarding to erosion, drought and poverty, and then compile all relevant information through contributions and views of all stakeholders' participation. The identification of the sensitive areas, evaluation/reviving of the existing development policies and their deficits, public awareness, development of appropriate strategies for combating desertification, drought, sustainable land and water utilization, protection of biodiversity, establishment of early warning systems and network and encouragement of all stakeholders including NGOs on promoting integrated, multi-disciplinary and participatory approaches for sustainable land management are the basic principles which are taken into account in the Turkey's NAP-D.

The main objective of the NAP is to identify the main reasons of desertification and to determine the roles of central government, local administrative bodies, land owners, NGOs and public to find out the ways, mechanisms and tools on solving the problems identified and to combat the negative effects of desertification/drought in the country. The NAP-D also identified the major reasons/causes of desertification and land degradation in Turkey into three groups; - natural causes/reasons including soil depreciation through water and wind erosion, irregular rainfall, soil components, changes on vegetation cover; - technical causes/reasons including mainly deforestation, overgrazing, treatment of natural hydrological cycling, inappropriate land use and irrigation practices, irregular urbanization, soil pollution etc and; - socio-economic, institutional and legislative based causes including conflicts, poor coordination among institutions, migration/overpopulation, lack of education/awareness, ownership etc.

## **2.2. Bilateral and Multilateral Co-operations and Financial Resources allocated**

Besides the traditional relationships with all nations and regions developed in a long time, a number of collaborative programs between Turkey and its neighboring countries particularly in Middle and West Asia, Eastern Europe, Middle East, North Africa as well as Mediterranean regions have developed and/or implemented since 1990s in various sectors. The government of Turkey has taken active role in such joint-works through its financial, personnel and technical capacity that is getting increased year by year. Land and water management, resource protection, erosion control, tree plantation practices and forest management, drought and flood control are the major subjects for that cooperation.

Turkey and its related organs enjoy actively joining to the international and regional cooperation on implementation of the Convention in accordance with its mandate (e.g. articles 12, 13 and 14). Turkey's development policies often take particular consideration to the international and regional processes and initiatives. Among others, the *Millennium Development Goals* (MDG) as well as the *Plan of Implementation* adopted at the World Summit on Sustainable Development (WSSD) in Johannesburg which, are directly or indirectly linked with desertification, drought and as well as poverty alleviation, are important ones that are recently being elaborated.

Furthermore, Turkey has made great efforts to participate in many important international and Convention related events such as the Conference of Parties (COP), sessions of the CRIC, the World Summit on Sustainable Development (WSSD), the sessions of UN Forum on Forest (UNFF) as well as the other sessions of the UN Conventions. Turkey has also actively taken part on the region specific collaborative works of the Northern Mediterranean Regional Implementation Annex (Annex IV) such as regional projects, programs as well as the RAP and SRAP of the Annex IV in order to find out common solutions for problems of the region and exchange of knowledge and experiences achieved.

The aid programs and collaborative works of Turkey focus mostly on the countries in the Middle East, Central and West Asia, due to the geographical location, historical linkages and existing co-operation arrangements. Although it is still limited, Turkey has supported to a great number of initiatives and programs in those countries through exchange of experiences, transfer of technology, education, technical visits, machinery and equipment etc. Those programs include a number of fields such as agriculture, land

use management practices, rehabilitation of degraded lands, reforestation etc. Unfortunately, the budget allocated and costs of those aid programs realized are not clear enough at the moment. It can be clarified and put into the related reports when the final amounts of expenses officially are declared.

Due to the limited resources and the general economic difficulties of the country, the financial contribution of Turkey to the affected African countries is quiet inefficient at present. Hence, active cooperation started recently with Ethiopia and Sudan in some fields that include financial assistance. Yet, Turkey's aid and support programs seem to be increased in the next years to those countries.

Turkey provides financial assistance to the implementation of the Convention mostly through diplomatic missions. As the party to the UNCCD it provides the Secretariat with the required annual contributions. The amounts allocated for this purpose are specified according to the decisions of the Conference of Parties (COP). The annual contributions are given in the table below:

<b>Year/period</b>	<b>Amount (in USD)</b>
1999-2994	56,660.00
2005	33,140.00
2006	29,844.00
<b>Total</b>	<b>119,644.00</b>

### **2.3. The Turkish Development and Cooperation Agency (TIKA); A Pioneer Initiative in International and Regional Cooperation**

In accordance with the recent development and processes occurred around, Turkey has launched variety of financial and technical support to the 37 developing countries in Asia, Europe and Africa since the late 1980s. Those supports include grants, in kind assistance, equipment and technical cooperation. It is realized that these contributions should be effective, coordinated and provide maximum benefits for both sides. For this purpose, The Government of Turkey established the **Turkish Development and Cooperation Agency (TIKA)** 1992<sup>1</sup>.

The main duties of this agency are to coordinate and disseminate all kind of international assistance made by Turkish government, strengthen cooperation between Turkey and the neighboring countries and contribute to those countries on their development efforts through appropriate programs and project in the field of economy, technique, social, cultural, capacity building, infrastructure, education and so on. A number of aid programs and projects have been implemented since 1992. In order to facilitate those programs TIKA has also established Regional Coordination Offices and assigned Program Coordinators in Afghanistan, Albania, Azerbaijan, Bosnia & Herzegovina, Ethiopia, Palestinian National Administration, Georgia, Kazakhstan, Kyrgyzstan, Kosovo, Mongolia, Macedonia, Moldova, Sudan, Tajikistan, Turkmenistan, Uzbekistan, Ukraine.

TIKA has successfully completed 559 projects and other activities by the end of 2005 in those countries. Many of those projects directly or indirectly included land rehabilitation, sustainable land management, water, protection of natural resources that support to the efforts of implementation of the Convention in those countries. As an example, a clean water supply was established in the FARYAB region in Afghanistan where 7000 people were suffering from shortage of clean water. However, the actual budgets and the financial expenses allocated to those projects could not be reported since the related institutions and TIKA has not completed the exact and final amounts for the time being. Those programs

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<sup>1</sup> More information can be obtained from the web page: <http://www.tika.gov.tr>

have also created new areas for cooperation, peace and friendship that were expected in the region. TIKA also seeks new fields of study to achieve a better and continues cooperation for expanding development efforts and aids in various sectors including land management in those countries.

Consequently, Turkey pays a great importance to generate close relations and cooperation with neighboring countries and has signed several agreements in the fields of different sectors. By this way, many students from those countries are attending courses in Turkey’s universities, colleges and technical institutes as holders of scholarships offered by the Turkish Government which has embassies and honorary consulates in that countries.

### 3- MEASURES TAKEN TO SUPPORT THE PREPARATION AND IMPLEMENTATION OF ACTION PROGRAM

Before the National Action Program on Desertification (NAP-D), several plans and programs were prepared and implemented to mitigate the impacts of desertification and land degradation in the country. Technical and administrative implementation of the plans has encountered many obstacles making the impact less desirable. Thus, the recent socially relevant approach of the NAP-D, along with the utilization of the indigenous technical knowledge combined with appropriate inputs of new technology to be implemented in an ‘anthroscape’ context (multifunctional, human re-shaped, ancient landscapes in basins and sub-basins)

The *Soil Protection and Land Use Law* will be the milestones in the implementation of the country’s desertification program. The European Environment Agency (2000)’s strategic plan employing the *Pressure, State, Impact, Response (DPSIR)* approach has also been the pivot of the NAP-D of Turkey.

The NAP-D of Turkey recommends that the study scale on land degradation and desertification be based on the present River Basin/ Catchments (26 basins in Turkey) and sub-basins developed by the State Hydraulic Works (DSI) for **sustainable land management (SLM)** in the country. These catchments are almost equivalent to landscape units some of which may also qualify for anthroscares. NAP-D attempts to assure full participation of the land users by adopting a bottom-up approach enabling a continuing dialogue among all concerned and ensuring a feed-back mechanism (Figure 1).

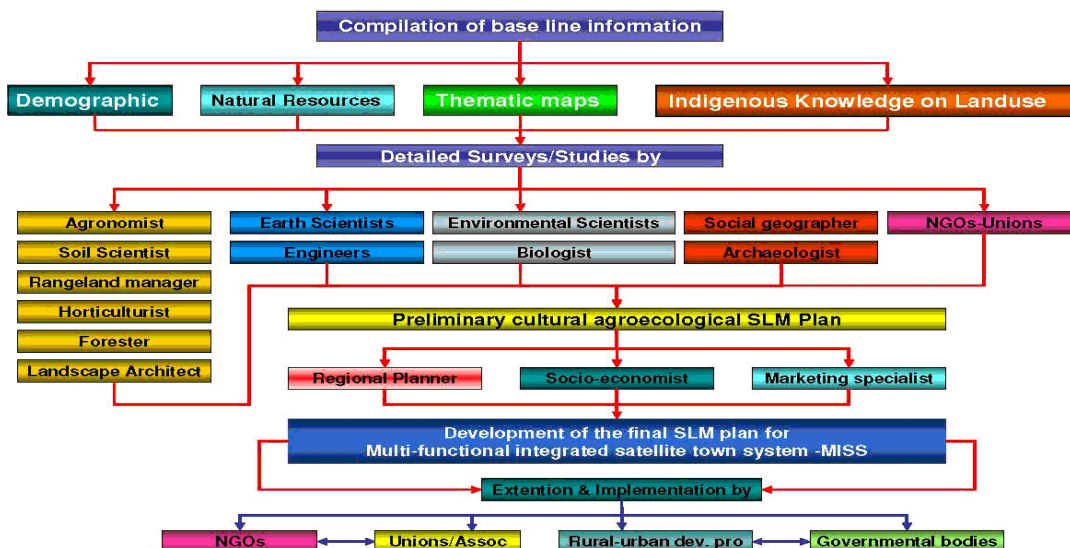


Figure 1: Framework of the multi-integrated NAP approach

The multi-integrated NAP-D of Turkey was recommended for implementation to the local administrations, with its foreseen holistic and inter-disciplinary approach as the ultimate challenge for SLM. Soon after, the Soil Protection and Land Use Law came into effect complementing the expected

phases of the implementation of the NAP-D of Turkey were considered. The Governors of all townships in Turkey for the collation and development of the data bases of the natural resources and all other land-based data, which will be accompanied by field studies/trials and proceed with the development of the SLM programmes are empowered.

The next phases of activities to follow accordingly include: (i) development of the initial cultural and environmental SLM Plans; (ii) development of SLM programs for multi-integrated satellite systems (MSS) at sites of successful indigenous land management for the enhancement of the participation of the local communities in the process of implementation of the NAP-D and; (iii) integration of the Soil Protection and Land Use Law to the NAP-D at selected anthrosapes to address regional development strategies and accelerate provisions on socio-economic equity within the different regions of the country.

These phases primarily necessitate the matching of the socioeconomic component to the specific landscape conditions (Akça et al., 2004; Kapur et al., 2002, 2004). Each landscape or anthroscape unit has to be considered as a unique entity requiring site-specific management plans. To this end, Local Coordinating Bodies (LCBs), to be empowered by the local administrations, under the auspices and audition of the National Coordinating Body (NCB) of Desertification are sought to be structured. In addition, problem-oriented maps are planned, based on the continuum and harmony of the natural resources in an anthroscape context. The challenges that still remain are many. Communication between the different entities is still inadequate. This can be partly resolved by appropriate training courses and ‘town-house’ meetings. A bigger challenge is to mesh socioeconomic aspirations with landscape conditions and this requires principals of both disciplines to discuss and rise above the challenge.

#### 4- OTHER ACTIVITIES RELATING TO COMBATING DESERTIFICATION

##### a. Sustainable land use management, including water, soil and vegetation in affected areas

Turkey, due to its physiographic environment combined with its past cultural and economic heritage as well as the current socio-economic situation of land users is highly vulnerable to desertification. 86.5% of its total land area and 73% of its arable land being under the risk of erosion and other land degradation and threats. Soil sealing, salinity, pollution of soils, inappropriate selection of crop types and patterns are the prevalent problems. These country-specific conditions often accelerate the process of land degradation in Turkey. The vast areas of country’s territory are therefore under the threat of water and wind erosion as well as other factors of degradation phenomenon that strictly need appropriate preventive measures.

The **Sustainable Land Management (SLM)** programs and their implementations at country-wide representative- pilot-sites will integrate soils, water, topography, biotopes-biodiversity reserve areas, crops, animal production, fertilizers and population/heritage data/information. Figure 2 illustrates a sample of selected anthroscape from Adana as an agroecosystem of biodiversity/ forest-olive-carob-vineyard-cotton-citrus-selected indigenous wetland vegetation for conservation management.

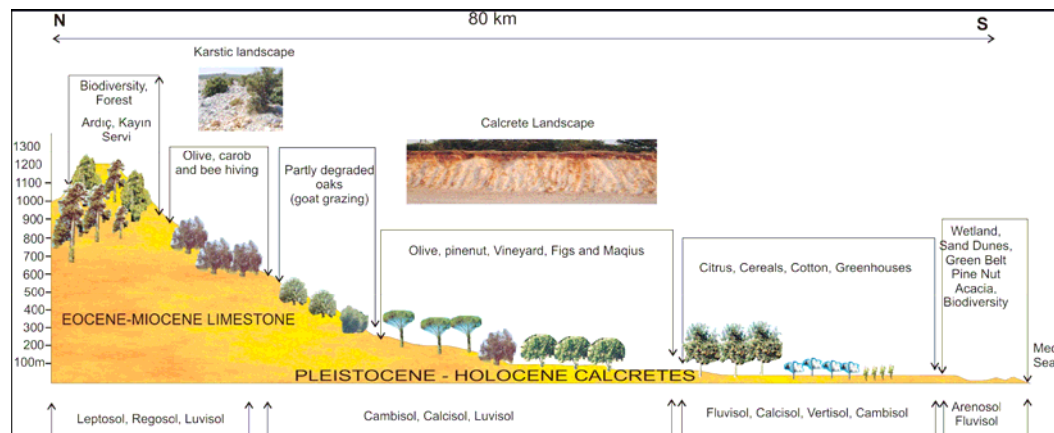




Figure 2. The Adana Anthroscape

Erosion is one of the most acute environmental problems which are affecting 75% 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 is severely affecting another 466,000 ha of land.

A special attention is also given to expanding of vegetation cover and forested land particularly in sensitive and vulnerable areas in order to maintain and sustain the land and soil resources. Followings are the main challenges on controlling erosion and preventing soil degradation practices: - Expanding of forest cover and rehabilitation of degraded forest areas through afforestation/reforestation practices on marginal (classes VI, VII and VIII), bare as well as disaster and erosion prone areas; - Rangeland improvement and expanding of grasslands and meadows in open lands preventing of soil loss done by water and wind and ; - Promoting improved agricultural land use and cultivation practices (e.g. contour plugging, irrigation methods, seed bed preparation, using of manure and fertilizer, new techniques, GIS, satellite images etc) to increase the soil and crop productivity.

#### **b. Sustainable use and management of rangelands**

The NAP identified that over-utilization and miss-management of the rangelands and alpine meadows are of the major reasons/causes of land degradation in Turkey. In terms of the institutional responsibilities and management measures, the four types of rangelands can be found in Turkey; rangelands inside the state forests, rangelands around forests, alpine meadows and other rangelands.

In order to maintain the sustainable use and management of existing rangelands, the first **Rangeland Law** 4342 put into force in 1998. The Law fully addresses the aforesaid four types of rangelands. Promoting decentralized management and locally based decision making, increasing of productivity and profitability in the rural livestock activities and better nutrition of people and protection of environment are the core considerations covered by the rangeland law.

Protection, maintenance and improvement of the rangelands inside the state forests, around forests and alpine meadows are under the responsibility of the Ministry of Environment and Forestry while the other rangelands are managed by the Ministry of Agriculture and Village Services. Further arrangements to realize the mandate of the law have also been started by the related institutions for the sustainable management of rangelands such as legislative and technical identification of rangeland/pastureland, setting up the boundaries of them and registration into official registry.

#### **c. Development of new and renewable energy sources**

Because of the increased environmental concerns created by the utilization of the fossil sources, Turkey has recently paid more attention and encouraged the research and development (R&D) studies on the renewable energy sources. In terms of the renewable energy sources such as hydrology, geothermal, solar, biomass, wind, hydrogen etc Turkey is quiet rich country. Therefore, the energy policy of the state is to generate the inventory and survey studies on exploitation the source potentiality of the renewable energy sources over the country. For this end, related academic and research institutions, private sector entities as well as government bodies are urging and highly supporting by the government. The Ministry of Energy and Natural Resources is the top government authority which is responsible to coordinate all energy related subjects over the country.

In this regard, the following projects have been conducted by the Scientific and Technical Research Council of Turkey (TUBITAK)<sup>2</sup> for promoting and development of the utilization the renewable energy sources that significantly contribute to the implementation of the Convention.

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<sup>2</sup> The Scientific and Technical Research Council of Turkey (TUBITAK) is an umbrella state institution which carries out and/or coordinates scientific and technological research studies. For further information contact: Atatürk bulvari 221, Kavaklıdere 06100 Ankara, <http://www.tubitak.gov.tr>

-The project titled “*Fuel Cell Technology Development for Clean Energy Production*”, (2003-2004) aiming at importing the fuel cell technology into Turkey and to develop fuel Cell products border to make energy conservation.

-“*BIOCOGEN, 2001-2003 (Biomass Cogeneration in Europe) Energy, Environment Sustainable Development Priority Area*”. The aim of the project is to determine the potential of the biomass origin fuels, currently usage ratios, biomass cogeneration plants statue.

-The “*EU 6<sup>th</sup> FRAME PROJECTS*” (2005-2008) aimed at the improving of the S&T research capacity in the fields of Integrated Biomass Gasification with Power Technologies has successfully evaluated and just passed the negotiation process with EC in 2005. The main goal is to improve the scientific research capacity of national research centre.

-The “*EU-DEEP, 2004-2009 - The Birth of a European Distributed Energy Partnership*” that will help the large-scale implementation of distributed energy resources in Europe. The EU 6<sup>th</sup> Framework Programme supported to the project. In the project Turkey is represented by Energy Institute of TUBITAK Marmara Research Center as one of 39 partners including utilities, research institutions, industry and governmental authorities.

-The project “*Exploitation of Agricultural Residues in Turkey (Life 03 TCY/TR/ 000061)*”, (2004-2006). The overall objective of the project is to strengthen the capacity of Turkey to exploit in a sustainable way the vast potential of agricultural waste residues in the country, aiming at sound environmental, economic and social benefits. More specifically, the project strives to map the exploitable fraction of such residues across the country, create the conditions for a better administrative, legislative and institutional environment for the realization of agricultural waste exploitation projects, create or improve the capacity of the regional administration, improve the business environment by supporting investors and transfer to Turkey the rich EU experience in the field of agricultural waste exploitation policy and technology.

#### **d. Launching of reforestation/afforestation programmes and intensification of soil conservation programmes**

Forests cover about 27 percent (20.7 ha.) of Turkey’s land area and have significant economic, environmental and cultural functions. Almost half of the country’s total forests are unfortunately degraded, unproductive or naturally low quality. About 15 percent of Turkey’s population lives in rural areas of which about 9.5 millions in around 20 000 forest or forest-neighboring villages where forest resources make a vital contribution to livelihood of local communities. However, the life standards of these communities are quite lower than the country’s average.

According to the current management plans, 83% of the quality forest area (about 10 million hectares) is managed with wood production as the main objective and only 17 percent is assigned to other primary uses such as for protection of soil and water resources and also biodiversity conservation. Urban dwellers fortunately are also giving more interest in forest management issues particularly with respect to their biodiversity, environmental, amenity and recreational functions.

Turkey’s forests have not only valuable commercial timber species but also great diversity of flora of various medicinal, aromatic, industrial and ornamental plants are the key assets. They can provide the major habitats for most species of fauna and extra income for rural people as well.

As a result of the experiences and achievements have been done for more than 50 years, it is recognized that the measures for sustainable protection of existing forests are extremely important and therefore appropriate forest plantation (afforestation/reforestation) and other erosion related measures for preventing soil erosion are strictly needed in Turkey. This is of the main pillars in challenges to mitigate the negative effects of desertification and drought in Turkey.

#### **e. Rehabilitation of degraded land**

In order to identify the vulnerable and sensitive areas to the possible landslides and floods hazards, the General Directorate of Mining Survey and Research (MTA) under the Ministry of Energy and Natural resources has launched special mapping study and being implemented as a research project on “Land Slide Inventory Mapping” over the country. The General Directorate has also being conducted another project titled as “rehabilitation of abandoned mining areas” in order to recovery the former mining areas.

The General Directorate of State Water Services (DSI) is the major state institute to take required measures for the sustainable management of country’s water resources. For more than 50 years, it has worked on building up dams, large-scale irrigation systems, hydro power plants and prevention erosion and floods around these facilities. So far the General Directorate has established a great number of dams, electricity power stations, irrigation channels and water reservoirs over the country. By 2006, irrigation systems for 2.6 million hectares of agricultural lands were built and over 50 000 hectares of land around the upper catchments areas was afforested where over 235 public settlements and 21.500 hectares of crop lands could be prevented from possible floods and sediments.

The State Forestry Service has also implemented and completed a number of important projects on rehabilitation of degraded forest as well as other lands since 1950s. As a basic part of the forestry related programs and investments in the country, the forestry service is applying rehabilitation programs and projects over the country.

#### **f. Desertification monitoring and assessment**

NAP-D of Turkey has identified proposed a number of immediate, mid-term and long-term actions including legislative, financial and institutional measures for reducing the impacts of desertification, rehabilitation of degraded lands as well as the improvement of land use practices where the sensibility of desertification/drought is high. The proposals for action of the NAP include assessment and monitoring measures.

Municipalities and Governorates are individually trying to establish environmental management plans, following their empowerment by the acceptance of the local Administration Act. This establishes the need for local and institutional capacity building at different implementation levels. In addition, attempts are underway to develop the national coordination bodies as well as the local ones on land/environmental degradation to develop and implement the NAP-D in the country. The MEF is already empowered to monitor and approve the management programs to be developed by the local authorities under the supervision of the NCB.

Finally, such an effort should not be viewed as a one-time assistance. Monitoring of both the socioeconomic and land resource base must commence before the onset of the activity, and continue even after the system is in place. Land degradation and desertification is nefarious in the sense that it can take many forms. Correcting the present set of processes may not nullify the problem but may spawn a whole series of other processes. Hence, the effort must also be viewed as a learning process for the long term sustainability of the systems.

#### **g. Information on the scientific and technical activities to combat desertification**

In accordance with the program areas of the Chapter 13 of the Agenda 21, integrated watershed projects are being planned and implemented. For instance, the “*East Anatolia Watershed Rehabilitation Project*”, supported by World Bank’s loan, was carried out in 11 provinces in the eastern and south-eastern parts of Turkey and completed in 2001. Effective and promising income generating activities, erosion control measures and rehabilitation of degraded lands through active participation of local stakeholders were developed and applied in project areas. Since a number of successful and satisfactory results have been realized from the project, the new “*Anatolian Watershed Rehabilitation Project*”, supported by WB and GEF fund, was prepared and started to implement in 2005.

Partnership cooperative works between the Government and NGOs such as TEMA<sup>3</sup>, OMO<sup>4</sup>, TOD<sup>5</sup>, TKV<sup>6</sup>, DHKV<sup>7</sup>, OR-KOOP<sup>8</sup> etc. has also gained momentum recently. They have implemented and/or participated to a number of projects in the field of land management, environment and forestry activities in Turkey. They often play an important role in awareness and fund raising, public education, increasing of stakeholders' interest and transfer of technology in forestry.

TEMA Foundation as an NGO in Turkey contributes to combating with soil erosion and implements rural development based model projects. Such projects aim to achieve the sustainable development while preventing erosion and protecting the environment. Presently, TEMA works on 35 small-scale Rural Development Projects over the country. The main purpose of those projects are to create alternative income resources for the local community, protect nature assets, find out market access for local products, promote eco-tourism and organic agricultural practices etc.

In order to support anti-desertification activities, promoting policies, strengthening institutional frameworks, ensuring wider cooperation and coordination at all levels, the bottom-up approach are given particular attention. In order to support the implementation of the Convention and to rise the interest of the whole public, the following meetings, panels, symposiums etc have recently been organized on different aspects of soil conservation and land management, environment, land use, land degradation etc through broad participation as well as effective collaboration of the interested parties interested<sup>9</sup>:

- *“International Symposium on Arid Region Soils”*, 1998. Izmir, Turkey.
- *“Symposium on Industrialization and Environment”*, 1999. Edirne, Turkey.
- *“3<sup>rd</sup> Industrialization and Environment Symposiums in Thrace in the Planning period of Turkey”*. 1999, Edirne, Turkey.
- *“Meetings of The Working Group on Land Degredation and Desertification”*, 1997,1998 and 2000. The Cukurova Unversity, Adana, Turkey.
- *“International Symposium on New technologies for environment and Agro-Applications”*, 2000, Tekirdağ, Turkey.
- *“International Conference on Sustainable Land Use and Management”*, organized by Soil Science Society of Turkey, 2002. Canakkale, Turkey.
- *“11<sup>th</sup> National Clay symposium”*, 2003. Izmir, Turkey.
- *“The EU-Thematic Network of the 'Medcoastland Project's Meeting”*(Mediterranean Coordination and Dissemination of Land Conservation Management to Combat Land Degradation and Desertification for the Sustainable Use of Natural Resources in the Mediterranean Coastal Zones), 2003. The University of Cukurova, Adana, Turkey.
- *“3<sup>rd</sup> GAP (South-eastern Anatolia Project) and Industry Congress 2003”*, Diyarbakir, Turkey.
- *“Ankara Climate Change Conference”*, 2004. Ankara, Turkey.

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<sup>3</sup> TEMA, Turkish Foundation for Combating Erosion, Forestation and Conservation of Natural Habitats.

<sup>4</sup> OMO, The Chamber of Forest Engineers

<sup>5</sup> TOD, Association of Turkish Foresters

<sup>6</sup> TKV, Turkish Development Foundation

<sup>7</sup> DHKV, Association for Protection of Natural Resources

<sup>8</sup> OR-KOOP, Union of the Forest Village Cooperatives of Turkey

<sup>9</sup> More information on afore mentioned events can be obtained from the following contact addresses: Prof. Cemil Cangir and D.Boyraz, Agriculture Faculty of Trakya University. [cangir@gmail.com](mailto:cangir@gmail.com), Prof. Selim Kapur and E.Akca, Agriculture Faculty of Cukurova University, [kapur@cu.edu.tr](mailto:kapur@cu.edu.tr)

- “13th International Meeting on Soil Micromorphology, New Horizons for Soil Quality vs Land Degradation”, September 2004, The University Of Cukurova, Adana, Turkey

- “6<sup>th</sup> Thrace Congress of Turkey Agriculture Engineers-Agriculture Week 2005”, 2005. Ankara, Turkey.

- “4<sup>th</sup> Industrialization and Environment Symposiums in Thrace in the Planning period of Turkey”. 2005, Edirne, Turkey.

- “The Introductory/Inception Meeting of the EU-Project Proposal on Regional Desertification Aspects and Their Mitigation/Monitoring”, 2005. University of Yuzuncu Yil, Van, Turkey.

- “Ministry’s Press meeting on “17 June World Day for Combating Desertification, 2005. Istanbul, Turkey.

- Meeting on “The Soil Protection Law in Relation to the Environmental Management Programs and Development Agencies in Turkey”, 2006. University of Cukurova, Adana, Turkey.

- The project on “Detailed Soil Survey and Mapping of Karaatmet Village (Tekirdag) and Sultanhan Town (Edirne) 2000. Agriculture Faculty of Trakya University and Ministry of Agriculture and Village Service.

- The project of “Environment Framework Planning for Ergene Watershed”, 2002. Agriculture Faculty of Trakya University and Ministry of Environment and Forestry.

- A method study on “the Complex Square Root Parametric System for Land Evaluation Method on Soils of The Thrace Region”, 2002. International Conference on Sustainable Land Use and Management. Soil Science Society of Turkey, Onsekiz Mart University, Çanakkale, Turkey.