

PROJECT NAME:	ANATOLIA WATERSHED REHABILITATION PROJECT
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LOAN AMOUNT: IBRD loan: US\$15.7 million
GEF grant: US\$7.0 million

DURATION: 2004-2012

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BACKGROUND: The main issues affecting the rural sector in Turkey fall into several areas, but generally reflect weaknesses in the overall incentives framework for agricultural production and problems related to the serious degradation of natural resources.

Agriculture. Turkey's agricultural sector has significant potential, but has gone largely unrealized because of distorted and outmoded support policies. Over the last 20 years, agriculture grew at only about one-third the rate of overall GNP. As a result, agriculture's contribution to national production shrank from 36 percent to 14 percent, although the sector still accounts for 45 percent of employment. A key problem with the policy environment has been the structure of agricultural support which has traditionally been channeled through a complex maze of input and credit subsidies, output price supports, high border protection, export controls, deficiency payments, price controls, market interventions to protect consumers, and others. Price distortions have led to unsound agricultural practices, including overemphasis on the use of agrochemicals with serious effects on soil and water quality.

Degradation of Natural Resource Base. Deforestation to meet increasing timber, fuel and fodder demands, together with overgrazing of rangeland, farming of steep slopes, and the lack of effective soil conservation practices on agricultural land have resulted in widespread degradation of land and water resources. Land degradation has significantly reduced the carrying capacity of rangeland and the fertility of agricultural land and thus negatively affected farming households' ability to derive a livelihood in the upland regions, with resulting higher poverty rates. In many areas of the country, extension workers and farmers heavily emphasize the use of external inputs like pesticides, inorganic fertilizers and animal feed. Excessive input use has also led to high levels of nutrient loads in ground water and rivers draining into the Black Sea, causing eutrophication. The *Black Sea Region Transboundary Diagnostic Analysis* (1996) identified Turkey's rivers which empty into the Black Seas as key sources of phosphorus (P) and nitrogen (N) pollution. It estimated that Turkey's annual discharge of nitrogen contributed about 20 percent, and its discharge of phosphates 12 percent, of total N and P respectively produced in the non-Danube Black Sea Basin.

Turkey's status as an EU candidate country calls for important changes in the country's environmental policy and regulatory framework, specifically taking account of the EU Directives on Water Resource Use, Nitrates, and Environmental Impact Assessment. Turkey must adopt a detailed, directive-specific program

to transpose the national legislative and regulatory framework in a manner consistent with the EU environmental *acquis*, and to develop a plan to finance supporting investments.

PROJECT OBJECTIVE: The project's overall development objective is to support sustainable natural resource management practices in 28 microcatchments in Anatolia and Turkey's Black Sea Region and thereby raise incomes of communities affected by resource degradation. The key global environmental objective is to introduce farming practices which will reduce the discharge of nutrients and other agricultural pollutants into surface and ground water in watersheds draining into the Black Sea in four provinces.

PROJECT DESCRIPTION: The project is being implemented in six provinces - Samsun, Tokat, Sivas, Kayseri, Corum and Amasya. GEF-supported activities for reducing nutrient loads to waterbodies from agricultural sources will be undertaken in four of the provinces – Samsun, Tokat, Corum and Amasya.

Component 1: Rehabilitation of Degraded Natural Resources. This component provides support for the planning and implementation of a menu of activities to protect degraded areas from further degradation, erosion and pollution. Rehabilitation interventions are focused around four sub-components: rehabilitation of forest land; rangeland rehabilitation; rehabilitation of agricultural land and environment-friendly agricultural practices. Activities include a specific program for piloting actions on reducing nutrient discharge to the water bodies that will be implemented in the lower parts of watersheds of four participating Black Sea provinces using GEF funds.

Component 2: Income Raising Activities. Under this component target communities are offered a menu of activities designed to raise household incomes in return for participation in conservation activities supported under Component 1. The menu varies in accordance with agro-ecological and socio-economic conditions in each village, as well as with farmers' resources and needs. The main income generating activities financed by the project include small scale irrigation; investments in livestock improvement, greenhouses and small-scale freshwater fisheries; and farm and crop enterprise diversification.

Component 3: Strengthening Policy and Regulatory Capacity Towards Meeting EU Standards. This component provides support for implementing the following three sub-components which emphasize participatory approaches to sustainable natural resource management, corresponding to locally expressed priorities: (i) support for the application of the EU Nitrates Directive ; (ii) development and promotion of a Code of Good Agricultural Practices; and (iii) institutional support for organic farming.

Component 4: Awareness Raising, Capacity Building and Replication Strategy. This component raises awareness amongst target beneficiaries and other stakeholders about the program approach and terms of participation in micro-catchment development. The goal will be to increase transparency in program implementation and empower beneficiaries to demand program services. With regard to the four Black Sea provinces, the component provides capacity building and public awareness activities at the local, national and regional level, for the training of beneficiaries and participating institutions as well as for the future replication of similar activities in Turkey and other Black Sea riparian countries.

Component 5: Project Management and Support Service: This component supports the technical assistance, financial services, logistical and operational requirements necessary to ensure the appropriate and efficient administration of project activities and resources by central and provincial project management units.

IMPLEMENTING AND MONITORING: Project Implementation: Responsibility for overall project management and coordination is with the Ministry of Environment and Forestry's General Directorate for Afforestation and Erosion Control (MEF/AGM). Overall project management and supervision is assured by a *Project Management Group (PMG)* and line agency specific *Project Management Units*. The Project Management Group is supported by an *Operations Unit* in charge of day to day project management and coordination. Overall implementation responsibility for GEF-related activities rests jointly with MARA's General Directorate for Protection and Control (KKGM) and the MEF's General Directorate of Environmental Management. The PMG's Operation's Unit is responsible for handling the administration of GEF-financed activities.

Project Monitoring: Overall project Monitoring and Evaluation is the responsibility of the Project Management Group which is supported in this task by the Operation Unit's M&E staff. Building on the M&E system of the EAWP, the M&E unit will develop and implement an M&E system which will include both routine monitoring and evaluation and special-purpose M&E focused on impact assessment. The M&E system will include targeted annual performance objectives and monitoring indicators. A baseline survey against which project performance targets can be measured will be carried out in each MC during the detailed MC development planning phase.

BENEFITS: Project benefits include: (i) sustainable increases in crop yields; (ii) higher fodder production on rangelands; (iii) improved livestock yields;(iv) improved longer term access to wood and non-wood forestry products; (v) higher and more stable household incomes leading to reduced poverty; (vi) improved water quality; (vii) reduced nutrient discharge to main rivers and Black Sea; (viii) increased availability of water for animal and human consumption; (ix) reduced flooding due to smoother streamflows; (x) reduced siltation and sedimentation; (xi) safer food products; (xii) ability to meet EU and national environmental regulations with regard to good agricultural practices, and requirements on nitrate.

PROJECT STATUS: The project was approved in June 2004, and became effective six months later. It was formally launched in April 2005. Microcatchment rehabilitation plans have been prepared (or are in preparation) for a total of 19 microcatchments. Rehabilitation activities in the first set of 4 microcatchments are nearing completion. Progress is well advanced in another 10 microcatchments, which are in their first or second year of rehabilitation. Plans are in preparation in the remaining catchments. In several selected catchments, good progress is being made, on a pilot scale, with introducing agricultural pollution control measures into microcatchment management.