

7

Policy and Measures

7.1. Priorities of nature protection policy

The priorities of the state nature protection policy are determined in "The strategy of environmental protection and rational use of natural resources of the Republic of Tajikistan for the period till 2015". This strategy prioritizes the following key problems:

1. Soil degradation;
2. Pollution of water objects;
3. Pollution of atmospheric air;
4. Loss of biodiversity;
5. Wastemanagement.

Considering the importance of global ecological problems and their relation to the state of the local environment, the republic participates in a number of international treaties, including:

Vienna Convention for the protection of the ozone layer (1996);
Montreal Protocol on substances that deplete the ozone layer and London amendment (1997);
The UN Convention on biological diversity (1997);
The UN Convention to combat desertification (1997);
The UN Framework Convention on climate change (1998);
Ramsar Convention on wetlands of international importance especially as waterfowl habitat (2000);
Bonn Convention for the protection of the migratory species of wild animals (2000);
Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental matters (2001).

7.2. Legislative measures

One of the basic mechanisms for the reduction, inventory and the control of greenhouse gas emissions is an adequate legislative base.

With the purpose to conserve natural resources and habitats, to rationally use and restore natural resources, to prevent adverse impacts of anthropogenic activities and to improve the quality of the environment, the Government of Tajikistan in 1994 adopted the Law "On nature protection". This law regulates the organization, monitoring and control over the use of natural resources, and environmental protection, including the atmosphere.

According to Article 15 of the present law, the state nature protection authorities of the Republic of Tajikistan together with state statistical reporting authorities conduct quantitative and qualitative control of natural resources and assess the state of the environment.

According to Article 18 of the present law, a specially authorized entity on nature protection defines the limits of use for natural resources, emissions and discharges of polluting substances into environment, and waste disposal.

Article 25 of the present law regulates the norms of maximum permissible emissions and discharges of polluting substances into the environment.

Article 30 of the present law establishes the standards and ecological requirements that provide specifications of allowable anthropogenic influences on the environment with regard to existing and new technologies.

The state ecological examination, according to Article 33 of the present law is an obligatory measure for protection of the environment. This procedure is being carried out to validate and conform the planned economic activity in accordance with nature protection legislation and the requirements of the environmental quality norms.

Article 46 of the present law regulates the ecological requirements to energy industries, including prevention of harmful emissions and discharges into the environment.

According to Article 52 of the present law, in order to protect the environment from waste pollution, all juridical and physical persons are required to adopt effective measures for observance of norms in generating and disposing industrial and domestic wastes.

Article 53 of the present law adjusts climate protection. According to the requirements of this article, the realization of systematic observations on climate change, establishment and observance of specifications for maximum permissible emissions of harmful substances that affect the climate, and development of long-term ecological programs that provide emission reductions are necessary.

Article 88 of the present law promotes international cooperation in environmental protection.

The following legislation that include the requirements to conduct the control over rationing and limitation of harmful emissions into the atmosphere have been developed:

The law of the Republic of Tajikistan "On atmospheric air protection " (1996)

The law of the Republic of Tajikistan "On energy industry" (2000)

The law of the Republic of Tajikistan "On transport" (2000)

Other legislative mechanisms that deal with inventory and control of harmful substance emissions into the atmosphere are the Administrative Code (2000) and Criminal Code (1998) that provide material and criminal liability for infringement of the nature protection legislation.

The government in 1993 authorized the definition of payment and its quantities for environmental pollution and waste disposal. If there is a case of harmful emissions and environmental pollution being over the limits, a fine of 10 times more than the normal charge is enforced.

Nevertheless, in the legislation on agriculture, forestry and other economies that have a potential influence on the climate, the mechanisms of reduction and inventory of anthropogenic greenhouse gas emissions and removals have not been enforced. In this connection, it is required that legislation in relevant areas adapt to the requirements of the UN Framework Convention and other international environmental treaties and documents accepted by the republic to their adaptation according to the requirements of the UN Framework Convention and other international environmental treaties and documents accepted by the republic.

7.3. Strategies and programs

In 1996, the Government accepted the State program on public awareness and ecological education of the population of the Republic of Tajikistan till 2000 and prospectively till 2010. The program is aimed at enhancing the level of education and knowledge of the population on environmental issues, including atmospheric air protection.

With the purposes of rational use of natural resources, including maintenance of optimum atmospheric air quality, the Government of the Republic of Tajikistan in 1997 accepted the State ecological program for the period 1998-2008.

In 2000, the Government accepted the National Action Plan on environmental hygiene aimed at, in addition to other measures, protection of the atmosphere from anthropogenic influence and protection of public health with regard to environmental quality.

In 2001, the Government accepted the National program of actions to combat desertification. The program provides a set of measures for the protection and improvement of the state of forests and land resources that will also promote enhancement of natural sinks of carbon in the aspect of climate change mitigation.

The National strategy on the protection of stratospheric ozone layer and phasing out ozone depleting substances has been developed. Some measures of the strategy are being implemented, including those on phasing out of CFCs, which have the potential to destroy the ozone layer and increase the greenhouse effect.

7.4. Institutional structure

A specially authorized state entity for the rational use of natural resources and environmental protection in the republic is the Ministry for Nature Protection of the Republic of Tajikistan.

The following functions are assigned to the Ministry for Nature Protection:

Implementation of complex management of nature protection activities in the republic;

Development and realization of common scientific and technical policies on nature protection activities to be implemented by national ministries and departments;

Control over the use and protection of lands, surface and ground waters, atmospheric air, flora and fauna, and common minerals;

Development of long-term state programs on nature protection and rational use of natural resources.

The Ministry has in its structure special inspectorate on state control for the protection of atmospheric air, engaged by the control of stationary sources of harmful substance emissions, development of the specifications of maximum permissible emissions and control over the performance of air protection measures.

The departments of the Ministry for Nature Protection develop methodologies, instructions on environmental impact assessment, specifications of environmental quality, including atmospheric air. Also, ministerial departments are engaged in gathering, analysis, publication and dissemination of information on the state of the environment, including the volumes of harmful emissions into the atmosphere and air quality situation.

The ecological examination of the Ministry for Nature Protection is engaged in the validation of economic activities for conformity to nature protection legislation and requirements of environmental quality.

Local committees for nature protection within various regions of the republic, carry out the instructions of the Ministry for Nature Protection with regard to the control of atmospheric air pollution sources and other objects of anthropogenic influence on the environment.

The Main Administration on Hydrometeorology and Environmental Pollution Monitoring under the Ministry for Nature Protection of Tajikistan is a coordinating state entity for implementation the UN Framework Convention on Climate Change.

The divisions of the Main Administration on Hydrometeorology carry out the following types of observation and environmental monitoring:

1. Meteorological;
2. Agrometeorological;
3. Upper air;
4. Actinometrical;
5. Hydrological;
6. Environmental pollution monitoring;
7. Special observations (glaciers, floods, avalanches, etc.)

In connection with joining the UN Framework Convention, the Main Administration on Hydrometeorology assumes the following commitments, in cooperation with other governmental institutions and research organizations:

Research on, and projection of climate change;

Compilation of national inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases;

Gathering information about vulnerability assessment to climate change, revealing the indicators and consequences of climatic changes;

Development and rating of the implementation of measures indicated in the National Action Plan for climate change mitigation, including strategy on GHG emissions reduction and adaptation to climate change;

Preparation and distribution of information about the implementation of the UN Framework Convention in Tajikistan;

International cooperation with UNFCCC Secretariat, Intergovernmental Panel on Climate Change and other appropriate organizations.

The Hail Protection Service carries out a set of measures to reduce the damage to agriculture and industry caused by hailstones.

The list of ministries and departments that have a potential impact on the climatic system, includes: Ministry of Energy, Ministry of Transport, Ministry of Industry, Ministry of Agriculture, State Committee on Land Resources, State Forest Authority etc. At present, the policies and measures in the relevant sectors do not consider the climate change problem thus requiring further integration of policies and responsibilities of the abovementioned ministries and departments for effective performance of the obligations under the UN Framework Convention.

7.5. Rationing and control of emissions

There are around 80 different industries in Tajikistan consisting of more than 1,300 separate enterprises. There are also about 12 thousand agricultural farms, which altogether adversely affect the environment.

Rationing and control of emissions are the determining factors in reducing anthropogenic pressure on the state of the atmospheric air and climate.

The basic enterprises of non-ferrous metallurgy of the republic are: Isfara hydro metallurgic plant, Anzob ore-mining plant, Adrasman ore-mining plant, "Vostokredmet", Joint company "Zeravshan", Joint company "Darvaz", and a giant of Tajik industry - the Tajik aluminum plant. The main sources of atmospheric air pollution are the production, transportation and storage of raw materials, and the technological processes involved. The enterprises of non-ferrous metallurgy have the greatest influence on the quality of atmospheric air and the climatic system.

The industry of constructional materials includes Dushanbe cement plant, enterprises of concrete constructions, limestone processing and others. These enterprises are located throughout the territory of the republic. Construction industry gives rise to the emissions of particles, greenhouse gases and aerosols.

The chemical industry of the republic includes the joint-stock company "Azot" (Vakhsh nitrogen fertilizer plant) that produces ammonia and carbamide, Isfara oil refining enterprise, Joint company "Tajikhimprom" (Yavan chemical plant) that produce chlorine-containing materials, and other enterprises. The emissions into the atmosphere come from acid, plastic, mineral fertilizer, petroleum and other products manufacture.

The emission rationing mechanisms in the industrial sector are the sanctions of specially authorized entities on nature protection that are issued for a maximum period of 5 years. These sanctions consider the specifics of industrial processes, composition and intensity of emissions, climate peculiarities, as well as geographical and administrative position. Other mechanisms are the payments for certified emissions and the penalties for over permitted emissions. At present, there are 900 enterprises that have certificates for the maximum permissible emissions. However, it is necessary to note, that GHG emissions are not considered in all abovementioned certificates.

The inventory of emissions of harmful substances into the atmosphere is conducted by administrations of enterprises, local committees for nature protection and special inspectorate on atmospheric air protection of the Ministry for Nature Protection of Tajikistan. At present, a regular inventory of GHG emissions from stationary pollution sources is not being conducted.

Motor vehicles are the main source of atmospheric air pollution, in particular carbon dioxide and nitrous oxides. Most vehicles that operate in the republic are being exploited over a long period of time that potentially increases the volume of harmful emissions. A small contribution into atmospheric air pollution in Tajikistan comes from railway transport and aviation.

The rationing of harmful substance emissions in road transport in the private sector is being carried out by the owners of vehicles taking into consideration specified norms of emissions. On an institutional level emission rationing is being implemented by administrations of enterprises and nature protection entities. The road police inspection, together with environmental protection institutions carry out selective control over the

contents of harmful substances in exhaust gases and give instructions for their adjustment (photo 6). The rationing of GHG emissions in the transport sector is not being carried out.

The inventory of harmful substance emissions from mobile sources is conducted on the basis of fuel use. However, a regular inventory of GHG emissions from mobile sources has not been compiled.

Oil and gas pipelines are the sources of methane emissions, which occur as a result of technological imperfections and failures. However, they are not considered by nature protection entities as sources of atmospheric air pollution.

In the countryside, the sources of atmospheric air pollution are: cattle breeding and poultry, agricultural engineering, application of mineral fertilizers, etc. Emission rationing at agricultural enterprises is practically non-existent, in spite of the significant contribution of agriculture into national methane and nitrous oxide emissions. A cattle breeding is of particular concern.



6. Testing of harmful substance concentrations in exhaust gases from motor vehicles

Photo by N. Safarov

The Tajik State Forest Authority manages the forest fund of the republic. However, the inventory of GHG emissions from forest fires and burning of biomass has not been conducted.

The Ministry for nature protection keeps an account of the formation of solid communal wastes, industrial wastes and wastewater. Nevertheless, the volume of GHG emissions is not considered within the scope of responsibility.

7.6. Environmental impact assessment and ecological examination

The Environmental Impact Assessment (EIA) and ecological examinations are the integral elements of planning, development and realization of all kinds of economic activities, which could directly or indirectly affect the state of natural resources and public health.

The Environmental Impact Assessment is intended to define and predict the results of human intervention into the environment and the consequences of that influence on public health. The EIA is being carried out with consideration of local environmental conditions and all potential factors of anthropogenic influence on the natural complex, and also expected ecological and socio-economic consequences.

The EIA is being conducted by competent institutions and/or by research groups, which have necessary experience in this area and confirmed scientific qualification. The participation of the public in discussion of the EIA project results is an important planning process element.

The EIA project documentation includes:

- 1) The purpose and rationale of planned activity;
- 2) Ways of realization and general description of planned activity;
- 3) Existing alternatives, including their absence;
- 4) The detailed report on the state of the environment;
- 5) The detailed report on socio-economic development;
- 6) Types and levels of impact on the environment in conditions of normal operation and in cases of extreme situations;
- 7) Possible changes in the environment and socio-economic consequences caused by these changes;
- 8) Measures on the reduction and prevention of negative impact on the environment and the reduction of ecological risk;
- 9) The information on identified gaps and uncertainties, revealed during EIA project Implementation.

The ecological examination assesses the scientific validity and conformity of planned economic activity to the requirements of environmental quality specifications and nature protection legislation.

The basis for ecological examination is "The Provision on State ecological examination in the Republic of Tajikistan" (1994) that has been developed according to the Law "On nature protection". The conclusion of state ecological examination is obligatory for implementation.

State ecological examination:

- Analyzes and estimates a degree of complex influence of planned activity on the state of the environment and public health;
- Defines completeness, integrated approach and efficiency of provided measures on prevention of emergencies and liquidation of their consequences;
- Rates the expediency and opportunity of conducting a planned economic activity in respect with ecological properties of considered territory;
- Analyzes a social-ecologic public opinion on planned economic activity;
- Prepares objective, scientifically-proved conclusions of ecological examination, timely transfer to relevant institutions that make decisions on implementing the object of the examination and informing interested persons and parties.

The ecological examination, among other issues, takes into account:

- The basic sources of atmospheric air pollution;
- Quality of atmospheric air and climatic parameters;
- Possible damage resulting from planned activity;
- The factors of reduction in the population's quality of life;
- Impacts on the climate and quality of atmospheric air, including volume of emissions, concentration of polluting substances, their influence on ecosystems with regard to the distance from the source of emissions;

The ecological examination also considers the description of offered actions to prevent, eliminate, minimize and compensate a negative impact on the environment, including:

The territorial nature protection plans;

The technical decisions on elimination of atmospheric air pollution, secondary use of energy and other resources;

Compensatory measures.

"The Provision on State ecological examination" defines the objects that subject to ecological examination in the Republic of Tajikistan. Thus, the EIA and state ecological examination are important tools for control and reduction of GHG emissions and mitigation of anthropogenic pressures on ecosystems.

Now in the republic a number of industrial enterprises have passed the EIA procedure and the ecological examination. However, measures on environmental protection and directives of state nature protection institutions have not yet been fully implemented.