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**OUTLINE PLAN FOR MODERNIZING AND DEVELOPING THE
NATIONAL SYSTEM FOR MONITORING ENVIRONMENTAL
POLLUTION IN GEORGIA**

Submitted by the delegation of Georgia*

Introduction

1. Changes in the status of the biosphere differ significantly depending on whether they derive from natural or from anthropogenic causes. The biosphere is constantly subject to change as a result of natural causes, but it normally reverts to its original state. The average values around which the characteristics of the biosphere fluctuate under the influence of natural processes are likely to change substantially only over a long period of time, i.e. over many millennia or historical epochs. An exception is where changes are brought about by natural disasters, these being relatively localized.
2. Quite another picture is presented by the modifications of the biosphere attributable to anthropogenic causes. These often lead to a sudden and sharp change in the environment, and for the most part are not beneficial. Despite the enormous ecological reserves of the biosphere, many anthropogenic impacts, especially pollution of the environment with non-natural chemical substances, have markedly adverse effects. Anthropogenic factors are frequently so distinctive in terms of the magnitude, intensity, duration and timing of their impact on the

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biosphere as compared with the normal processes observed in nature, and to which biological systems are adapted, that they often affect levels of tolerance, placing an excessive strain on organisms, and lead to a breakdown of the biological system.

3. The negative results of anthropogenic impacts are not an inevitable consequence of the development of human society as such. They are in large part related to errors in technology and environmental policies and to insufficient study of the possible effects of any anthropogenic impact.

4. It has now become essential for the development and implementation of effective environmental protection measures and rational use of natural resources to monitor both natural changes in the environment and changes brought about by anthropogenic impacts.

5. Natural changes in the environment have already been observed for a long time (more than a century) by various national geophysical services around the world. However, the existing systems for monitoring anthropogenic impacts, including environmental pollution, are by contrast still in their infancy. These systems therefore require further enhancement.

I. ANALYSIS OF THE EXISTING SITUATION IN GEORGIA WITH REGARD TO MONITORING ENVIRONMENTAL POLLUTION

6. Activities related to monitoring environmental pollution in Georgia are at present undertaken by various ministries, agencies and research institutions (ministries responsible for the protection of the environment and natural resources, agriculture and food, health, and internal affairs; State hydrometeorology and geology departments; research institutes of the Academy of Sciences, etc.).

7. The sub-systems in these bodies responsible for monitoring environmental pollution are operating on the basis of organizational, technical or technological and methodological guidelines and other types of regulatory instruments that were applicable at the time of the existence of the Soviet Union. They are, of course, now outdated and do not meet present-day requirements or conform to current international standards. However, even these sub-systems have undergone major changes since the early 1990s, in the context of an acute socio-economic crisis. The main components of the system of monitoring are in an unsatisfactory condition. There has been a quantitative and qualitative degradation of the networks used for conducting observations. The situation is extremely difficult as regards the tools and equipment used for these purposes. The available technical facilities have become worn and obsolete, and most of them need to be inspected and repaired or replaced. The necessary inputs are not being supplied. All the kinds of measurements required are being performed manually. Automated systems for monitoring are completely lacking. Mobile analytical laboratories are not available to conduct urgent tests on samples in environmental emergencies.

8. No reliable quality control systems exist for carrying out tests on environmental samples. Metrological support for measuring tools is very poorly organized. There are no modern automated systems for data processing and storage. Modern methods of forecasting and evaluation of the actual and anticipated status of the environment have not been introduced into everyday practice.

9. Absolutely no observations are made for bioindicators and bioaccumulators, although these would make it possible to obtain a better overall picture, including also those pollutants which might have been missed by the existing monitoring services that from time to time measure environmental parameters.
10. Observations are also not being made of background and transboundary environmental pollution, thus resulting in a failure to comply with international obligations.
11. Coordination of the work of the various monitoring services is not assured at the appropriate level. This frequently leads to duplication of effort and to inefficient use of scarce material resources.
12. It is therefore essential to carry out the measures contemplated in the outline plan discussed below to remedy these shortcomings and provide for the establishment of a unified and coordinated national system for monitoring environmental pollution. This will create the conditions for the development and implementation of effective environmental protection measures and facilitate compliance with the relevant international obligations. Georgia will thus move a step further towards convergence with the European Union.

II. BASIS OF THE OUTLINE PLAN

13. The outline plan has been developed on the basis of the following:
- European Union directives on environmental protection;
 - Environmental protection conventions, international agreements and treaties;
 - Environmental legislation of Georgia;
 - Various decrees and orders of the President of Georgia on matters relating to the establishment and development of systems for monitoring environmental pollution.

III. MAIN GOALS OF THE OUTLINE PLAN

14. The main goals of the outline plan are to:
- Restore and modernize the existing systems for monitoring chemical, radioactive and biological pollution and other kinds of harmful impacts on components of the environment - ambient air, precipitation, surface water, waters of the Black Sea, upper lithosphere subject to technogenic impacts and ground water at local and regional levels;
 - Establish systems for monitoring background and transboundary environmental pollution, including greenhouse gases;

- Establish systems for monitoring bioindicators and bioaccumulators;
- Introduce modern methods consistent with international standards for monitoring, the compilation of forecasts and evaluation of the actual and anticipated status of the environment;
- Establish an effective quality control system for monitoring and metrological support of measurement tools;
- Establish a system for the immediate detection and study of dangerous ecological and toxicological situations resulting from pollution (including accidental pollution) of the environment;
- Establish an automated system for the collection, processing, dissemination and storage of monitoring data; and create and manage the databases;
- Actively promote the development of national environmental quality standards consistent with international standards;
- Set up a coordinated system of staff training and skills upgrading, and make effective use of international training centres in this field

IV. EXPECTED RESULTS OF IMPLEMENTING THE MEASURES PROVIDED FOR IN THE OUTLINE PLAN

15. Implementation of the measures provided for in the outline plan is expected to ensure:
- High quality data on the status of the environment;
 - Improved reliability of forecasts of the status of the environment;
 - Objective evaluation of the actual and anticipated status of the environment;
 - Improved effectiveness of the environmental protection measures being implemented;
 - Improved access to information for users, and prompter supply of data to them;
 - Georgia's easier fulfilment of its international obligations and integration into the international community at the appropriate level in the field of environmental protection.

V. BASIC MEASURES FOR ACHIEVING THE GOAL SET OUT IN THE OUTLINE PLAN

16. The basic measures for achieving the goals set out in the outline plan include:

(a) Establishing, within the Ministry for the Protection of the Environment and Natural Resources, a body for coordinating the activities of the monitoring services placed under the authority of the various agencies in Georgia;

(b) Setting up an inter-agency expert group, with the participation of representatives (scientists and specialists) of the monitoring services;

(c) Conducting an inventory of monitoring services in the country; determining the status of existing buildings, equipment, analytical tools, computer and telecommunications facilities, availability of the necessary inputs and supply of electricity, water, etc., and ensuring financial support for monitoring activities;

(d) Conducting an inventory of sources of environmental pollution in the territory of Georgia;

(e) Formulating a short-term accelerated programme of environmental monitoring having regard to the material, technical and financial options actually available and the environmental protection priorities identified for the country;

(f) Planning repairs on damaged buildings and equipment and out-of-service technical facilities, and providing for the normal operation of centres and laboratories belonging to the monitoring services;

(g) Formulating sound scientific proposals with a view to:

- Rationalizing the existing network for monitoring environmental pollution at local and regional levels, together with maintaining long-range representative observation posts;
- Establishing systems to monitor background and transboundary environmental pollution, including greenhouse gases;
- Establishing systems to monitor bioindicators and bioaccumulators;
- Drawing up a list of parameters reflecting the status of the environment and defining the periodicity of monitoring;

(h) Compiling a consolidated list of methods for testing environmental samples, as used in Georgia's monitoring services and in similar services in developed countries; and describing the criteria to be applied for ranking the methods used by order of preference;

- (i) Elaborating data quality control procedures, including intra-laboratory, external and inter-laboratory quality controls making reference to international procedures;
- (j) Defining the country's basic organizations for metrology and standardization having regard to methods and technical facilities for monitoring environmental pollution;
- (k) Elaborating of methods of forecasting and evaluating the actual and anticipated status of the environment;
- (l) Elaborating scenarios concerning the development of the environmental situation and preparing recommendations for decision-making on its normalization in particular regions of the country;
- (m) Formulating proposals to re-equip the environmental monitoring network, inter alia with automated measuring instruments and integrated mobile laboratory units, and making suggestions for the possible manufacture of certain types of analytical tools in Georgia;
- (n) Formulating proposals with a view to building a system for the collection, compilation, processing and storage of data on environmental pollution, and a suitable geographic information system;
- (o) Developing the methodological and regulatory framework for cooperation by the country's monitoring services and national centre with international environmental organizations;
- (p) Making reference to the above documentation for the purpose of:
 - Acquiring analytical tools, computers and telecommunications equipment for technical upgrading of the monitoring services;
 - Regularly monitoring pollution and other kinds of harmful impacts on components of the environment;
 - Regularly compiling forecasts and conducting evaluations of the actual and anticipated status of the environment;
 - Creating and managing databases;
 - Regularly preparing and issuing bulletins, reviews, reports, maps and other kinds of information products describing the status of the environment.

17. The activities provided for in the outline plan will be carried out by scientists and specialists of Georgia with the active participation of international experts.

VI. FINANCING OF THE ACTIVITIES PROVIDED FOR IN THE OUTLINE PLAN

18. It is proposed to secure funding for the activities provided for in the outline plan partly from the State budget of Georgia and partly from international organizations and donor countries.

19. The plan is due to be implemented in stages, between 2002 and 2010.
