

NATIONAL ACTION PLAN

on

**Strengthening Capacity to Respond to Challenges of Biodiversity
Conservation, Climate Change and Desertification / Land Degradation**

(2006-2015)

2005

Abbreviations

USA	-	United States of America
ANAS	-	Azerbaijan National Academy of Sciences
OSCE	-	Organization for Security and Cooperation in Europe
APU	-	Azerbaijan Pedagogical University
UNO	-	United Nations Organization
GEF	-	Global Environmental Facility
NGO	-	Non-Government Organization
GIS	-	Geographic Information System
DP	-	Development Programme
CDM	-	Clean Development Mechanism
CIS	-	Commonwealth of Independent States
MENR	-	Ministry of Ecology and Natural Resources
SSC	-	State Statistics Committee
AAA	-	Azerbaijan Agricultural Academy
BSU	-	Baku State University
MoA	-	Ministry of Agriculture
SLMC	-	State Land and Mapping Committee
MoJ	-	Ministry of Justice
MoE	-	Ministry of Education
MoH	-	Ministry of Health
MoF	-	Ministry of Finance
MoT	-	Ministry of Taxes
MIE	-	Ministry of Industry and Energy
NP	-	National Parliament
TM	-	Transport Ministry
MFA	-	Ministry of Foreign Affairs
MIA	-	Ministry of Internal Affairs
SCC	-	State Customs Committee
UNITAR	-	United Nations Institute for Training and Research
WWF	-	World Wide Fund for Nature
CITES	-	Convention on International Trade in Endangered Species of Wild Flora and Fauna
UNESCO	-	United Nations Organization for Education, Science and Culture
MD	-	Millennium Declaration
TACIS	-	European Union Programme for Technical Assistance to CIS countries and Mongolia
WMO	-	World Meteorological Organization
TRSS	-	TV Radio Stock Society

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Introduction

As a result of a drastic rise of needs for natural resources linked to the growth of the world population, globalisation of economy, development of industry, uneven access to modern technologies, global climate change, the acceleration of desertification, decline in biodiversity, and similar factors impacts on the environment tend to increase in recent years.

Presently, the whole mankind is getting more and more concerned about global environmental challenges and these issues are now being considered by the developed and developing countries of the world both at political and economic levels.

In order to reduce the increasingly growing impact on the environment to a minimum there is a necessity in strengthening activities of the world community and international organizations.

Pursuant to a decision by the board of Global Environmental Facility (GEF) support provided by GEF to countries with economy in transition for needs assessment and strengthening capacity in the protection of the global environment is part of the aforementioned activities.

The main objective of needs assessment and strengthening capacity by countries is to build an independent capacity in the area of global environmental protection as well as biodiversity conservation, combating climate change and desertification / soil degradation by taking account of provisions of the three international Conventions.

Azerbaijan has joined more than 20 international environmental conventions and agreements. Azerbaijan has assumed important commitments as a party to these conventions and agreements.

In the course of implementation of the conventions on biodiversity conservation, combating climate change and desertification / soil degradation the following commitments have been identified:

- doing researches;
- preparing reports;
- training of specialists;
- public awareness raising;
- facilitating exchange of information at national level;
- strengthening capacity at systemic, institutional and individual levels, etc.

Cooperation with international organizations plays a particular role in the fulfilment of these commitments assumed by Azerbaijan.

In the course of implementation of the project on National Needs Assessment towards Strengthening Capacity to Overcome Challenges of Biodiversity Conservation, Climate Change and Desertification / Soil Degradation within the framework of cooperation with United Nations Development Programme (UNDP) and under the support of GEF the three Conventions (on biological diversity, climate change, and combating desertification) were reviewed and a national report was prepared on each thematic area.

Integrated and complementary approach has been identified for the preparation of the National Action Plan on strengthening capacity in the area of global environmental challenges.

To this end crosscutting issues in the area of protection of the global environment in Azerbaijan have been identified on each of the three thematic areas, the challenges analysed and action plan on their tackling prepared.

While preparing the action plan the following was taken as essential:

- identification of crosscutting issues for each of the three thematic areas;
- improvement of national procedures on the implementation of international conventions;
- development of a system on gathering data and reports intended for resolving crosscutting issues during the implementation of the conventions;
- expanding monitoring and research activities in compliance with the provisions of the three Conventions.

Ministry of Ecology and Natural Resources of the Republic of Azerbaijan (MENR) is the focal authority responsible of the project implementation.

The financial support for the implementation of the proposed national Action Plan in 2006-2015 is deemed to be shared by the Government of Azerbaijan, international donors and private entities on a 50 to 50 basis.

I. NATIONAL NEEDS ASSESSMENT IN THE AREA OF GLOBAL ENVIRONMENTAL CHALLENGES

1.1. Thematic assessment on biodiversity

At present time serious threats to biodiversity of the globe have arisen as a result of anthropogenic impacts. As a consequence of human activities a number of species of animals and plants have become extinct while some of them are threatened with extinction. As a solution to this issue of concern 156 states adopted a United Nations Convention on Biodiversity at Rio-de-Janeiro in 1992.

Noting the significance of the issue the Republic of Azerbaijan ratified the UN Convention on Biodiversity in 2000 and Cartahena Protocol thereto in 2005.

1.2.1. Current state of biodiversity

Azerbaijan enjoys the richest biodiversity in the Caucasus region. Throughout 9 climatic zones up to 4500 species of higher plants have been recorded which accounts for 64 percent of the Caucasus overall species composition. Of these plants 7 percent or 240 species are endemics and relicts belonging with 108 genera and 36 families.

18 thousand species of fauna were recorded within the country's area. The present day fauna of Azerbaijan includes 97 species and sub-species of mammals, 357 species and sub-species of birds, 125 species and sub-species of fish, 67 species and sub-species of reptiles and amphibians and about 15 thousand species of insects.

A number of species of flora and fauna listed in the Red Data Book of the Five Caspian littoral states can be found at sea and in the coastal area. Migratory routes of a number of rare and endangered birds lie across the Caspian Sea.

To ensure biodiversity conservation Ministry of Ecology and Natural Resources has undertaken complex actions on establishing new specially protected nature areas, enlarging the area of existing nature sites, strengthening protection mode and setting up relevant infrastructure in these areas. Starting from 2001 six national parks (Ordubad after Academician Hasan Aliyev, Shirvan, Ag-gol, Hirkan, Altiaghaj, Absheron), two state nature reserves (Shahbuz, Eldar Pine), one state nature sanctuary (Gakh) have been established, the area of five state nature sanctuaries (Garayazi, Ismayilli, Pirigulu, Turyanchay) have been expanded. As a result of these actions the area of specially protected sites in the country having expanded twice as much as in 2001 have accounted for 593110 hectares, i.e. have been increased from 4 percent to 8 percent of the total country's area. This, in its turn, has created conditions in the country for conservation and further development of biodiversity threatened with decline.

To facilitate the fulfilment of commitments assumed the Republic of Azerbaijan including the implementation of complex measures on eliminating threat of extinction of genetic pool of plants, animals, microorganisms a State Commission on the Protection of Genetic Pool was established in 2002 by a relevant order of the President of the Azerbaijan Republic.

Under the support of GEF, UNDP, Flora and Fauna International Biodiversity Strategy and Action Plan in the Republic of Azerbaijan was prepared in 2004. The Action Plan covers a period of five years (2004-2008) and identifies priority actions. Although the envisioned

actions do not encompass all the issues of biodiversity in Azerbaijan, they will contribute to the enhancement of the existing conditions in this area.

Despite the achievements a number of biodiversity conservation issues remain unresolved.

The following factors also negatively affect biodiversity in terms of decline in the number of species:

- loss or change of habitats;
- commercial use of biological resources;
- unsystematic or uninterrupted cattle grazing in pastures, failure to meet grazing standards, poor activities on the recovery of grasslands;
- contamination of the environment (soil and water resources) in industrial zones and adjacent areas by industrial wastes;
- failure to observe rules ensuring protection of wild animals while mowing grass or crops, burning plant residues in the mown cropland;
- use of unregistered pesticides and fertilizers of poor quality;
- contamination of soil by oil and oil products, etc.

In addition, 44,3 thousand hectares of specially protected nature sites of the country has been occupied by Armenia. These are two state nature reserves including Bastichay reserve which is represented by stands of Eastern Plane and ranked first in Europe and second in the world (after Canada) and 4 state nature sanctuaries. Similarly, a large part of summer pastures are also under occupation. According to some sources of information natural resources of these areas are ruthlessly exploited and as a consequence a serious damage is caused to biodiversity.

Overview of capacity in biodiversity conservation

According to the provisions provided in the Convention capacity in biodiversity conservation is defined by the total of goals identified by scientific-research institutions government bodies, civil society, communities and individuals in their activities in this area and their capabilities to achieve them.

Environmental subjects are taught at environmental education and practical training centres and 47 higher and 60 high educational institutions of the country's educational system. Most of these educational institutions are financed from the state budget. A staff of over 20 thousand teachers is engaged in this area. Graduates with a higher degree in environmental sciences are taught at Baku State University (BSU), State Management Academy (SMA), Academy of Agriculture (AA), University of Architecture and Construction (UAC) and other state and private higher educational institutions. Personnel of relevant agencies regularly attend extension and vocational courses overseas.

Activities of many ministries and other government bodies, public organizations in Azerbaijan is closely linked to with the biodiversity area. While their general objectives in the protection and conservation of biodiversity are the same, their areas of activities, responsibilities, commitments, methods and approaches applied are different. In order to avoid disconnection and replication in the use of capacity there is a need for the creation of good coordination system among institutions and determination of areas of responsibility, functions, commitments and allocated budget of each agency while drafting legislative acts and national programmes pertinent to this area.

A separate law on biodiversity conservation has not been adopted in the Republic of Azerbaijan. However, 24 laws on biodiversity conservation and regulatory acts on the

execution of these laws have been adopted. The majority of laws and regulatory acts have been adopted in the country after accession of Azerbaijan to the Convention on biodiversity and they generally meet provisions of the Convention.

A current state of biodiversity in Azerbaijan and increasingly growing attention to this issue make significant the implementation of urgent actions. Laws, national and foreign state policy and adopted programmes pertinent to this area mainly encompass those commitments that need to be implemented. However, there are obvious discrepancies between real activities and objectives set forth in the programmes. That is to say, the real activities lag behind the process of biodiversity changes.

The main reason for poor biodiversity conservation activities is limited financial resources. Problems in the Republic of Azerbaijan that are inherent in the transition period and aggravated by a political situation (refugees and internally displaced persons, loss of the potential of the occupied areas) make it impossible to finance the implementation of programmes on biodiversity conservation as well as fulfilment of the commitments under the Convention. Investments into this area are impeded by the obvious fact that revenues from the protection and sustainable use of biodiversity can be gained in long-term perspective. The mobilization of human resources, the institutional enhancement and development of cooperation all requires the attraction of financial resources.

The analysis of activities of agencies concerned demonstrates that the present coordination and cooperation in biodiversity conservation do not meet the required standards. There is no awareness among the communities about materials on the Convention, laws, regulatory documents and programmes. Donor organizations and international institutions capable of making investment are reluctant to provide financial support to the resolution of the problems because of a lack of clear understanding of the situation in this area.

Major needs in biodiversity conservation

To develop capacity in biodiversity conservation in Azerbaijan to the required level the following needs should be met:

1) Enhancement of the legislation on biodiversity;

At present there are ongoing activities on bringing the legislation on biodiversity in the country to the European standards.

There is a need for the adoption of the following laws and regulatory acts:

- Law on biodiversity conservation;
- Law on plants protection;
- Law on biosafety;
- Law on national parks;
- Regulatory document on the establishment of a specially protected nature areas and monuments Fund;
- Regulatory acts on rehabilitation centres within national parks and animal nurseries;
- Regulatory document on the restocking, propagation and sustainable use of medicinal herbs.

2) Expansion of the area of specially protected nature sites;

There are ongoing activities on expanding the total area of specially protected nature sites so that it constitutes 10% of the country's total area. On the other hand overcoming such challenges as a lack of the required infrastructure in specially protected nature areas, poor knowledge and awareness of the public about specially protected nature areas, reluctance of the private sector to take part in the development of specially protected nature areas and similar others is of the foremost responsibility in front of us.

3) *Enhancement of mechanisms of making biodiversity inventory;*

With a view to making inventory of wild animal species in the Republic of Azerbaijan annually during appropriate seasons a census of mammals in autumn (in October) and birds in winter (January) is carried out.

For ensuring complete and detailed biodiversity inventory there is a need for the involvement of locals and communities into this process and strengthening activities in raising their awareness in this area.

4) *Strengthening scientific research capacity for the assessment of biodiversity within the country;*

The development of capacity in the following directions is deemed to be appropriate:

- systematisation of findings of scientific research activities carried out in the area of biodiversity and their evaluation in terms of suitability for further application;
- application of suitable findings in pilot projects and subsequently on a larger scale;
- evaluation of the coherence between the subjects of researches currently ongoing in the country as well as level of their implementation and a state of biodiversity protection and making changes to thematic plans if need be;
- Stimulating the implementation of scientific research activities encompassing all forms of biodiversity protection processes (physical, biological, social, economic, etc.);
- Investigation of issues relating to the role of social ecology in the sustainable development conception and aspects of social-economic researches in the field of the environment. Entering into a database information on all actions implemented in this area making use of all means to make available the knowledge to stakeholders.

5) *Development of curricula related to biodiversity conservation for all layers of the society and their execution;*

Paying attention in the curricula to aspects coherent to national circumstances, the accumulation, development and exchange of information in these curricula as well as training of personnel capable of promoting the setting-up of early warning systems.

6) *Enhancement of a system of public awareness raising in biodiversity conservation issues;*

Poor knowledge of biodiversity conservation issues by different layers of the society, unsatisfactory involvement of NGOs into this area, insufficient level of information exchange system in biodiversity, poor public awareness raising about biodiversity conservation issues and other shortcomings urge the need the enhancement of a system of public awareness raising about biodiversity conservation issues.

Activities and actions that are envisioned to be undertaken and implemented in this area can be more useful as opposed to administrative methods.

7) Enhancement of a forest management mechanism

One of the challenges of biodiversity conservation in Azerbaijan is linked to limited habitat for the existence and reproduction of a number of rare and endangered species. The role of forests is indispensable for the conservation and normal development of fauna and flora species and ensuring their diversity. The main problem of forest development in the country is the anthropogenic impact on forests. The long-term experience shows that the elimination of these impacts is impossible without enhancement of the forest management mechanism.

Therefore, the application of new mechanisms in the management of multifunctional forests is an important precondition for biodiversity conservation.

1.2. Thematic assessment on climate change

With the purpose of preventing present and future climate change 150 states of the world signed the UN Framework Convention on Climate Change at United Nations Conference on Environment and Development in Rio de Janeiro in 1992.

The basic purpose of the Convention is to maintain such a level of greenhouse gases concentration in atmosphere so that the climatic system is not faced with a threat of harmful anthropogenic impact. Such level can be maintained within a certain timeframe on condition that ecosystems are capable of keeping up with a trend of the climatic change while the manufacture of food products and future economic development are not jeopardized.

The National Parliament (Milli Mejlis) of the Republic of Azerbaijan ratified the United Nations Framework Convention on Climate Change on January 10, 1995 and the country has become a party to the Convention since May 16 of the same year.

1.3.1 Present state of climate change issues

In recognition of urgency of the issue in the country a State Commission on Climate Change composed of heads of relevant ministries, committees and companies was established in 1997 so as to ensure the implementation of commitments under the Convention.

The Republic of Azerbaijan, as a Party to UN Framework Convention on Climate Change and non-Annex 1 country has taken a commitment to develop and implement national and regional programs aimed at reducing the expected impact of Global Climate Change and publish those programs making them available to the general public.

As a non-Annex 1 country, Azerbaijan submits its National Communications to the Conference of the Parties to the Convention every three years provided that financial resources are available for that.

The first step of the Republic of Azerbaijan in terms of fulfilling the commitments under Articles 4 and 12 of the Convention was “Initial National Communication of Republic of Azerbaijan” project under the financial support of Global Environment Facility and United Nations Development Programme provided to developing countries.

“Self-assessment towards developing a project proposal for the Second National Communication of Republic of Azerbaijan to UNFCCC” project developed by MENR has been submitted to and approved by GEF. The project on Second National Communication of the Republic of Azerbaijan is expected to commence on January 1st, 2006.

Kyoto Protocol the aim of which is to strengthen commitments of developed countries to reduce quantitative indicators of greenhouse gases emissions was adopted at the 3rd Conference of the Parties to UN Framework Convention on Climate Change in December 1997 in Kyoto, Japan. At present 144 countries have ratified the Kyoto Protocol.

The Parliament of the Republic of Azerbaijan ratified the Kyoto Protocol which is Annex to the UN Framework Convention on Climate Change on July 18th, 2000.

The Kyoto Protocol took effect on February 16th, 2005 following its ratification by the Russian Federation.

Azerbaijan has not assumed quantitative commitments under the Convention.

Clean Development Mechanism (CDM) is defined in Article 12 of the Kyoto Protocol. Azerbaijan as non-Annex 1 party can only participate in CDM.

Clean Development Mechanism envisions activities towards the abatement of greenhouse gases emissions under projects implemented by developed countries in developing countries. The amount of greenhouse gases reduced during the project implementation is added to the quota of the developed country.

The purpose of Clean Development Mechanism is to provide support to non-Annex 1 Parties with a view to maintaining stable development of developed countries and achieving the ultimate goal of the Convention and also, according to item 3, provide assistance to non-Annex 1 Parties in the fulfillment of quantitative obligations concerning restriction and reduction of emissions.

1.3.2 Overview of capacity on climate change

Prediction of expected climate change is based on the general circulation models of atmosphere based on recommendations of the Intergovernmental Panel on Climate Change. In addition to this, efforts are undertaken to make prognosis based on artificial scenarios developed by scientists from the National Academy of Sciences (NAS).

Carried out researches show that expected changes in climate will result in serious repercussions in the following key areas:

- Inundation of coastal areas, precarious situation of coastal ecosystems, aggravation of coastal erosion processes
- Increase in adverse impact on human health and biodiversity
- Increase in adverse impact on water and forest resources, agricultural lands and other ecosystems which are easily susceptible to climate

Although the reduction of greenhouse gases concentration is an important factor, the role of the elaboration and implementation of adaptation actions to mitigate damage to be caused by irreversible character of climate changes is indispensable.

The collection of initial data is one of the main criteria facilitating the preparation of the national cadastre of greenhouse gases. In this regard, the reliability of data and their conformity to the methodology is one of the important issues.

It should be noted that information on the amount of greenhouse gases has to date been made available for the public in reports of State Statistics Committee (SSC). In view of this, activities are being undertaken by MENR in partnership with SSC. It is envisioned to supplement information on environment pollution provided by the statistics service of the country with data on greenhouse gases and ozone depleting substances and in the second phase, to enhance fuel to energy balance to international standards and methodology.

One of the obstacles for the preparation of the cadastre is a lack of cooperation on the part of companies and joint ventures in providing relevant data to SSC.

Taking account of the aforementioned the implementation of actions in these directions is of paramount importance.

The main objective of the economic policy of the government of Azerbaijan as a country with economy in transition is to promote sustainable social-economic development. In addition, methods promoting economic development should take account of environmental standards and concerns. This is first of all linked to the effective use of natural resources, replacement of energy capacious technologies and application of technologies that reduce greenhouse gases emissions. A way out from the crisis in this area is seen by the government of Azerbaijan in the effective use of natural resources, utilization of alternative energy sources (solar, wind, water, biogas, etc.) and environmentally friendly technologies at the existing heating and electric power stations.

The promotion of public awareness raising about contemporary methods of rational use of energy resources is one of the important tasks.

1.3.3 Major needs in the area of climate change

The following needs should be met in order to develop the climate change capacity to the required level:

1) Climate change impact assessment and implementation of adaptation measures;

To this end it is important to develop a national programme on the use of water resources while taking account of National Programme on Climate and climate change impact assessment, to regularly inform the public about expected changes in seasonal and territorial distribution of water resources, organize trainings for personnel of the forestry sector, elaborate national legislative acts relating to the Caspian Sea, promote awareness raising among the communities of coastal zones about sea level fluctuations in the Caspian, raise awareness among specialists and communities engaged in the agricultural sector about climate change challenges, develop a national strategy by taking account of climate change issues in the agricultural sector, implement scientific research activities in the area of biometeorology and protection of climate dependent human health and make assessment of climate change impact on wetlands and biodiversity and elaborate adaptation measures.

In addition, there is a need for ensuring systematic observations of climate and consequently, fundamental replacement of infrastructure and technical base of the

observation network, increasing the number of precipitation gauging stations in highlands, studying a state of glaciers and trends in the change of snowlines, carrying out observations for tracing CO₂ emissions as well as setting up internet network in all structural units.

2) *Enhancement of forest management mechanisms;*

There is a need for the protection and rehabilitation of forests in the country and their management based on new approaches in conformity with market economy mechanisms. To this end, it is appropriate in the first instance to incorporate Kyoto Protocol mechanisms (stimulation of forest planting on lands under different ownership, lease of forestland, planting forest tracks of commercial significance, regulation of taxation system, etc.) into the national legislation.

3) *Education and awareness raising on climate change;*

It is required to promote continuous environmental education at all levels of education (particularly on climate change), equip technical base to modern standards, ensure high level training of personnel to teach environmental subjects at schools, create a database along with providing access to computers and internet, organize trainings for enhancing knowledge of specialists on climate change, prepare educational manuals, programmes, methodological and visual facilities, create a modern library stock, regularly disseminate information about present and future effects of climate change among decision-makers and a wide-range of public groups.

To ensure continuous long-term human resources development it would be appropriate to organize qualification enhancement courses at World Meteorological Organization's Regional Training Centres, internships in developed countries for exchange of experience as well as training courses to master computer software and learn foreign languages.

4) *Preparation of a cadastre of green house gases;*

The following preconditions are considered necessary for the preparation of a cadastre of green house gases as part of the Second National Communication of the Republic of Azerbaijan:

- Undertaking relevant actions for the Improvement of the National Cadastre System;
- Modernization of the structure of Climate Change and Ozone Centre affiliated with Ministry of Ecology and Natural Resources in conformity with the provisions of the Convention;
- Development of methodologies to advanced practice;
- Creation of a modern network and database of GHGs;
- Inclusion of information on GHGs into reports on pollution by enterprises;
- Long-term plan based human resources development;
- Organizing systematic training courses for specialists of relevant ministries and other institutions;
- Learning advance practice of the Intergovernmental Panel on Climate Change;
- Preparation of methodological guidelines on the advanced practice for specialists of relevant sectors.

5) *Reduction of green house gases emissions;*

To reduce greenhouse gases emissions through stimulating the replacement of energy capacious technologies used at enterprises of the energy sector with new technologies it is required to adopt new standards and other legislative acts, encourage the use of renewable energy sources by adjusting tax and custom duties, draft amendments to relevant legislative acts to impose conditional taxes and custom duties on the import of used vehicles, enhance awareness raising and provide incentives for the introduction of new technologies in the private sector, organize trainings for municipalities and private sector in view of a lack of experience on taking out a loan and enhance advertising campaigns and information dissemination programmes in view of a lack of awareness of the public about energy effectiveness.

1.3 Thematic assessment on combating desertification / soil degradation

Desertification / soil degradation is one of the serious economic, social and environmental challenges for many countries. The Convention to Combat Desertification was adopted on 17 June 1994 in Paris and has taken effect since 1996.

The Republic of Azerbaijan joined the Convention in 1998. Ministry of Ecology and Natural Resources is the focal authority for the Convention. Coordination Council composed of national focal point, representatives of stakeholders and NGOs is functioning in the country.

1.3.1. A state of desertification / soil degradation

Desertification / soil degradation process of different degrees takes place in an area of 3741 thousand hectares of a total of 8640 thousand hectares of the country area. The main causes of desertification are water erosion (34,3%), irrigation (3,2%) and wind erosion (4,3%). In recent decades this process has been much more intensive in the most densely populated and economically developed zones, namely in the Kura-Araz lowland, Asbsheron peninsula, and Nakhchivan AR. As a consequence, the area of lands affected by desertification increased from 36 percents to 43,3 percents (3741 thousand hectares) over the period 1970 to 2000. Of the area subjected to desertification 1520,6 thousand hectares (17,6 percent) have been slightly eroded, 881,3 thousand hectares (10,2 percent) have been moderately eroded and 1339,2 thousand hectares (15,5 percent) have most of all suffered from erosion. According to information by 01 January 2002, 665 thousand hectares of the irrigated soil in the country were subjected to salinization while 480 thousand hectares were affected by salinity. Among the causes along with natural factors (climate change, wind, water torrents, etc.) human impact plays a particular role. Tree logging because of a shortage of power, overgrazing, improper irrigation systems, farming with no account of scientific grounds, failure to meet agrotechnical standards and other causes speed up the process of desertification. This process is stimulated by deforestation taking place over the last 20 years, double increase in the number of cattle and by extensive irrigation. Unprofessional agricultural management on privatised lands following the land reform has also influenced this process. 30 thousand hectares of land have been destroyed as a result of mining operations.

The most dreadful degradation of soil is the case in the Absheron peninsula. In consequence of oil exploration for more than one hundred years with no account of environmental standards 10 thousand hectares of land have been contaminated by oil.

Taking account of a state of activities on combating desertification / soil degradation in the country a project proposal on the developing National Action Plan to combat desertification / soil degradation has been prepared and submitted by MENR to GEF.

The following priority actions relating to combating desertification / soil degradation are envisioned in the project:

- analysing main causes of desertification / soil degradation;
- identifying main priorities concerning combating desertification / soil degradation;
- diverting efforts to reducing the impact of anthropogenic factors to a minimum;
- interlinking relevant programmes on combating desertification / soil degradation.

1.3.2. Overview of capacity in combating desertification / soil degradation

Capacity in combating desertification / soil degradation is represented by relationships between institutions engaged in this area under the legislation, social standards and national values existing in the country, environmental education system and being dependent on the level of activities of in this area, by the total of human, administrative, organizational, financial and technical recourses at their disposal.

Human capacity is defined as the total of capabilities of individuals employed by institutions combating desertification / soil degradation. Those engaged in combating desertification should have legal, environmental and technical knowledge and communication, assessment, planning, administrative and other skills of the required level. In this regard relevant institutions dealing with combating desertification have a sufficient human capacity. However, there is a need for employees to undergo regular trainings and enhance their qualifications.

Administrative resources are assessed by results of activities of relevant institutions engaged in this area depending on the level of management mechanism. Defining responsibilities, commitments and obligations including discharge of duties are the factors affecting administrative capacity. At present there is inconsistency in administrative resources of stakeholders with regard to the speed of desertification in Azerbaijan against combating activities. In that case the need to strengthen capacity of stakeholders in terms of administrative resources arises.

Financial resources to fulfil commitments under the Convention are defined as funds earmarked from the budget as well as loans, grants and other investment sources. It should be admitted that financial resources of relevant institutions to successfully deal with combating desertification is not sufficient.

Technical resources to fulfil commitments under the Convention are defined as equipment, computers and other technical facilities at the disposal of relevant institutions. A special importance here is placed on the gathering, analysis and distribution of information as well as technical resources required for the organization of workshops, trainings and setting up specialised laboratories.

Different institutions are involved in activities on combating desertification / soil degradation in Azerbaijan. Although they all have one goal their area of activities, responsibilities, commitments, methods and approaches applied are different. It is important to ensure liaison among these institutions to avoid isolation and replication in the use of the capacity. To this end responsibilities, duties, allocated funds, activities timeframe of each institution need to be defined while drafting regulatory acts and developing national programmes.

Eight State and Nation Programmes have been developed to date which directly or indirectly deal with the issue of combating desertification / soil degradation.

These programmes envision a broad range of ways and methods of combating desertification / soil degradation.

1.3.3. Main needs in the area of combating desertification / soil degradation

Taking account of the scale and change dynamics of desertification / soil degradation as well as its specifics and potential in relation to Azerbaijan the following priority needs can be put forward:

1) Planting trees and perennial herbs in landscapes that are susceptible to desertification;

There are various causes of the spread and speed of desertification / soil degradation in Azerbaijan. This process is for 80 percents linked to water erosion in landscapes susceptible to desertification. Such erosion is also supported by the destruction of vegetation, inadequate agricultural practice, monoculture growing and overgrazing. In order to prevent this process it is required to plant trees and perennial herbs, apply chisel ploughing, crop rotation and undertake other measures in landscapes that are susceptible to desertification crop rotation.

As from 2001 activities on the rehabilitation and expansion of forests in the country have been intensified. In 2003 Ministry of Ecology and Natural Resources developed National Programme relating to this area and had it approved by the State.

There are local and centralized administrative bodies, specialized institutions and highly qualified specialists in this area. Despite all this the capacity to carry out good work is insufficient. To this end it is important to involve local communities and ensure sustained actions.

2) Improvement of a system of information dissemination, environmental education and awareness raising concerning the issue of desertification/ soil degradation;

A survey undertaken among community members affected by desertification process of a different degree and having a different level of education testifies to a poor awareness and knowledge by the public about desertification and ways to combat it.

A serious attention has been given to this issue in the environment-related National Programmes adopted by the State within the past four years. However, insufficient awareness raising about the problem is being observed among NGOs and mass media which are capable of promoting public movement in this area. Negligence of global environmental challenges in the statistics system and restricted access to information available at ministries poses a problem for raising awareness among wider public masses. There is a need to rectify current activities directions of the human capacity and approaches to the resolution of the problem in this area.

There is also a need for developing a special statistic information register meeting international standards. Information on a state of land resources, areas affected by desertification and a degree of their desertification should be included in priority areas. Publishing of the gathered information on web pages to make it available for a wider public can provide a more effective outcome.

The analysis of activities by public institutions shows that the level of implementation of projects directly relating to desertification / soil degradation is very low. The number of projects addressing this problem is small because the level of activities to raise awareness of the public about the issue of combating desertification / soil degradation is insufficient. One of the reasons for poor activity of NGOs in this area is that this problem is not included in the list of priority actions by foundations operating in this region. The major part of activities by NGOs is supported by grants provided by international foundations. Although a serious attention in grant programmes announced in the South Caucasus is given to environmental issues relating to the Caspian Sea, the Kura and Araz rivers, sustainable development of mountainous regions, biodiversity, etc., the challenge of desertification / soil degradation remains overlooked.

The relationships, exchange of information and experience among citizens of different layers and different concern about the problem are not well-organized. Therefore, there is a need for the development of a national communication system and setting up a special information network in this area. Taking account of different opportunities of the public to access information this information network can be complemented by mass media sources, online networks, special bulletins, brochures and awareness raising campaigns.

3) Stimulating the use of renewable energy sources;

As part of actions to combat desertification / soil degradation and drought the use of alternative sources of energy is addressed in State Programme on Poverty Reduction and Economic Development, National Programme on Environmentally Sustainable Social-Economic Development and State Programme on the Use of Alternative and Renewable Energy Sources in the Republic of Azerbaijan (2004). Generating electric power by means of photovoltaic modules, solar water heaters, water pumping wind mills and the use of other methods of sourcing alternative energy can play an important role in combating desertification / soil degradation.

There favourable conditions in Azerbaijan for the use of renewable source of energy. The power of solar energy in Azerbaijan is 2000 kW per second per square meter, the number of sunny days accounts for 270 per year while wind energy power constitutes 0,5 kW per square meter.

4) Rehabilitation of soil fertility by improving the utilization of water reservoirs and irrigation and drainage channel systems, prevention of water loss and irrigation erosion;

Approximately half of the land in Azerbaijan is suitable for cultivation. Of this land 1,7 million ha are used for growing of plants and crops. About 1,3 million ha of the land are irrigated and 80 percents of the harvest is obtained from these lands. On over 740,4 thousand ha of the irrigated land there is a need for setting up new irrigation systems while on 282,7 thousand ha area the construction of a drainage channels network is required. Of the area encompassing the drainage channels network 239,6 thousand ha need to be reconstructed in a complex manner, 300 thousand ha of open-air drainage channels system need to be replaced by a covered-up network, 95,3 thousand ha need to be substantially levelled and 88,1 thousand ha need to be washed down.

Ensuring proper exploitation of drainage systems and their reconstruction should be put first and the level of ground waters and their chemical composition be assessed. There is a

need to organize combating wash and erosion of the whole cultivated system in regions threatened with erosion.

In Azerbaijan 70 percents of water resources is formed by the inflow of water from outside the country. By increasing a store of water resources to be used for irrigation through constructing water reservoirs on internal rivers the area of irrigated land can be enlarged up to 1600-1650 thousand ha. The exploitation system of complexly used water reservoirs and their technical maintenance need to be improved. The application of advanced irrigation technologies and prevention of water loss accounting for over 27 percents are also included in the list priorities.

Regional Programmes on soil reclamation by means of irrigation and amelioration are in the minority. Since there is no possibility to regulate the use of water in partnership with countries located within the Kura-Araz river basin during dry seasons Azerbaijan most of all suffers from shortage of water compared to these countries. Water resources of the country are limited and account for 31,23 km³ (river sources) which fall to 23 km³ in dry seasons.

In the context of regional policy having the Republics of Georgia and Armenia as countries located in the Kura-Araz river basin join the Convention on the Protection and Use of Transboundary Watercourses and International Lakes adopted in 1992 at Helsinki, signing bilateral agreement on the protection and use of water resources of the Kura river between the Republics of Azerbaijan and Georgia, the protection and use of water resources of the Araz river as well as the development and implementation of actions on the utilization of Sarsang water reservoir under the mediation of international institutions until the conflict between the Republics of Azerbaijan and Armenia is resolved are of importance.

5) *Making inventory of soil, water and forest resources and identifying main factors affecting soil degradation;*

It is required to obtain complete and detailed information related to this area in order to properly allocate funds and technical facilities intended for combating desertification / soil degradation and effectively use human capacity and natural resources. Due to problems of transition period, change in economic relations and for other reasons the carelessness in the use of natural resources (soil, forest, water, subsoil, etc.) have resulted in the quantitative and qualitative trend towards decline in these resources. However, complete and detailed account of this trend was not undertaken. Due to a shortage of technical and financial means inventory is not carried out in a proper manner at research institutions in charge. Therefore, there is a need for strengthening institutional capacity of agencies engaged in this area.

Capacity of research institutions to do research on priority issues in a contemporary manner is limited. There is a need for a state programme on the development and application of scientific basics of actions on combating desertification / soil degradation for the territory of Azerbaijan.

Although scientific potential is high in the country findings of laboratories should be developed to the level of pilot projects.

The impossibility to do high level researches due to insufficient funds earmarked in the budget for this kind of activities, a lack of appropriate technical capacity at research

institutions, incomplete scope of field surveys due to limited funds, failure to exchange scientific attainments in the field of amelioration and irrigation gained during internships overseas, poor national human resources development are all of other existing problems.

Strengthening technical and financial capacity of MoA and SLMC that are responsible for practical activities on combating desertification / soil degradation is one of the important steps to be taken.

The magnitude of desertification / soil degradation within the area of Azerbaijan for the past 30-40 years, its change dynamics and social-economic repercussions require urgent and adequate combating response in this area. The analysis of the capacity of stakeholders shows that important steps have been undertaken in the country in this area and a certain capacity has been built to respond to the challenge. However, it should be unambiguously admitted that there is a considerable difference between the present day change dynamics in desertification / soil degradation processes and the existing capacity to adequately respond to them. Therefore, additional and more effective actions should be undertaken to strengthen the capacity.

II. CROSSCUTTING ISSUES IN THE THREE CONVENTIONS ON GLOBAL ENVIRONMENTAL CHALLENGES

2.1. Identifying priority issues

2.1.1. Main shortcomings in the fulfilment of commitments under the Conventions

Concrete actions towards the elimination of environmental problems are being carried out in Azerbaijan with a view to ensuring sustainable development. At the same time there are a number of obstacles impeding the overcoming of problems in the country in the areas of concern. These are as follows:

In the area of biodiversity conservation:

- very poor environmental public awareness about biodiversity conservation issues;
- a shortage of manuals, facilities and programmes to raise awareness of a wider public about biodiversity conservation in the educational system;
- a lack of regular national and regional workshops and trainings in this area;
- failure to systematically involve stakeholders to regionally and internationally organized trainings on exchange of experience;
- poor exchange of experience and information at all levels;
- poor organization of the use and development of database on biodiversity conservation at relevant institutions;
- limited opportunities for the assessment of change dynamics and scale of biodiversity on account of a failure by state environmental statistics to fully cover the biodiversity area;
- poor general coordination of activities in this area despite the fact that various areas of biodiversity conservation are covered by relevant state and national programmes adopted in the country;
- insufficient attention to social aspects of biodiversity conservation such as health, demographic trends, migration, etc. in programmes that are in preparation;
- making little use of findings for biodiversity conservation provided by research which has been financially and technically weak in recent years;

- reluctance in the implementation of pilot projects among practical and scientific laboratories resulting in the impediment of application of scientific findings in practice;
- weakness of activity of NGO-s in the field of bio-diversity protection;
- out of level financial support in the activity of bio-diversity protection and as a result of non-elimination of current problems.

In the field of climate change:

- non-satisfaction of public enlightenment work about factors causing climate change and on expected complications at the result of climate change;
- low level of public informing in the field of climate change;
- weak implementation of transfer to new technologies and availability of outdated equipment, production technologies in spheres of energy and transport which make sources of wastes of gases that create heating effect in atmosphere;
- lack of experience in the field of project preparation to meet international standards;
- unimproved system of information exchange for creation of cadastre of gases which causes heating effect in the country;
- weakness of public role in measures implemented in the field of reduction of wastes of gases, causing heating effect;
- out of level study of effect of expected climate change on separate sectors of economy, population health, ecosystems;
- unsatisfactory training of specialists in the field of teaching of climate change in the country on scientific basis;
- non-meeting of modern requirements in observation, forecasting technologies and equipment in climatic system;
- non-allocation of purposeful financial means from state budget for implementation of measures in the field of evaluation of effect of expected climate change and adaptation to it in the country;

In the field of combating desertification

- weakness of public informing system in the field of combating desertification, non-arrangement of ecological education on required level in the country;
- unimproved mechanism of forests management in the field of combating desertification in the territory of the country;
- non-utilization of restored energy sources on required level;
- reduction of soil fertility as the result of non-maintenance of water reservoirs on required level, irrigation and erosion, water leakages due to outdated of irrigation and collector-drainage systems;
- irregular conduction of inventory taking of soil, water and forests resources;
- weak coordination of activities implemented in the field of combating desertification in the country;
- non-implementation of results of scientific-research works in the of field of combating desertification.

2.2. Cross-cutting priority problems

The analysis of current problems in the field of fulfillment of obligations arisen from Conventions on protection of bio-diversities, climate change and desertification/soil degradation, which Azerbaijan Republic joined, shows that following points may be referred to crossing problems on three thematic fields:

- non-improved National legislation on global ecological problems;
- weakness of system of public informing, non-organization of ecological education on required level;
- non-allocation of purposeful financial means from state budget on sufficient amount;
- very low level of ecological knowledge of population;
- weak organization of information and experience exchange on all levels;
- non-improved mechanism in management of forests;
- non-implementation of results of scientific-research works on required level;
- unsatisfactory level of specialists' training etc.

The following problems are most important for Azerbaijan in present phase among those which considered as crossing for each three thematic fields:

- 1) public informing in the field of protection of bio-diversity, climate change and combating desertification;
- 2) improvement of mechanism of management of forests in Azerbaijan.

2.2.1. Basing of public informing in the field of global ecological problems as priority direction

1) *On individual level.* Despite attention on public informing in the field of global ecological problems in the National and State Programs adopted for last three years in the country in the ecological field was grown, the informing of various strata of population in bio-diversity, climate change and desertification/soil degradation fields and understanding of population on which complications may lead these problems in future, is still very low level. For example, any person hunts any endangered bird or animal and sells it on cheap price for satisfying his small need or cuts one tree of 250-300 years old and listed in "Red book" for purposes of satisfying man's need in fuel.

The level of ecological information and enlightenment which regulates relation of public on protection of environment in Azerbaijan does not meet entirely today's requirements. Despite some works (opening of Orchuss center, regular preparation and distribution of bulletins on condition of environment, creation of website of ministry, publication of magazine on condition of environment etc) were done by Ministry of Ecology and Natural Resources in this direction, there is a big need in implementation of complex measures for reaching of activities on international level.

As population is less informed about their rights to get environmental information, their participation in adopting of decisions in this field is unsatisfactory.

At the same time the low level of informing of NGO and Mass Media representatives, which can form strong public activity, on problem is observed. The low attention on global ecological problems in statistics system, limitation of access of population to database of ministries creates problems in informing of masses. There is a need in correction of procedures of activity directions of human potential available in the country in this direction and reaching of problems' solution.

There is a need in preparation of special information cadastre according to international standards. The priority areas should include information on bio-diversity, climate change and desertification of soils and its degradation. There is a need in creation of internet pages for delivering of collected information to masses.

Despite big potential of NGO-s, they have less experience and information on modern management methods of projects and working mechanisms. Lack of financial and material resources are felt and non-coordination of common activities on required level is visible.

Liaison between various strata of population and interested citizens in this field, information and experience exchange had been arranged weakly. There is a need in development of national

communication systems, creation of special electronic information networks in this field. Taking into account the difference in getting of information by population locally, this information networks may include Mass Media, electronic networks, special bulletins, brochures, educational-informative round tables, meetings, lectures.

Organization of ecological management trainings according to Convention requirement for state and self-governing bodies, NGO-s is necessary. There is a need in creation of training programs, methodic parameters and education means in the field of potential increase according to requirement of Conventions.

2) *On institutional level.* Results of implemented projects in country in the filed of implementation of requirements of Conventions are not popularized and demonstrated sufficiently. Required conditions were not created for conduction of researches and analysis directed to fulfillment of Convention requirements in priority directions.

In this regard creation of center for strategic studies on ecological problems by involving representatives of relevant organizations under the MENR would be of great importance in fulfillment of all three Conventions' requirements.

Teaching of global ecological problems in comparison with other fields within common educational burden given for teaching of ecology in secondary and high (state or private) education structures is conducted relatively low and unsystematic level.

Database of main structures operating in ecological field of country is very weak. Unsatisfactory level of material and technical provision, modern computer equipment, specialized library funds of these structures make impossible to strengthen this base. The present level of works carried out in this field causes strong demand in information center and from this point of view it is possible to establish links among Republican Ecological Behavior and Experience Center and many other ecological centers of the country, operating in many regions through providing access to Internet and having links through computer networks.

3) *On system level.* The system of informing of decision-making persons in the field of implementation of Conventions on global ecological problems in the country was arranged poorly. Informative materials (booklets, books, brochures etc.) dedicated on analysis of the Conventions are not published regularly and disseminated.

The methodic handbooks are not published for informing employees of responsible organizations in fulfillment of requirements of Convention in this field. Information on Conventions on global ecological problems is not regularly covered in Mass-Media.

Propaganda in the field of strengthening of bilateral relations among organizations in the fulfillment of Convention requirements had been arranged on very weak level.

It is obvious that enlightenment of public on all three Conventions is quite important in fulfillment of obligations provided in these Conventions by Azerbaijan.

2.2.2. Basing of improvement of forest management mechanism in the field of global ecological problems as priority direction

The Azerbaijani forests are related to 1st group of forest types and mainly have soil protective, water preservative and regulative, microclimate forming, bio-diversity protection, maintaining of ecological balance, esthetic, health and ecotourism developing functions and is not of industrial (wood processing) importance.

1) On individual level. Population growth in the Azerbaijan Republic had caused increase of requirement on heating effect. As this demand was not entirely met, and electric power and gas is supplied with interruptions, population uses the forests as fueling wood, which leads to decrease of forests areas.

Living of more than 1 million refugees and IDP-s from occupied by Armenia Azerbaijani lands in tent towns for more than 10 years in hard conditions and non-supply of them with heating power had caused increase of effect on forests. At the same time valuable forests masses in occupied by Armenia areas are ruthlessly destroyed and used in construction and furniture industry.

The role of public is quite low in management of forests. The population is less informed about importance of forests in solution of ecological problems.

The enormous increase of cattle in regions and their unsystematic pasturing along with creating many problems in restoration of forests, in foresting new areas, in preservation of bio-diversities, also creates conditions for intensification of desertification process.

2) On institutional level. The last record of forest funds in the country was done in 1988. Since 1988 the one time forest funds' record (once a five year) is not carried out.

Forests' structuring and projecting is not carried out on required level. There is a need in preparation of 10 year perspective projects for operating of forest economies for these purposes.

As the result of shortage of funds allocated from state budget, study of international experience and application taking into account the local specifications in the field of forests management is conducted slowly, and bringing into conformity the record of forests inventory taking and report system to international requirements becomes impossible to organize on required level.

There is a need in qualification improvement of relevant employees of state and local self-governing bodies in the field of sustainable development of forests.

There are problems in improvement of qualifications of scholars and teachers working in area of teaching of forest economies and forest management in high and secondary vocational schools. The cooperation among structures operating in forest management in cadre training field is on low level.

Various private entities operating in wood processing industry of the country use local material in contradiction with legislation.

3) On systematic level. The current forests legislation in Azerbaijan does not allow using Kyoto protocol mechanisms on required order. Therefore, there is a need in improvement of forest legislation in view of Kyoto protocol mechanisms.

It is known that Azerbaijani forests are not of industrial importance and such situation hinders in stimulating the activity of private activity in development of forests, makes impossible attraction of owners of non-forests funds' lands in laying of forests areas.

In order to expand forests fund lands in the country, there is a need in stimulation of foresting of areas in useless lands in mountainous, foothills and plain areas, in foresting works in areas of share lands and municipalities' lands. For these purposes creation of mechanism of stimulating of short turnover plantations consisting of fast growing tree sorts in irrigated areas of country with attracting land owners is one of the important conditions.

There is a need in exact definition of managed forests areas and preparation of strategy of permanent management of these forests.

Study of modern experience and application for purposes of improvement of monitoring system in changes of forest funds has great importance.

Alternative energy sources are not used sufficiently for reduction of effects on forests in country, and problems in supply of natural gas to regions were not eliminated. The necessity appeared in application of tax and customs privileges for creation of stimulus in import of forest materials.

The role of forests is irreplaceable either in normal development of fauna and flora, preservation of species and their enrichment, in reduction of effect of climatic changes, or in prevention of desertification/soil degradation. Therefore it is important for multi-functional forests to be managed with new mechanism in solution of global ecological problems. Actually activity in this field in the country began to be implemented since 2001. Department of Forest Development functions in the Ministry of Ecology and Natural Resources and the National Program was adopted in 2003 in the country related to this field. Specialists, local and central state bodies are available in this field. Potential for implementation of works on required speed and particularly financial means are not sufficient. Attraction of local communities and private sectors to this work, ensuring of sustainability of implemented works are of special importance.

For these reasons there is a need in improvement of mechanism of management of forests aimed for development of forests in Azerbaijan Republic, which included in list of less forested countries and which areas covered with forests comprise of 11% of total territories.

The improvement of forests management mechanism that put forward as priority requirement in protection of bio-diversities form one side would create base for combating desertification/land degradation, and from other side will create conditions for settlement of adaptation problems in forests sector being most vulnerable to climatic changes, which in its turn will make contribution in protection of global climate.

III. NATIONAL IMPLEMENTATION PLAN

3.1. Survey of activity planning process

Last 30-40 years reduction of bio-diversity, climatic changes, scope of desertification/land degradation processes, its changing dynamics and social-economic results requires forming of activities on level of modern requirements. Therefore new, most effective measures are to be implemented on requirements arising from implementation of Conventions on protection of bio-diversities, climate change and combating desertification/land degradation.

The following main directions aimed for increase of potential in the direction of crossed problems' solution given in National Implementation Plan, prepared for these purposes, were selected:

3.1.1. On public enlightenment in the field of global ecological problems:

- preparations of informative means for decision making persons in the field of implementation of Conventions;
- preparation of methodic means for informing of responsible organizations in this field for implementing of the Conventions requirements.
- preparation of enlightenment handbooks for responsible persons of organizations authorized to prepare laws and normative legal acts in the field of global ecological problems;

- preparation of education/training means in the field of social-economical aspects of global ecological problems;
- preparation of National implementation plan on combating desertification/soil degradation;
- preparation of education/training means assisting to propaganda of global ecological problems covered by the Conventions, among local communities and private sectors;
- implementation of pilot projects of informative nature on solution of global ecological problems covered by the Conventions;
- coverage of information related to Conventions in Mass-Media;
- creation of ecological education programs reflecting the subjects of the Convention in common education system;
- organization of propaganda in the field of strengthening the mutual relations among interested parties in implementation of the Convention requirements;
- establishment and propaganda of indicators system for evaluation of implementation of the Convention requirements;
- creation of training-resource center paying special attention on global ecological problems and operating permanently in the field of environment management;
- increase of opportunities for operative organization of public enlightenment in force-major circumstances related to environment;
- organization of ecological management training according to Convention requirements for representatives of state, self governing bodies and NGO-s.

3.1.2. On improvement of forests management mechanisms:

- Improvement of legislation base in conformity with Convention requirements in the field of forests management;
- study and application of international experience in the field of forests management;
- creation of legal base for use of mechanisms of Kyoto protocol in development of forests and use of lands in the country;
- improvement of methods of studying of conditions of forests funds in the system of forest management;
- improvement and application of forest inventory taking system on record and report in Azerbaijan according to international requirement;
- expansion of forests fund lands;
- information of public and increase of potential in this field taking into account necessity of restoration of Tugay forests along Kurboyu areas;
- organization of coordination in management of forests economies and water resources;
- expansion of mutual relations among relevant organizations in implementation of Convention requirements in the field of global ecological problems;
- involvement of employees of relevant state and local self-governing bodies to training and qualification improvement in forests management;
- organization of qualification improvement of cadres working in the field of forests economies and management;
- organization of lectures and conduction of training for purposes of increase of role of community in forest management;
- creation of economic mechanism that stimulates provision of rural population with alternative fuels for purposes of forest protection and its rational use;
- regulation of land use for purposes of combating desertification;
- preparation and implementation of adaptation measures in the direction of reduction of negative effects of expected climatic changes.

It is expected to prepare in future implementation plans aimed for settlement of other crossing problems in the field of bio-diversities, climate change and desertification/land degradation.

3.2. Action Plan

3.2.1 NATIONAL PRIORITY 1.

Enhancement of public environmental awareness raising

Objective 1.1. Strengthening capacity at systemic level

<i>Scope of activities</i>	<i>Interventions</i>	Responsible agencies	Execution period		Budget
			2006-2008	2008-2015	Million manats
1.1.1. Preparation of informative materials for decision-makers in the implementation of and compliance with the Conventions	1. Preparation of leaflets, brochures and booklets on the analysis of each of the three Conventions	MENR, NGOs	+		145.0
	2. Enhancement of curricula and other information dissemination facilities on conventions dealing with global environmental challenges and coordination of information dissemination	MENR, MoE	+	+	160.0
1.1.2. Preparation of methodological materials for raising awareness of personnel employed by	1. Preparation of brochures on responsibilities, commitments and required capacity of responsible bodies	MENR, MoA, MIE, SLMC, MoE, ANAS	+		95.0

institutions responsible for the implementation of and compliance with the Conventions	2. Preparation and publication of methodological guidelines and brochures on capacity strengthening for ensuring compliance with provisions of different Conventions	MENR	+	+	120.0
1.1.3. Preparation of legislative and other regulatory acts on global environmental challenges	1. Preparation and publication of visual materials (brochures, leaflets, etc.) on comparative analysis of the country's legislation on global environmental challenges	MENR, MoJ, NP, NGOs	+	+	130.0
	2. Development of new legislative acts meeting provisions of the Conventions and preparation of proposals on amendments to the existing legislation	MENR, MoJ, NP, NGOs	+	+	100.0
1.1.4. Preparation of educational materials on social-economic aspects of global environmental	1. Preparation of curricula and methodological guidelines on social-economic aspects of global environmental challenges	MENR, MED, MoE	+	+	11.0

challenges	2. Preparation of educational materials (brochures, booklets, video films, posters) on social-economic aspects of global environmental challenges		+	+	77.0
1.1.5. Preparation of National Action Plan on combating desertification / soil degradation	1. Preparation of a draft National Action Plan on combating desertification / soil degradation	MENR, MED, MoA, SLMC, ANAS, NGOs	+		200.0
	2. Preparation of National Action Plan on combating desertification / soil degradation		+		4650.0
1.1.6. Preparation of educational materials intended for raising awareness of global environmental challenges addressed by the Conventions among communities	Preparation and public dissemination of awareness raising facilities (brochures, booklets, video films, posters) on the following subjects:	MENR, MoA, MoE, MM, MIE, MoH, MoF, NGOs			
	1. Impact of global environmental challenges on energy supply		+	+	28.0
	2. Impact of global environmental challenges on food supply		+	+	28.0
	3. Desertification and poverty		+		28.0

	4. Desertification and food supply		+		28.0
	5. Poverty and biodiversity conservation	MENR, NGOs	+	+	28.0
	6. Climate change and food safety	MENR, MoA	+	+	28.0
	7. Role of biodiversity in our life	MENR, NGOs	+		23.0
	8. Forests of Azerbaijan and global environmental challenges	MENR, MoA, NGOs	+		25.0
1.1.7. Publication of information on the Conventions in mass media	1. Establishment of a working group providing updates to the network of TV & radio broadcasts and environment related periodical press as well as information agencies and organization of its work	MENR, TCC, MoE, MM	+		30.0
	2. Preparation of a series of programmes broadcasts raising awareness about objectives and goals of the Conventions	MENR, MoE,	+		15.0

	3. Organization of special issues in the press intended for raising awareness about objectives and goals of the Conventions	MENR, MM	+	+	12.0
	4. Ensuring periodic update of information about the Conventions on the web-site of MENR	MENR	+	+	-
1.1.8. Regular addressing of information on the Conventions in awareness raising campaigns	1. Preparation and publication of annual brochures addressing up-to-date information on the Conventions	MENR	+	+	42.0
	2. Running a contest on making animated films intended for raising awareness of school children about the Conventions	MENR, MoE, TRC		+	15.0
1.1.9. Using ISO 14000 standards as guidance in joint activities of stakeholders towards the implementation of the Conventions	1. Preparation of a handbook on ISO 14000 standards	MENR	+		14.0
	2. Preparation of training programmes and materials on the promotion of ISO 14000 standards	MENR	+	+	38.0
	3. Organization of training courses on ISO 14000 standards	MENR	+	+	8.0

1.1.10. Organization of awareness raising campaigns to strengthen interrelations among institutions responsible for the implementation of provisions of the Conventions	1. Preparation of proposals on the improvement of tax and customs duties in relation to the fulfilment of commitments under the Conventions	MENR, MED, MoT, SCC	+		22.0
	2. Running reporting workshops with the participation of working groups on the Conventions twice a year and dissemination of outcomes of the workshops through mass media	MENR, MM, NGOs	+	+	12.0

Objective 1.2. Strengthening capacity at institutional level

<i>Scope of activities</i>	<i>Interventions</i>	Responsible agencies	Execution period		Budget
			2006-2008	2008-2015	Million manats
1.2.1. Organization of awareness raising campaigns to ensure rational use of water resources enhance irrigation and drainage systems in the agricultural sector	1. Making analysis of standards of water use in the agricultural sector of different regions of the country and their dissemination through publications among the public	MENR, MoA	+		125.0
	2. Publication of awareness raising materials (booklets, leaflets, video films, posters) on irrigation and drainage systems	MENR, MoA, NGOs	+	+	115.0
	3. Organization of workshops on water use problems	MENR	+	+	15.0
1.2.2. Setting-up a center for strategic assessment of global environmental issues	1. Fitting up the center with office and other equipment	MENR	+		160.0
	2. Setting-up a small publishing unit within the center	MENR	+		270.0

1.2.3. Setting-up a standing environmental management educational resource centre on global environmental challenges	1. Getting the centre up and running (fitting on equipment and visual materials)	MENR	+		95.0
	2. Development of educational strategy programme	MENR, MoE	+		25.0
	3. development of curricula of the educational resource centre	MENR, MoE	+		25.0
1.2.4. Presentation and dissemination of results of projects on the implementation of the Conventions in the country	1. Public dissemination of results of the implemented projects by means of the following: <ul style="list-style-type: none"> - leaflets - booklets - video films - posters - web-pages - online forums - conferences - press-releases - resolutions 	MENR, MoE, NGOs, MM	+	+	350.0
1.2.5. Facilitating researches and analyses on priority directions of the Conventions implementation	1. Preparation of proposals on the incorporation of global environmental management researches into research programmes	MENR, ANAS, MoE	+	+	5.0

	2. Preparation of proposals on the financial support of researches	MENR, ANAS	+		59.0
1.2.6. Involvement of different foundations in priority activities and raising awareness about their effective use	1. Preparation of Conventions related Priority Projects Portfolio and its submission to relevant government bodies as well as international donor institutions	MENR, MIE, MoA, ANAS	+		75.0
	2. Dissemination of information about the implementation of provisions of the Conventions in terms of its significance for the country among the donors	MENR, NGOs, MM	+	+	45.0
	3. Public dissemination of information about potential financial sources for the implementation of provisions of the Conventions	MENR	+	+	20.0
	4. Organization of round tables to attract oil companies operating in Azerbaijan and other private entities to the financing of priority projects	MENR, SOCAR	+	+	23.0

	5. Opening a special account to be used for financial support from the private sector and organization of the fundraising campaign	MENR	+	+	22.0
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Objective 1.3. Strengthening capacity at individual level

<i>Scope of activities</i>	<i>Interventions</i>	Responsible agencies	Execution period		Budget
			2006-2008	2008-2015	Million manats
1.3.1. Organization of environmental management trainings for representatives of the government, self-governing bodies and NGOs in conformity with provisions of the Conventions	1. Preparation of environmental management educational programmes for individuals engaged in activities on the implementation of the Conventions at all levels	MENR, MoE	+		170.0
	2. Running trainings for representatives of Local Executive Authorities, self-governing bodies, NGOs, mass media and communities	MENR, NGOs, MM, LEAs	+	+	110.0
	3. Publication and dissemination of training courses catalogues among stakeholders	MENR	+		45.0
	4. Organization of training courses for representatives of donors sponsoring environment protection as well as tax and customs institutions	MENR, MED, MoT, SCC	+	+	36.0

1.3.2. Development of training programmes, methodological guidelines and educational materials intended for strengthening capacity meeting provisions of the Conventions	1. Development of training programmes on main principles and approaches of the Conventions for Local Executive Authorities, research institutions and NGOs as well as State Executive Authorities	MENR, MoE, NGOs, ANAS, LEAs	+		76.0
	2. Development of training programmes on the economic assessment of the environment and ecosystem	MENR, MED, MoE	+		55.0
	3. Development of training programmes on the management of land, agriecology and agricultural wastes	MENR, MoE	+		34.0
1.3.3. Ensuring participation of teachers and trainers engaged in education and training in compliance with provisions of the Conventions at local, regional and international training courses	1. Ensuring participation of teachers and trainers engaged in education and training in compliance with provisions of the Conventions at local, regional and international extension courses	MENR, MoE	+	+	190.0
	2. Introduction of Conventions related topics into teacher's training programmes	MENR, MoE	+	+	90.0

	3. Development of educational manuals from Convention related materials intended for education and training	MENR, MoE	+		190.0
	4. Organization of teacher's training programmes for teacher and trainers employed at Environmental Upbringing and Skills Development Centre of Ministry of Education	MENR, MoE	+	+	76.0
	5. Running regular country-wide workshops to promote exchange of experience among teachers of higher educational institutions	MENR, MoE	+	+	12.0
	6. Ensuring participation of teachers and trainers in short-term internships on exchange of information and experience at scientific institutions dealing with global environmental issues	MENR, MoE	+	+	120.0

3.2.2 NATIONAL
PRIORITY 2.

Enhancement of forest management mechanisms

Objective 2.1. Strengthening capacity at systemic level

<i>Scope of activities</i>	<i>Interventions</i>	Responsible agencies	Execution period		Budget
			2006-2008	2008-2015	Million manats
2.1.1. Analysis of the legislative base in forest management	1. Organizing meeting and running workshops on the importance of incorporation of provisions of the three Conventions addressing global environmental challenges into the forestry legislation	MENR, MoJ, MED, LEAs, municipalities	+		30.0
	2. Preparation of proposals portfolio on the incorporation of provisions of the three Conventions addressing global environmental challenges as well as Kyoto Protocol mechanisms on the commercial use of forests in Azerbaijan into the forestry legislation	NP, MENR, MoJ, MoA, MED, LEAs, municipalities	+		45.0

2.1.2. Enhancement of methods of assessment of forest resources in the forest management system	1. Strengthening technical capacity to effectively carry out country-wide forest stocking and projection and development of ten-year term projects envisioning training of personnel in this area	MENR, MED, MoE	+		20.0
	2. Development of a draft programme intended for the introduction of the advanced practice with a view to enhancing a system of monitoring of changes in forest resources	MENR	+		25.0
2.1.3. Expansion of forest lands	1. Preparation of proposals on pilot projects aimed at forest planting in mountains, foothills and lowlands, and on degraded lands unfit for agricultural use	MENR, SLMC, LEAs, municipalities, NGOs	+		25.0

	2. Running round tables, workshops with the participation of stakeholders to stimulate forest planting in public allocated lands and municipalities' properties and preparation of proposals portfolio	MENR, NGOs, LEAs, municipalities	+	+	45.0
	3. Development of project proposals aimed at stimulating short-term rotation plantations of fast growing species in irrigated zones of the country through the involvement of private land owners		+	+	15.0
	4. Development of pilot projects on forest planting on sand beaches of the Caspian coastal zone		+		22.0

2.1.4. Strengthening capacity in the rehabilitation of Tugay (riparian) forests along the Kura river banks	1. Preparation of proposals on the implementation of pilot projects aimed at the rehabilitation of Tugay (riparian) forests along the Kura and Araz river banks, raising awareness of the communities about the importance of reconstruction and strengthening technical capacity		+		35.0
2.1.5. Ensuring coordination in forestry and water resources management	1. Development of pilot projects aimed at planting buffer strips to reinforce the soil structure of ravines in watersheds	MENR, MoA	+	+	20.0
	2. Development of pilot projects aimed at expanding reforestation and afforestation activities in areas mostly affected by water torrents in mountain systems	MENR, MoA, NGOs, LEAs	+		15.0

2.1.6. Strengthening interrelations among institutions responsible for the implementation of provisions of the Conventions addressing global environmental issues	1. Holding discussions, workshops with the involvement of national focal points on each convention at institutions responsible for the implementation of provisions of the Conventions	MENR, institutions of concern	+	+	35.0
	2. Periodic publishing, disseminating and placing information on the web-site of MENR about the implementation of provisions of the Conventions by agencies responsible for forest management		+	+	30.0
2.1.7. Making use of Kyoto Protocol mechanisms in the use of land and development of forests in Azerbaijan	1. Holding a scientific practical conference on the Role of Kyoto Protocol mechanisms in the use of land and development of forests in Azerbaijan and publication of abstracts of conference papers	MENR, SLMC, MED, MIE, NGOs, MM	+		12.0

	2. Correct identification of forest areas envisioned for management and development of a strategy on sustainable forest management	MENR, SLMC, NGOs	+		200.0
	3. Enhancement and application of forest inventory system in Azerbaijan to international standards	MENR, SSC	+		250.0

Objective 2.2. Strengthening capacity at institutional level

<i>Scope of activities</i>	<i>Interventions</i>	Responsible agencies	Execution period		Budget
			2006-2008	2008-2015	Million manats

2.2.1. Organization of vocational training courses on forest management for representatives of relevant government and self-governing bodies	1. Preparation of educational programmes and manuals on sustainable forest management for representatives of relevant government and self-governing bodies	MENR, MoA, MoE, ANAS, NGOs	+	+	210.0
	2. Setting up an educational resource centre for forest management and equipping it with relevant facilities	MENR, MoE, ANAS	+		200.0
	3. Regular involvement of representatives of relevant institutions in vocational training courses	MENR MoA, MoE, NGOs	+	+	50.0
2.2.2. Learning and application of international practice on forest management	1. Acquirement of guidelines, textbooks, scientific literature from countries with advanced practice in forest stocking with a view to bringing the national system to internationally accepted standards and making them available in the national resource centre	MENR MoE, ANAS, NGOs	+	+	75.0

	2. Analysis and translation of those documents that meet conditions of Azerbaijan and their appropriate dissemination by different means	MENR, MoE, ANAS, NGOs	+	+	55.0
	3. Publishing catalogues for regional and international vocational training courses and exchange of experience	MENR, MoE, NGOs	+	+	20.0
	4. Sending forestry specialists to take part in regional and international workshops and training courses to exchange experience	MENR, MoE, ANAS, NGOs	+	+	50.0
2.2.3. Promoting the enhancement of qualification of staff engaged in forestry and forest management	1. Preparation of educational programmes for scholars and teachers dealing with issues of forestry and forest management at high and higher specialized schools	MENR, MoA, ANAS, NGOs	+	+	40.0

	2. Involvement of scholars and teachers dealing with issues of forestry and forest management at high and higher specialized schools in courses, workshops and trainings organized at technical educational practical centre to enhance their qualification		+	+	30.0
	3. Sending scholars and teachers dealing with issues of forestry and forest management at high and higher specialized schools to regional and international training courses	MENR, MFA, NGOs	+	+	75.0
2.2.4. Human resources development in forest management	1. Preparation and implementation of a cooperation programme in human resources development among institutions specializing in forest management	MENR, ANAS, MoE, NGOs	+	+	45.0

	2. Taking actions to ensure sustained education on forest protection and sustainable use of forest resources at high and higher schools	MENR, ANAS, MoE, NGOs	+	+	35.0
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Objective 2.3. Strengthening capacity at individual level

<i>Scope of activities</i>	<i>Interventions</i>	Responsible agencies	Execution period		Budget
			2006-2008	2008-2015	Million manats
2.3.1. Development of educational and other visual facilities intended for raising the role of the public in forest management in conformity with provisions of the three Conventions on Global Environmental	1. Preparation and dissemination of brochures, booklets, posters and video films intended for raising the role of the public in forestry and forest management in conformity with provisions of the three Conventions on Global Environmental Challenges	MENR, MoE, NGOs	+	+	110.0

Challenges	2. Broadcasting of promotional clips on TV and installation of promotional posters on waysides and other appropriate areas to raise the role of the public in forest management	MENR, TM, NGOs	+	+	40.0
	3. Organizing poll of opinions, surveys, conferences, information exchange on forest management by means of internet and online networks	MENR, NGOs	+	+	25.0
2.3.2. Organizing discussions and training courses to raise the role of the public in forest management	1. Preparation of training programmes to involve the public in forest management in conformity with provisions of the Conventions on Global Environmental Challenges	MENR MoA, MoE, NGOs	+		25.0
	2. Organizing round tables, training courses and workshops addressing the role of the public in forest management	MENR, Self-Governing Bodies, Municipalities, NGOs	+	+	30.0

3.2.3. Implementation of commitments on specific areas arising out of provisions of each of the three Conventions

<i>Scope of activities</i>	<i>Interventions</i>	Responsible agencies	Execution period		Budget
			2006-2008	2008-2015	Million manats
3.1. Development of economic mechanisms to stimulate supply of alternative sources of energy to communities in rural areas to protect ensure sustainable use of forests	1. Organizing round tables, workshops with the participation of stakeholders to address supply of alternative sources of energy to the community in regions, to assess needs and develop proposals	MENR, MoT, SCC, Private sector	+		20.0
	2. Development of proposals portfolio to stimulate the import of timber and coal into the Republic		+		20.0
	3. Discussions and development of proposals portfolio on the application of preferential customs duty and tax rates to stimulate the import of forest resources into the Republic	MENR, MoT, SCC, Self-Governing Bodies, Municipalities, NGOs	+		15.0
2.3.2. Regulation of land use to combat desertification	1. Organizing round tables and workshops with the participation of relevant institutions and local community members to address the issues of regulating the number of cattle commensurate with the capacity of pastures around villages	MENR, SLMC, MoA, Self-Governing Bodies, Municipal	+		50.0

	2. Drafting regulatory documents on regulating the number of cattle commensurate with the capacity of pastures around villages	ities, NGOs	+		45.0
	3. Organizing discussions with relevant institutions addressing the significance of transition of cattle-breeding to an enclosed system by using productive breeds of cattle in regions	MENR SLMC, MoA, Self-Governing Bodies, Municipal ities, NGOs	+		40.0
	4. Development of pilot projects on the rehabilitation of exhausted quarries in the Absheron peninsula	MENR SLMC, Self-Governing Bodies, Municipal ities, NGOs	+		22.0

3.3. Reduction of GHG emissions	1. Organizing discussions to encourage the State to stimulate the replacement of energy consuming technologies with modern ones at fuel using enterprises in the energy sector and development of proposals portfolio on amendments to the legislation	MENR, MIE, MED	+		35.0
	2. Making statements in media to encourage the private sector to bring in new technologies and organizing workshops and conferences to promote activities of the private sector in this sector	MENR, SCC, MoT, Private sector, NGOs	+	+	50.0
	3. Organizing discussions on imposing special customs duty and tax rates for importing used vehicles and development of proposals portfolio on amendments to the relevant legislation	MENR, SCC, MoT, MIA, Private sector, NGOs	+	+	25.0
	4. Development of proposals portfolio on launching production of gas and dust scrubbers on the base of the existing equipment producing complexes in the country	MENR, MED, MIE	+		23.0

	5. Development of pilot projects on the rehabilitations of strips of trees and planting new ones along roads of national and international importance	TM, MENR, Self-Governing Bodies	+		23.0
3.4.	1. Development of National Programme of the Republic of Azerbaijan on climate change by involving relevant government bodies, private sector and different layers of the public with a view to reducing to a minimum negative impacts of climate change likely to affect human health, biodiversity, different sectors of economy including the study of climate change impacts and adaptation actions	MENR, MED, MIE, ANAS, MoA, MoJ, TM, SCC, MoT, Self-Governing Bodies, NGOs, Private sector	+		40.0
3.5.	1. Systematizing findings from researches implemented to date in the area of biodiversity, climate change and desertification / soil degradation and development of an action plan on the application of those findings that are considered to be suitable	MENR, ANAS, MoA, MoE, NGOs, Private sector	+		45.0

TOTAL:

11 137.0

2 272 857 USD