



Situational Analysis

of Education for Sustainable Development
in the Central Asian sub region

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Regional Environmental Centre for Central Asia

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Almaty, Kazakhstan
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The concept of education for sustainable development (ESD) has got popularity for the last years, and at the World Summit for sustainable development (Johannesburg, September, 2002) the initiative on realization of the UN Decade on ESD in 2005-2014 was put forward.

UNESCO was nominated as a leading organization on advancement of the Decade on ESD.

The main purposes of the Decade are the next:

- Integration of sustainable development in systems of education at all levels;
- Assistance to development of education as a base for sustainable society;
- Strengthening of international cooperation for development of innovative politics, programs and practice on education in interests of sustainable development.

The ESD includes four basic areas having various purposes and audience:

1. Improvement of basic education and assistance to it;
2. Reorientation of education on all levels with the purpose to ensure sustainable development;
3. Maintenance of understanding by the population of sustainability of development;
4. Education/training.

Within the framework of preparation for the UN Decade on ESD, CAREC in 2004, under support of the Regional office of UNESCO in Bangkok and in cooperation with the Central Asian experts prepared analytical review «Situational Analysis of ESD in Central Asia». The review became a component of the «Situational Analysis of ESD in Asian - Pacific region», which was completed in 2005 and published by UNESCO - Bangkok.

This review contains the following basic chapters:

- Information and public access.
- Knowledge systems. Education.
- Environmental Protection and management.
- Peace and equality.
- Local context.
- Transformation.
- Culture.
- Related and crosscutting subjects and issues.
- Public health.
- Environmental education (EE).

We hope, that the review will help you to understand better essence of the ESD issues, its purposes and tasks, role of each of involved parties, and you can find useful information on environmental problems, its influence on public health, interconnection between economy and ecology, and will use successfully in training process.

We express hope, that the review will serve to the purposes of the further development EE and ESD in Central Asia, and will be useful not only for experts in EE and ESD issues, but also for our partners, representatives of the international organizations and financial institutions working in Central Asia and supporting this direction.

We express the special gratitude to the members of the Central-Asian Working group on EE and ESD, both all our partners and donors supporting the EE Programme of Central Asia.

Yours faithfully, the authors.

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1. INTRODUCTION

Interview: «What does Education for sustainable development (ESD) means to you?»

Irina Balashova, Kazakhstan:

«It's an absolutely new knowledge attainment approach, enabling both teachers and learners to look at ordinary things differently, from an unexpected angle. I discovered simple and amazing methods that are changing my lifestyle. I feel satisfied seeing that my actions contribute to the improvement of the world around me».

Muhammedgurban Orazov, Turkmenistan:

1. *It is about fostering love for your Homeland and your own nature in children and adolescents.*
2. *It is a call for the whole humanity to protect their environment.*
3. *It is a great contribution to biodiversity preservation.*
4. *It is not only about natural resource preservation, it is also about natural resource enhancement».*

Ruzimuhammad Sultanov, Uzbekistan:

«Education for SD is education designed to address community problems and needs in the interests of future generations».

Gulmahmad Davlyatov, Tajikistan:

«My country needs education for sustainable development, as it is not possible to go into the future without it. Education for sustainable development is a prerequisite of my nation's future».

Evgeniya Postnova, Kyrgyzstan:

«The goal of Education for Sustainable Development is to give an opportunity to the people to accept the values and to develop the knowledge and skills that will enable them to make individual and joint decisions locally and globally to contribute to the improvement of the quality of life without jeopardizing the future of the planet. Education for Sustainable Development is not a new course in the curriculum telling the children what Sustainable Development is all about, it is rather an alteration of the approaches to education».

2. BACKGROUND

The general environmental situation in Central Asia (CA) is characterized by significant disturbances of the natural environment, which result in absolute or partial loss of natural resources, decreased productivity of natural landscapes, exhaustion of water systems, soils, contamination and deterioration of the human habitat. In CA the problems of the Aral Sea shrinking, public drinking water and irrigation water supply, sound water resource use, pollution of water sources, interaction between agricultural and energy sectors are prospective issues to be jointly addressed by the environmentalists of all countries in the region. Such interaction may result in actual integration of all national programs on water saving, water use and water sources protection.

One of crucial problems for CA sub region is availability of water resources, which has always determined settling and economic activities of the peoples living in CA. Formed during the Soviet Union era, the resource approach still prevails in water management activities of Central Asian countries. Water is mainly regarded from the viewpoints of agriculture and power engineering without taking into account its many other functions. As a result of this, the quality of the potable water and public health, have become aggravated, and soil fertility and crop yields have decreased.

The welfare of Central Asia depends considerably on the natural balance of the fluvial formation zones, mountainous ecosystems of the Pamir, Tianshan and Altai. However, in the mountains of Central Asia certain degradation processes are currently growing. These include disafforestation and erosion, pollution with wastes and a reduction of pasturelands. The collapse of ecosystems has caused a considerable reduction in biodiversity. The numbers of vanished or threatened animal and plant species is growing. Fish reserves have reduced due to regulated water run-off, and the pollution of rivers.

Part of the environmental problems includes those connected with the area surrounding the Caspian Sea. Ecosystem conditions of the Caspian Sea, the world's biggest inland water reservoir, are unique in biological variety of flora and fauna, causing serious concerns among national governments and communities of the Caspian countries. Disintegration of environmental and economic interests in the Caspian basin threatens this unique ecosystem.

One of the major problems in the Central-Asian region is desertification. Degraded soils in Kazakhstan cover 66% of its total area and in Turkmenistan and Uzbekistan up to 80%. Should salinization continue to increase at the same rate, within a few decades the major rural areas surrounding the river basin will become useless for agriculture. Salinization of the rivers will make them improper for potable water supply. The numerous military and civil test sites known throughout the world like Semipalatinsk Nuclear Test Site, Baikonur Space Vehicle Launching Site, and Aralkum which is a new desert in modern history, continue to make their negative transboundary impact causing air pollution in addition to new sources of human-caused desertification.

The environmental situation, evolving in the sub-region, has an inevitable impact upon human health accompanied by economic losses; for this reason environmental security is one of the strategic objectives for the states in the sub region, especially if it is seen comprehensively as ensuring adequate living conditions

for the population and sustainable well being supported through the resource base.

Regional Programmes/Initiatives. CA new independent states' ten year experience has shown that uncoordinated efforts by separate sectors, countries or international organizations neither lead to expected results nor resolve serious environmental and regional development issues. The countries themselves, international organizations and experts in their previous experience assessment have come to an agreement with regard to the main causes of inefficiency and ineffectiveness in the environmental and sustainable development sphere, and identified problems, such as:

- ◆ Weak capacity of central and local governments and NGOs;
- ◆ Lack or limited access to information, in particular at the planning stage, lack of transparency in the decision making process;
- ◆ Lack of clearly formulated common goals and measurable indicators, a conflict between sector interests and goals;
- ◆ Undeveloped legislative and institutional mechanisms for achieving consensus between sectors, countries, different government levels and stakeholders.

Cooperation in the Central Asian sub region is reflected by the number of the programmes and initiatives developed on the basis of multilateral agreements.

At the Almaty meeting of the CA Ministers of Economy, Finance and Environment, in the of preparatory process for the WSSD for the purpose of addressing the above mentioned issues, sub-regional Partnership Initiative for sustainable development through formulating common goals and enhancing coordination mechanisms (Central Asian Initiative (CAI) for SD/Central Asian Agenda 21) was proposed.

In the WSSD preparatory process, CA countries received very strong support of the CAI at the UNECE regional ministers' Conference (Geneva, 2001), Asian-Pacific regional ministers' Conference (Cambodia, 2001) and the Summit itself (Johannesburg, 2002). The CAI ultimate goals are: combating ecosystems degradation, water supply improvement, poverty eradication and achieving other Millennium Development Goals by 2010-2015.

CAI made part of the final WSSD documents – Johannesburg Plan of implementation and list of partnership initiatives, and serves as a basis for further CA countries' cooperation with the world community on the Summit resolutions implementation. After the WSSD, at the 5th Pan-European Conference of the Ministers of Environment in Kiev in 2003, in order to further develop the CAI, CA governments developed and presented the document «Invitation to Partnership for the CAI Implementation» and a report «Environment, Water and Security in CA» where the CAI main goals and priority indicators were specified.

Those goals do not cover all WSSD goals but reflect a consensus achieved by CA countries on SD goals:

Goal 1. Water basin ecosystems conservation.

Goal 2. Transition to Rational Water Use and Expanding Access to Drinking Water.

Goal 3. Governance Improvement and Institutional Development, Inter-Sector Partnership.

The «Invitation for Partnership» paper and «Environment, Water and Security in CA» report made part of the Pan-European Conference of Ministers' final official documents. At the Conference the CAI Implementation Memorandum was signed with the participation of the CA countries' governments, EC, UNECE, IFAS, ICWC, ICSD, and CAREC, international organizations, NGOs and businesses. In the Ministerial Declaration it was decided to start preparation of the «Partnership Agreement» as international legal document between CA countries and the world community on uniting efforts for implementing the sustainable development goals in CA.

The Caspian Environment Programme (CEP) is a regional programme developed for and by the five Caspian Littoral States, Azerbaijan, Iran, Kazakhstan, Russia and Turkmenistan, aiming to halt the deterioration of environmental conditions of the Caspian Sea and to promote sustainable development in the area. Now CAREC administrates the Grant Programme «Sustainable development of Caspian communities».

The Regional Environmental Action Plan (REAP) was initiated by request of the Ministers for Environment of Central Asia during the UN/ESCAP meeting, Tehran, February 2000. As a follow-up of this request, the REAP preparation process was initiated by the UNEP office in Asia and the Pacific. In 2000-2001, the REAP had been developed as a joint venture between UNDP, UNEP, and the ADB under the overall guidance of the Interstate Sustainable Development Commission (ISDC). The main directions of the Programme on concrete actions on improvement of the environmental and socio-economic situation in the Aral Sea Basin for a period of 2003-2010 (PASB-2) have been approved on Dushanbe's meeting of Central Asia countries Leaders.

The Environmental Partnerships in the UNECE Region: Environment Strategy for countries of Eastern Europe, Caucasus and Central Asia was adopted by Ministers at the Fifth Ministerial Conference «Environment for Europe», Kiev, 23 May 2003. The overall objective of the Strategy is to contribute to improving environmental conditions and to implementing WSSD Plan of Implementation in the Eastern Europe, Caucasus, and Central Asia (EECCA) by strengthening efforts of these countries in environmental protection and by facilitating partnership and cooperation between EECCA countries and other countries of the UNECE region, including all stakeholders.

Currently post-soviet states of Central Asia form a unique polyethnic region, on the territory of which there has been fixed simultaneous development of two processes: regional integration and national states formation. All the nations of the region alongside with positive trends in the sphere of ethnic policy share common problems related to the practice of interethnic and intercultural interaction. Polyethnicity is one of the major regional development resources and given this implementation of ethnic policy having strategic nature, i.e. based on qualitative situational analysis and determining developmental horizons, is becoming most pertinent. Historical experience of the majority of states that have experienced social, economic and political transformation shows that without national coalition it is impossible to achieve identified strategic goals. This is a necessary precondition for the reform deepening, economy stabilization and further progress.

One of the causes of general environmental deterioration is insufficient or low level of environmental knowledge in the community, including executives and those employed in various production sectors related to nature management. Environ-

mental problems should be prevented at the stage of executive decision-making; otherwise the society will be destined to battle against the consequences rather than causes of those problems.

An effective system of environmental education (EE) is one of the basic tools in ensuring sustainable development of the economy and society. The principles of sustainable development, as it is known, are grounded on preservation and transfer of certain environmental capital reserves, such as fertile soil, clean air, predictable climate, ozone layer, genetic biodiversity to the future generations. This is possible provided all available ways are employed to encourage effective high technology sectors, a significant part of which is based on the quality of environmental training of specialists in all areas of nature management and administrative management.

Development and improvement of EE systems are closely linked to the first pillar of the Aarhus Convention, ratified by four CA countries – which is access to environmental information. The implementation processes of Convention and EE programs are related in terms of the involved stakeholders and actors, and organizations and institutions, as well as in terms of the goals and expected outcomes, this is why they should be implemented in close coordination.

Central Asia, locating in both Europe and Asia, has unique opportunity to participate in both ESD processes, as European, or Asian-Pacific. ESD was defined as a priority for the European environmental policy within the framework of preparation for the Fifth Ministerial Conference «Environment for Europe» in Kiev (2003) and in connection with preparation of the UNECE ESD Strategy. The Statement of Environmental Ministers of the UNECE countries for the Kiev Conference recognizes the timeliness and importance of the ESD Strategy, and urges the governments to initiate the process at national levels, to identify the state coordination bodies and to present national level progress reports to the UNECE. In July 2004 development of the draft UNECE ESD Strategy was finalized, and CA took active part in the process as a member of the drafting group on development of the ESD Strategy. In October 2004 Committee of Environmental Policy (CEP) of UNECE considered the draft UNECE ESD Strategy and decided to forward it to the High-level meeting of Environment and Education Ministries on 17-18 March 2005 for final consideration. The meeting, in coordination with UNESCO, launched the UN Decade of ESD in the UNECE region.

In frames of preparation ESD Strategy for Asian-Pacific region CA sub region also participates in the process taking part in series of seminars and workshops on EE and ESD in APR on preparation Situation Analysis on ESD (Bangkok, Thailand, 19-20 August, 2004); development of EE training courses (Tokyo, Japan, 13-15 September, 2004). UNESCO Bangkok hosted a workshop to finalize the Strategy for ESD in Asia Pacific on 1-3 February 2005 on coordination, planning joint activities on implementation of the Decade for ESD (2005-2014). CAREC EE Programme will contribute to the process development taking into account their own experience on EE and ESD and global priorities.

After the First Sub-regional Workshop on EE held by the CAREC in cooperation with the Ministry of Environmental Protection of Tajikistan in 2002 we received an inquiry for a new CAREC EE programme opening. In order to assist governments, NGOs, scientific and public community of Central Asia countries the CAREC launched the EE Programme at the beginning of 2003. EE Programme is a component of the Central Asian Agenda-21 development and is carried out in close cooperation with the CAREC In-

formational Programme and Public Initiatives Support Programme and with other regional and global educational programmes.

The preconditions for development of the Environmental Education Programme were:

- ◆ Initiatives of UNESCO and Japan on the Decade of ESD in 2005-2014
- ◆ Decisions of Presidents of Central Asian countries on WSSD in Johannesburg, where EE was declared as one of priorities of global environmental policy
- ◆ Partnership of the Ministries of Environment, Education, NGOs, international organizations, and CAREC in the field of EE and ESD
- ◆ EE is closely connected with the first pillar to the UNECE Aarhus Convention, ratified by 4 CA countries – access to environmental information.

The Programme purpose is to solve priority sub regional EE problems: Arrange stable relationship, experience, information and methodic life long exchange in the field of EE between different educational institutions in CA countries; Develop common approaches and principles for EE programme forming and implementing; Work out public databases in the field of EE (experts, organizations, legislation, methodic materials, etc.); Create informational, methodic and training centers network in the CA region countries; Introduce modern textbooks, manuals and methodic books in the field of EE and ESD; Attract interested partners' and donors' investments for the EE Programme and projects implementation in the sub region.

Second Sub-regional Consultative Meeting «Environmental Education for Sustainable Development in Central Asia» in April, 2003, (Bishkek) held by the initiative of the Ministry of Education and Culture of Kyrgyz Republic under CAREC and European Commission (EC) support, started active work of EE Programme. The Meeting was a CA regional response to WSSD decisions, where EE and ESD were declared as preceding directions of the global environmental policy.

EE Programme and Review «Status, Prospects and Ways of Environmental Education Development in Central Asian Countries» were approved at the Bishkek meeting, and a Joint Working Group on implementation of the joint CA Sub-regional Project on EE was organized. Review was presented at the Kiev Conference of Environment Ministers, May 2003. At the Plenary Session «Education for Sustainable Development» in Kiev presentation of the CA sub-regional position on EE and ESD, the new CA EE Programme, the CA Sub-regional Project and Report on EE were made. Outcomes of the Bishkek Meeting on EE were included into the main documents of the Kiev Ministerial Conference.

While planning EE Programme activities special attention was paid to development of regional experts and specialists in the field of EE networks development – ministries, departments, non-governmental organizations (NGOs), scientific institutions representatives and pedagogues. At the moment we have created a data bank on experts and organizations, donors and partners specializing in the field of EE; and on legal and methodic maintenance (laws, programmes, methodic books, manuals, text-books on EE and ESD). All data is presented at the CAREC website www.carec.kz within the objective of providing free public access.

Central Asian Working Group on ESD sub-regional project implementation is actively cooperating on development of CA EE

Programme. Thus, CAREC under EC support started implementation of the CA Sub-regional Project on EE and ESD training component: on a selective basis team of experts-trainers on EE and ESD in CA was established. WG members, experts on EE and team of experts-trainers on EE and ESD had the introduction workshop training «EE and ESD Theory and Practice» at the CAREC on 5-6 October 2003, under the leadership of trainer prof. Moscow State University D. Kavtaradze (Russia).

New project »Posters and Video on Climate Change« has been started under British Embassy support in Kazakhstan in April 2004 – the ESD textbook dissemination in CA through trainings for teachers, posters and video on climate change. The project supports development of EE and ESD and assists Kyoto Protocol ideas promotion in CA region. In frames of this project five educational posters and video on climate change have been developed and disseminated for secondary schools of Central Asia in 2005. Posters and video became additional educational resources to the textbook on ESD and will be used in secondary schools courses of natural subjects.

UNESCO Cluster Office in Almaty for Kazakhstan, Kyrgyzstan and Tajikistan rendered additional support to the project through preparation and implementation of a Central Asian Sub regional Conference on ESD on the 10-11 November 2004; preparation of national CA countries reports on EE and ESD issues; presentation of the textbook on ESD in Almaty for Kazakhstan and CA countries with posters and video film use.

Problems on EE and ESD in CA sub region. There are some typical problems on in all CA countries in the sub-region. Unfortunately, it would still be inadequate to say that there is a modern model of continuing EE at all levels that have been developed in the sub-region. There is a severe shortage of methodological developments, scientific and popular literature, modern video and audio aids, and no directed governmental and public support in the area of elementary or preschool education.

There is still no comprehensive EE program covering all age groups in any country of the sub-region. The textbooks and teaching aids preserved from the Soviet time do not reflect specific features of the Central Asian wildlife and environmental situation. Incorporation of a special course of ecology into school curricula as a separate complete course has been delayed everywhere. The environmental knowledge is not sufficiently integrated into other secondary education system courses. There is a problem with training and retraining of qualified staff to ensure system-based activities under the plan of EE.

Another important problem is training of educators. Although some countries do provide it, it is not reflected on the employment, for instance, in Kyrgyzstan only 8 % of university graduates specializing in environment were able to get the relevant employment. This is caused by a lack of a mandatory subjects legally enshrined in the state system of education. Innovative experience of school educators in the area of EE is not sufficiently used. There is a limited access to modern forms and methods of EE, the available programs are not interactive enough and often disregard environmental, economic and social features of those countries where they are implemented.

Another important issue is developing training materials in the national languages of the Central Asian countries and the lack of computer support for environmental education programs in schools.

The problems of EE are in many respects explained by the status of this subject material in the Higher Schools, which has the following distinctive weaknesses: evident lack of textbooks and methodological guides, only 2 to 10 copies of books are available for some of the subjects, which is too little. There is a pressing issue related to producing own textbooks and guides, especially in the state languages; No modern programs in the area of environmental education teaching methods; The departments and chairs providing training to environmental specialists do not have almost any modern technical equipment (audio, video equipment, computers, e-mail, Internet); Weak links among universities and schools working in the area of EE and weak interaction with the Ministry of Environmental Protection and NGOs; Lack of funding to create a logistical and scientific base.

There are a number of problems the NGOs face in their activities, including the following: The third sector in the Central Asian countries is young, that's why governmental agencies do not always see them as real partners capable of contributing to EE; Weak financial base of non-governmental organizations, which in many ways depend on the limited funding from the donor agencies that are almost the only source of for them, as there is still no state NGO support procedure and no tax privileges for the business sector to encourage charity; Uneven distribution of non-governmental organizations within their countries, as a result rural and remote areas are not covered; The outreach of environmental NGOs in the sub-region is weak, as in most cases their target group is represented primarily by students and teachers; Lack of coordination between various actors of EE (among environmental NGOs as such and between the state institutions and environmental NGOs) in terms of content and methods; small outreach, insufficient use of mass media, in particular, television as a great resource for EE.

Proposals on EE Development in CA: Though EE is a part of the general education system; there is a need to develop special measures ensuring its legal, scientific, methodological, organizational, information and logistical development components. The current main objective in improving EE in the Central Asian sub-region is integrating it into the worldwide process of EE and ESD. This will require the following:

- ◆ Study and provide critical analysis of the international experience in EE;
- ◆ Conduct research to adapt foreign methods in the area of EE to the existing education system of the CA countries;
- ◆ Create a database of experts and specialists in EE in the sub-region, establish and develop contacts with foreign partners; create a database of the existing training programs, methods and tools;
- ◆ Make efforts to lobby relevant laws on EE, be that an individual law or amendments to existing laws on education.
- ◆ Implement the principle of continuing education in the system of retraining and advanced training of educators and environmental experts;
- ◆ Establish expert training and attestation programs for the development of environmentally sustainable local, sector-specific and national strategies; Conduct regular trainings and develop advanced training courses for environmental educators; Develop training courses and train specialists in environmental databases, glossaries and Internet technologies, aimed at supporting sustainable development (NGO

support resource centers, social marketing, environmental and public announcements, multi-language phraseological electronic translator on SD topics);

- ◆ Develop distance EE systems;
- ◆ Take inventory of education terminology, specify notions and subjects of environmental disciplines, which are much broader than the objectives of environmental protection;
- ◆ Obtain certification for the subject matter of the related areas – environmental economics, ecotourism, sustainable land and forest management, sustainable architecture and design, environmental art, deep ecology and ethics, etc.;
- ◆ Create electronic network libraries and databases, photo, audio and video archives in gigabytes and information exchange tools, which will be widely accessible to all education institutions and programs;
- ◆ Develop training TV, integrate it into the internet, multimedia and game-based teaching aids;
- ◆ Establish environmental journalism training courses;
- ◆ Identify new ways of evaluating the training process and outcomes;
- ◆ Study the English language as a tool to access the world of knowledge, Internet, international education and public activity, as a tool of grant program financial management and productive employment and as a tool to access the world law and activities of the world institutions.

3. SITUATIONAL ANALYSIS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT IN THE REPUBLIC OF KAZAKHSTAN



3.1. INFORMATION AND PUBLIC ACCESS

In 1998 on the Forth Conference of the Ministers «Environment for Europe» in Aarhus, Denmark, Kazakhstan signed the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) and ratified it on October 23, 2000. In the framework of the Aarhus Convention implementation on 5 June 2002 at the national seminar on the Aarhus Convention a trilateral Memorandum on cooperation between the Ministry of Environmental Protection (MEP), Parliament and NGOs of the Republic of Kazakhstan was signed.

No large-scale environmental disaster prevention interventions will yield realistic results unless the general public has open access to environmental information and opportunity to influence critical environmental decision-making. This is an essential prerequisite for a legitimate environmental protection mechanism.

In the recent years Kazakhstan has been actively developing its political, legislative and institutional framework for NGO activities. The Laws of the Republic of Kazakhstan «On Environmental Protection», «On Environmental Assessment», «On Public Associations» and «On Mass Media» define the major rules of public participation and access to information and justice. Cooperation between the Parliament of the Republic of Kazakhstan and NGOs dealing with environmental law, have joint law drafting efforts to facilitate approximation of positions and unity of approaches applied by legislature, executives and NGOs. Environmental law experts and NGO representatives participated in the development of Kazakhstan's Land and Water Codes and are currently working on Kazakhstan's Environmental Code in cooperation with the Members of Parliament and governmental officials.

The general public in Kazakhstan has always treated environmental reforms implemented by the Government with a fair understanding. In turn, the Government has supported public movements designed to liquidate a severe damage caused to public health and environment (closure of the Semipalatinsk nuclear testing site, Aral Sea salvation efforts, importation of nuclear wastes into the country). NGOs are active in various areas, including environmental protection, environmental education, radiation safety, wildlife conservation, environmental awareness, civil and environmental initiatives support, legislation and law, ecology of the Aral, Balkhash and Caspian areas and desertification prevention.

Many public environmental organizations of Kazakhstan are presently united under the NGO EcoForum. The public organizations decided to work concertedly in the EcoForum on EE, biodiversity and desertification, radiation and man-caused pollution; mass media activities; environmental law, water issues, etc. The following may be referred to as the major indicators of Kazakhstan's civil sector development and improvement:

- ◆ Number of Environmental NGOs. As stated earlier, the number of NGOs in the Republic of Kazakhstan has been growing. There are several thousands of NGOs that were established starting with early 1990-es; over 600 of them are environmental NGOs.
- ◆ Number of Meetings, Seminars, Trainings, Public Hearings and Campaigns Involving NGOs. Every month there are more and more seminars, conferences and meetings organized both by the public and jointly with the governmental and international organizations. There are at least 10-15 meetings covering environmental problems and their solutions held in Kazakhstan every month. In other words, there are at least 120-180 of such events conducted every year.
- ◆ Number of Environmental Publications in Electronic and Print Mass Media. As indicated in the independent research of the International Cooperation Institute, NGOs received an opportunity to access informal, objective and independent information, which is considered to be a significant progress on the way to civil society. In order to ensure more effective performance, NGOs need to use all information dissemination opportunities, including local and regional newspapers, magazines, television and radio stations, list serves, regular web site updates and their own publications. There are currently quite a few Kazakhstani NGO newsletters, mostly focusing on sustainable development and environmental issues.
- ◆ Most Popular Kazakhstani Print Mass Media: «The Kazakhtstanskaya Pravda», «The Panorama», «The Delovaya Nedelya», «The Novoye Pokolenie», «The Express-K», «The Yuridicheskaya Gazeta», «The Republic» Business Review, «The EcoCourier» have been recently exhibiting their interest in environmental problems. In addition there are electronic mass media that are growing stronger, including information agencies, bulletins issued by the Government, ministries and agencies, press services of governmental and private companies, NGOs and public associations. The number of environmental publications continues to grow (about 10-20 a week, 40-100 a month).
- ◆ Number of Web Sites. The following environmental sites are among the most widely known and visited sites: the Ministry of Environmental Protection – www.nature.kz; CAREC (<http://www.carec.kz>); UNDP Resource Center (<http://www.undp.kz/~ngorc>); UNDP «Environment and Sustainable Development in CA and Russia» (<http://www.caresd.net>); Global Environmental Facility Small Grants Program in Kazakhstan (<http://www.gef.sgp.nursat.kz>); Dutch Organization Milieukontakt Oost-Europa (<http://www.milieukontakt.nl>); Soros Foundation Kazakhstan (<http://www.soros.kz>); NGO «Environmental Press Center» (<http://www.ecopress.lorton.com>); NGO «Karaganda Environmental Press Center» (<http://kazbiodivnet.narod.ru>); Independent Site «Center of Gravity» (<http://www.ct.kz>); LEEP (www.ecostan.org); EcoLine (<http://www.ecolme.ru/books>); Interagency Climate Change Coordinating Office (<http://www.climate.kz>), etc.

3.2. KNOWLEDGE SYSTEMS

Since its independence Kazakhstan has gone through a great amount of work to adapt its education to the demands of a market-based democracy. The first State Programme «Education» was signed on September 30th, 2000, outlining the fundamentals for implementing the public education policy. Public spending on education has been increased by over 130% in the course of program implementation, which brought along a 70% increase of school teachers' wages and over a 100% increase of college teachers' wages. 196 schools were constructed just in the last 3 years with a total capacity of 75 thousand students; 3,721 schools (45%) were overhauled.

The Programme «Auyl Mektebi 2005» was commissioned by the Head of the State to ensure rural school development and is currently under implementation. Kazakhstan was the first among the CIS states to complete the process of supplying schools with computers. Today 46% of schools have Internet connection. At least 53% of schools will be connected by the end of this year. National textbooks have been developed for grades 1-8.

The system of higher education went through dramatic changes. A new independent test-based enrolment mechanism has been introduced. A multi-level staff training system compliant with the standard international specialty classifiers has been implemented. The market of educational services is based on the mechanism of multi-channel university financing.

The regulatory framework in the area of education has been updated. The Republic adopted the laws «On Education», «On Children's Rights in the Republic of Kazakhstan», «On Social, Medical and Pedagogical Correctional Support to Challenged Children». There are also other activities underway designed to develop the national education model.

There is the State Education Development Programme 2005-2010 for the Republic of Kazakhstan. The Programme provides for: Transition to 12-year general secondary education; Introduction of a new level - post-secondary professional education; Three-level academic credit education system: bachelor – master – doctor (Ph.D.); National Education Quality Assessment System.

In order to meet the increasing public demand for pre-school education and training, enrolment of 30% of children from poor families is planned to be funded from the state budget; a stage-by-stage pre-school enrolment of 75% of the 5-6 year olds will also be implemented. Research and methodology support of pre-school education will be provided by the Republican Scientific and Practical Center «Pre-school Childhood».

The Program provides for the transition to 12-year general secondary education. According to the Declaration of the Council of Europe, 12-year schooling is a prevailing international practice. This model was introduced in most of the leading countries worldwide. Once introduced in Kazakhstan, it will allow avoiding widening technological divide with the economically developed countries and will ensure competitiveness of graduates. The eligibility age for a 12-year school is 6 years. One of the objectives is enhancing the quality of the state language teachers in schools where Kazakh is not used as a language of instruction. Special attention should be given to the issues of improving the teaching methods and the quality of Kazakh language textbooks for the schools with Russian used as a language of instruction. The State Programme ensures significant allocations from the state budget to create enabling conditions for language studies. 6,230 (80%) educational organizations will be supplied with language laboratories and multi-media classrooms in 2005-2007.

In the next 3 years 249 schools will be built to cover the demand; funds will be allocated to strengthen the material and technical base of schools and to retrain teachers for their work in 12-year schools. The Programme also provides for establishing the conditions for profile training in high school, especially in small schools. The Research and Methodology Center «Uchebnik» will be established to organize textbook development, theoretical review and on -ground testing.

Challenged children require serious attention. Funding has been annually allocated since 2002 to develop and publish special textbooks for such children. Over 240 million tenge have been allocated for the last 4 years to provide visual and hearing technical aids to children with visual and hearing impairments. There are 102 special correctional organizations currently operating in the Republic. However, only one third of challenged children are enrolled. 14 special correctional boarding schools are planned to be constructed and funded from the budget, which will allow addressing the problems of this category of children.

Further improvement of higher education is closely related to readjustment of the role of universities in the modern society. The higher education institutions of the country have a whole range of tasks related to improving the quality of education, in particular, international accreditation, and international diploma validity, improvement of university management and democratization of the teaching process and financial transparency of universities. The state will expand its support to universities. For instance, in order to address the lack of the latest text books in libraries, especially text books in the state language, starting with 2005 the Republican budget will allocate 100 million tenge annually to develop, acquire and translate textbooks.

Postgraduate education will include master's and doctor's degrees. The current form and content of postgraduate studies are not effective. Less than 18% of postgraduate students graduate with academic degrees. Postgraduate studies requirements will be tightened to improve the quality of education.

Information and Communications Technologies (ICT) are a determinant of increased competitiveness of the educational system and its integration into the worldwide educational environment. Though all schools have been supplied with computers, there are still gaps in terms of effective ICT application in education. Therefore, significant resources will be allocated from the budget in the next few years to supply computers and enhance information support for educational institutions. 75% of schools will be connected to the Internet by 2005 and in 2007 the student-computer ratio will be 35:1. A number of objectives should be attained to ensure efficient use of computers. It is necessary to eliminate computer illiteracy among teachers, accelerate development of electronic textbooks and multimedia training aids and to create at least one comprehensive educational portal ensuring student and teacher distance learning.

3.3. ENVIRONMENTAL PROTECTION AND MANAGEMENT

The environmental situation in Kazakhstan is very vulnerable. The territory of the Republic is made up of steppes, semi-deserts and deserts. There exist unique inland-continental seas and lakes, such as the Caspian Sea, the Aral Sea, Balkhash Lake, Zaisan Lake, and Alakol Lake. Anthropogenic impacts on the natural environment of Kazakhstan have resulted in a violation of the ability to ensure future economic and social development in practically the entire territory of the country. Extensive development of agricultural production has left a legacy in the form of land degradation and the impoverishment of landscapes. 60 % of the country's territory is subject to desertification bringing about a reduction in soil fertility and, leading to a reduction in the efficiency of stockbreeding and plant growth. Over 40 years of plowed virgin and fallow lands use have caused a loss of 1.2 billion tons of humus due to wind and water erosion. Intensive and irrational development of irrigated farming, as well as the regulation of runoff in arid climatic conditions has brought about the hard deficit of water in basins of small and large rivers, such as the Ili, the Syrdaria, the Ishim.

The Aral Sea disappeared before the eyes of a generation. A similar catastrophe can happen to Balkhash Lake. While the need for water in the Republic is 100 cubic kilometers per annum, the existing supplies form 34.6 cubic kilometers. The water supply per capita in Kazakhstan is the lowest among CIS countries.

Annually more than 200 million cubic meters of polluted wastewater are discharged into surface reservoirs. More than 3 thousand sources of pollution of underground water, an area that forms several to hundreds of square kilometers, have been revealed in the Republic.

Most of the enterprises of the processing and energy complexes have imperfect technology, which are outdated and physically worn out, promoting an increase in harmful emissions. In the early 90's nearly 6 million tons of pollutants (50%- heat power, 20% ferrous metallurgy, 13% - non-ferrous metallurgy, 4% - chemistry and oil chemistry) were emitted into the air annually. Areas of dangerous air pollution coincide with places of concentrated habitation. In Karaganda and Pavlodar oblasts there are respectively 10.5 and 7.7 tons of pollution for each inhabitant of emissions per annum. As a result of the activity of enterprises of the mining-metallurgical complex more than 20 billion tons of industrial waste have accumulated on the territory of Kazakhstan, with an annual generation of nearly 1 billion tons. 95 % out of the total volume of extracted ore falls into the waste, frequently it is exceedingly toxic and placed in places inadequate for storage.

The oil and gas industry occupies the first place among the branches of industry by volumes of investments. Despite this fact, in the main regions of oil and gas extraction and oil refinery - in Atyrau and Mangystau oblasts, work is carried out with the use of backward technologies and outdated equipment bringing about accidents and leakages of oil. As a result the total area, occupied by oil pollution in West Kazakhstan, forms 194 thousand hectares, and the volume of spilled oil forms more than 5 million tons. The practice of burning associated gas in flares also inflicts significant ecological and economic damage. The increased heat background and oxidation of components of the environment around deposits and the combustion of gas have negative impacts on soil, vegetation, and the animal world adjoining to oil complexes areas, making increasing contributions to the greenhouse effect. There are irrevocable gas losses of more than 740 million cubic meters per annum. There is therefore an increased morbidity of population in the area of Tengyz oil and gas deposits (more than 6 times higher than regional indices) which is related to pollution of atmospheric air with dioxides of sulfur and nitrogen.

As a result of raising the level of the Caspian Sea more than 200 oil wells and oilfields have become flooded, including the largest ones - Kalamkas and Karazhanbas this is a threat not only for biological diversity (in the Caspian Sea there are 90% of the world reserves of sturgeon fish, a great amount of ornithological fauna types, and Endemic - the Caspian seal are concentrated), but for the whole environmental system of the Caspian Sea as well. For the last 10 years the commercial fish catch has reduced 10 times.

The enormous territory of Kazakhstan has been damaged by the activity at military testing sites and by cosmic launches. For a period between 1949 and 1991 at the Semipalatinsk Nuclear Testing Site 470 nuclear explosions took place. It is impossible to count exactly the number of people who died; the number of irradiated people has reached half a million. On the territory of the former Semipalatinsk Nuclear Testing Site nearly 2 million hectares of agricultural land has suffered from radioactive contamination.

The poor condition of forests, occupying only 3% of the territory of the country, and being a place of habitation of the most valuable and rare types of animals, and 90% types of high plants known in the Republic, causes particular concern. Enormous damage to the forest resources is inflicted by fires - in 1997 forested areas of more than 200 thousand hectares were burned.

Intensive pollution of air, water and soil, degradation of the animal and vegetable world, and the depletion of natural resources have resulted in the destruction of ecosystems, desertification, and considerable losses of biological and landscape diversity, growth of population morbidity and mortality rate. Lowering quality of life and unsustainable development of the Republic are the consequences of such changes. At the same time the government expenditures on environmental protection are the lowest ones in the Euro-Asian countries. They make up not more than 0.5 USD per person per year.

The environmental management is administered by the Kazakhstan Government through its central executive bodies, such as the Ministry of Environmental Protection, the Ministry of Economy and Budgeting, the Ministry of Energy and Mineral Resources, the Ministry of Agriculture and the Agency for Land Resource Management. The national and local governments set out the procedures for environmental protection and use, fix the resource use fees, regulate the activities of the natural resource users in accordance with the law and work on biological resource reproduction.

The level of investments of nature users to environmental protection, mostly being in difficult economic condition, is still low. Besides, for 1998-2000, the overall investments to environmental protection have made 163 billion USD in Kazakhstan. Starting in 1989-1990 in Kazakhstan a new transition period environmental policy oriented at the development of economic instruments of regulation of nature use, and expansion of the rights and authority of the local government.

After getting independence Kazakhstan has confirmed many times its adherence to the ideas of environmental safety and sustainable development. It has signed the final documents of the UN Conference on Environment and Development (Rio-92), become an active member of the «Environment for Europe» process, joined the most significant international conventions on climate change, to combat desertification and biodiversity conservation. Kazakhstan is a permanent participant of international forums on environmental protection, a member of the UN Sustainable Development Commission, and actively initiates bilateral and regional environmental agreements. Kazakhstan is a Party to many global and regional environmental conventions such as conventions on Combat Desertification, on Biodiversity, on Climate Change, UNECE Aarhus Convention, etc.

Transition to the environmentally safe and sustainable development is becoming one of the priority directions of the Kazakhstan Development Strategy. Understanding of the fact that the success of social and economic transformations depends a lot on the environmental policy carried out in the country has been reflected in the governmental resolutions and in the Long-term Strategy Kazakhstani development up to year 2030 and its component – Strategy «Ecology and Natural Resources – 2030», approved in 1996. The main goal of the Long-term Environmental Strategy is harmonization of the society and environmental interaction, and creation of an environmentally favorable habitat.

The responsibility of the country and its citizens for environmental protection is shown in the Constitution of the Republic of Kazakhstan and meets the priorities of the Long Term Strategy «Ecology and Natural Resources - 2030», one of the tasks of which is establishment of powerful environmental administration. The transition to the market economy demands reorganization of the whole structure of state environmental bodies and clear division of responsibilities at all levels.

Presently the Ministry of Environmental Protection is the central executive body in the sphere of environmental protection. At the local level akimats and Oblast Departments of the Ministry perform the environmental management functions. MEP, responsible for policy-making in the field of protection of natural resources, coordinates the interaction between the ministries, departments, local administration, non-governmental sector on the Programme implementation of; formulates strategic plans in the field of environmental protection, controls their execution; and submits proposals on addressing priority environmental issues to the Government.

Environmental legislation of Kazakhstan contains about 90 laws and regulations. Besides that, there is a necessity to improve the legislation (tuning to international conventions and agreements, signed and ratified by the Republic of Kazakhstan during years of independence), and its execution. The main environmental laws in Kazakhstan are; Law on Environmental Protection as well as its developing Laws on Environmental Expertise, on Specially Protected Areas, on Animal Life Protection, Reproduction and Use, on Land, on Oil and Forest and Water Codex, and the Decree of the President on Minerals and Mineral Use act. The issues of environmental and natural resources monitoring are being solved on the basis of Regulations on Monitoring of Forest Ecosystems, Land and Minerals approved by the Government of the Republic of Kazakhstan. New editions of the Civil and Criminal Codex, which include articles concerning liability for violation of environmental law, were accepted.

Environmental NGOs take active part in environmental management. The NGOs activities are regulated by the Laws on Public Associations and Environmental Protection.

3.4. PEACE AND EQUALITY

Kazakhstan is a participant of practically all the major international human rights documents. Article 1 of the Constitution of the Republic of Kazakhstan runs that «The Republic of Kazakhstan proclaims itself a democratic, secular, legal and social state whose highest values are an individual, his life, rights and freedoms» and that «The fundamental principles of the activity of the Republic are public concord and political stability; economic development for the benefit of all the nation; Kazakhstan patriotism and resolution of the most important issues of the affairs of state by dynamic methods including voting at all-nation referendum or in the Parliament».

It is pointed out in Article 14 of the Constitution of the Republic of Kazakhstan that «No one shall be subject to any discrimination for reasons of origin, social, property status, occupation, sex, race, nationality, language, attitude towards religion, convictions, place of residence or any other circumstances»

As for international agreements then in Article 4 of the Constitution it is said that «International treaties ratified by the Republic have priority over its laws and be directly implemented except in cases when the application of an international treaty shall require the promulgation of a law».

During the years of independence acquired as a result of the USSR disintegration, Kazakhstan has achieved considerable success. An independent state has been formed, the basis of market economy has been built and a new political system has been shaped. In terms of the rate of economic transformations, clearly Kazakhstan is the leader in Central-Asian region. All these could hardly be achieved if the people of Kazakhstan had not been consolidated. And this is not an easy task due, at least, to the fact that from the standpoint of its ethnic – demographic composition and cultural and religious diversity Kazakhstan is a polyethnic nation with more than 130 ethnic groups residing in it.

National consolidation, which is the status and the consolidation-related process and at the same time is an important precondition of Kazakhstan's sustainable development process. The national consolidation policy is based on such principles, as Kazakhstani patriotism, interethnic and interconfessional concord and peace and these have been and still are one of the strategic objectives of the state. Formally power bodies have recognized that the first and foremost condition of successful democratic reform implementation, targeted at transformation of political and economic systems, inherited from the old totalitarian regime of the Soviet epoch is the unity of people and civil harmony within the society, ensuring political stability. One of the tasks Kazakhstan is facing right now; being the country with diverse, polyethnic population composition, is understanding and the search for possible ways of social and political formation of ethnic and cultural diversity. Issues of interrelation of state and society, ethnic self-identification and partnership acquire paramount importance within the framework of further formation of state fundamentals and a civil society.

The Assembly of the Peoples of Kazakhstan that was put together in 1995 under the Ordinance of the President Nursultan Nazarbayev is the major consultative body under the Head of the State. The activity of the Assembly is aimed at promotion of interethnic concord and stability in the country, spiritual renaissance of the people residing in the territory of the Republic and following the principle of equality.

The formation of multicultural society and national consolidation within the framework of such polyethnic country as contemporary Kazakhstan, is possible only on the basis of civil commonality, i.e., a nation, which in its turn is based on equal civil rights for the representatives of all the ethnicities, on the priority of the rights of an individual, on democratization of all the social life spheres. The people of Kazakhstan must become a community of citizens of different nationalities but not some new ethnic community.

3.5. LOCAL CONTEXT

It is known that the first years of independence for Kazakhstan likewise for many other CIS countries have been characterized by difficulties in political, economic, social and humanitarian spheres. Gradually the process of self-identification of the peoples of Kazakhstan went on, different approaches to addressing complex issues of internal and foreign policy continued being developed and perfected, state formation has been going on. This is true not only in respect to the national level but, in the first place, to the local one too. The function of Kazakhstan local governance bodies includes social and economic development at the local level. Local power bodies prove to be an effective instrument of sustainable development of local communities. Now Mazhilis of the Parliament of Kazakhstan is developing Law on Local Governmental Management. This law will allow the delegation of some authorities from national to the local levels – oblasts and districts.

In this connection local agendas developed at oblast, city and district levels, are very important processes within the framework of general development of CA regional and Kazakhstan Agenda –21.

An example of interesting project implementation at the local level may be the project that is under implementation in CA from 2003 to January 31, 2004 «Enhancement of the Local Environmental Management in EECCA Countries». The project originally included 4 basic LEAP components: Information; Capacity building; Lobbying and Pilot projects implementation. Initial analysis of the current decision-making practice, local self-governance development and experience with regard to the implementation of local agendas (LA)-21 and projects, of community involvement in CA countries has become baseline data used to determine strategies for the promotion of best environmental management practice in CA countries. Regardless of the large number of similarities which exist in the development of Central-Asian countries which are united by a common geopolitical environment, common cultural roots and presence of deep links between the countries at ethnic and political levels there are considerable differences at social-economic development level, in power democratization and decentralization issues.

The first important step was holding a regional training workshop to help in the development of local environmental protection action plans (LEAP) in CA countries. Such a training workshop was initially organized for the members of Central-Asian network of experts in the area of environmental management «Gorod Buduschego - The City of the Future». There they developed detailed, but short-term plans with respect to LEAP promotion in the countries. Local experts were to adapt the LEAP methodology in real conditions and assess real development prospects within the framework of future projects. Every year the population growth in urban areas is gaining speed. About 50% of the population of Central Asian countries is concentrated in the cities. Administrative bodies now face a huge number of environmental problems, like air and water pollution, removal and waste disposal and etc. The application of LEAP methodology when planning nature-conservative measures seems to be the most effective way out of the current situation in the countries of Central Asia given that their local ecological action programs include identification of priorities and selection of the most appropriate activities for addressing priority ecological problems of the community.

LEAP is an effective tool for environmental management and decision making, which is oriented at the improvement of local social and environmental conditions. Representatives of local power bodies, business, NGO and science work together in the course of 12-24 months in order to come to a common concept regarding priorities of local community development. The outcomes of this process are shaped into an Action Plan, which is viewed as a sort of Guide in addressing local community social and environmental problems. LEAP includes activities that would help local community to develop a vision of its own future, to assess environmental status, to identify ecological priorities, select the most appropriate ways of addressing urgent issues, to

take measures necessary to achieve real improvement of the environment and health of the population. LEAP concept implies active community participation in decision-making process of local power bodies.

Decentralization of decision making process makes it possible to adapt ecology-related activities to the specific needs of the given territorial community or region. The LEAP goal is to promote and develop mutually coordinated process with the participation of local power bodies, representatives of industry and urban citizens. The final outcome of the given process is the Local Action Plan on Environmental Protection, developed with the participation of all the stakeholders. Local companies can make a tangible contribution to the LEAP implementation. One of the examples of LEAP support is contribution of funds or resources to the implementation of a city area ecological program.

3.6. TRANSFORMATION

Social and demographic processes. Ten years of independent development of the Republic of Kazakhstan have brought changes in the social and demographic composition of the population, which in turn have been determined by fundamental changes in the entire social system and by modernization processes of the society and economy. In general this period is characterized by both positive and negative trends. In the middle of the 90s the social factor of modernization had negative trends in the formation of social structures due to the collapse of the social sphere, unemployment growth, high level of social polarization, further shrinking of social mobility area, dramatic enhancement of «village-city» migration flows. The decline in the economic sector, which lasted from 1990 till 1996, was characterized by considerable inertness that accumulated during the crisis period and especially manifested itself in industry. Positive changes in economy became obvious in 2000.

Internal migration and immigration. The experience of countries going through modernization confirms its considerable impact upon migration, social processes and social stratification. Especially considerable is the impact of «rural area – urban area» migration, emigration, legal and illegal immigration. During the period of system economic crisis the increase of the scope of poverty was accompanied by such negative social trends as marginalization of some individual population groups. In the 1990s a considerable volume of internal migration was characteristic for Kazakhstan, and during 1990-1999 it made up less than 2 million people. According to expert assessment «rural – urban» flow was responsible for about 70% of internal migration. Thus, the number of rural migrants that have got resettled in 1990-1999 to the cities made up about 1.4 million people. Major «attraction centers» for rural migrants were capital cities – Almaty and Astana. Among major reasons of considerable «rural – urban» migration process was unemployment and scarcity of social sphere facilities in rural area.

Immigrants from Russia, Uzbekistan, Turkmenistan and Kyrgyzstan made up major immigration flows to Kazakhstan. Illegal immigration has acquired significant scope. In the first half of 1990's citizens from PRC prevailed among illegal immigrants and in the second half of 1990's – citizens from Turkey. The period of 1999-2000 was characterized by dramatic growth of illegal immigration (transit) from Afghanistan and Sri Lanka, which was due to deterioration of political situation in these countries. Refugees from the so-called «hot spots» also experienced difficulties determined by adaptation. The Agency of the RK on Migration and Demography maintains registration of the people that would like to acquire the formal status. Based on the data provided by this Agency in 2001 more than 900 refugees were formally registered in Kazakhstan. Now at the assessment of the International Organization on Migration (IOM) there are more than 19 thousand refugees in Kazakhstan.

The Law «On Migration» was passed on June 26, 1992. The Government of Kazakhstan declared its preparedness to receive ethnic Kazakhs from neighboring as well as from overseas countries that are willing to return to their historical Motherland. Immigration quotas are annually determined by the Ordinance of the Head of State specifying the number of repatriate families received by Kazakhstan. According to the formal data 184 thousand repatriates arrived in Kazakhstan in 1990. In reality during the period of independent development twice as much repatriates came to Kazakhstan. On December 13, 1997 a law there was passed on «Population Migration». On August 17, 2000 the «Concept of State Demographic and Migration Policy of the Republic of Kazakhstan» was approved by a Government Resolution.

Ethnographic composition. 1999 census registered changes with regard to ethnographic composition. Today representatives of more than 130 ethnic groups are to be found in Kazakhstan. The most numerous of them are Kazakhs (53,4% of the total population) and Russians (30,0%). Then Ukrainians (3,6%), Uzbeks (2,5%), Germans (2,3%), Tatars (1,6%) and Uigurs (1,4%). The number of Byelorussians, Koreans, Azerbaijanis and Turks vary from 0,7 – to 0,5% of the total population of Kazakhstan.

The average age of population in Kazakhstan is 29 years. Youth is one of the largest social-demographic groups in Kazakhstani society. According to the results of 1999 census 3,845,700 people aged from 15 to 29 live in the Republic, which makes up 25,7% of the total population.

Unemployment. Real or (if to use terminology of Statistics Agency of the RK) «total unemployment» is much higher than the number of formally registered unemployed people. Total unemployment in 1990-s steadily kept on growing. Dramatic increase of unemployment was registered in 1991-1993 and in 1994-1995. The next five years were characterized by a gradual increase of the total unemployment growth from 808 thousand people in 1995 to 950 thousand in 1999. Considerable unemployment rate determined the necessity to adopt and implement special state Programme. On June 3, 2000 the Government approved of the «State Programme on Poverty and Unemployment Control for 2000-2002». Its goal was to «alleviate the scope of poverty and unemployment at the expense of active employment policy and targeted support to poor people, mainly disabled ones, and also to those categories of people that are the most vulnerable at the labor market».

According to the Ministry of Labor and Social Protection data there were 36 unemployed per one vacancy in the Republic in 1999. In the rural area there were eight times more claimants per vacancy - 285 unemployed. Out of 251,8 thousand unemployed that were registered in 1999 in unemployment centers only 8,8 thousand people have got a job. Out of them only 1,3 thousand people have been employed in rural areas.

Poverty. In Jakarta Declaration it is stated that poverty is the main enemy of health. In June 1996 more than 35% of the population of Kazakhstan lived in poverty (based on the subsistence rate). In Kazakhstan the difference between rural and urban areas is not as much as between different regions of the country. The problem of poverty is not absolutely new for the Republic of Kazakhstan. Relatively small categories of poor population with low income used to be registered in Kazakhstan prior to the disintegration of the USSR, at the beginning of scaled economy transformations.

A considerable role in recognition of the pertinence of poverty control in Kazakhstan, and the necessity to develop integrated programs, targeted at the implementation of the concept of human development belongs to countries-donors, international organizations: World Bank, UNDP, EBRD, and ADB. World Summit on Social Development that took place in Copenhagen in 1995 contributed to the facilitation of efforts aimed at promoting poverty control on the part of international organizations. Cooperation of the Government of the Republic of Kazakhstan with UNDP that has been growing since 1995 is viewed as a fact of recognition of the development concept pertinence and the necessity to devise a National Program on poverty control. This cooperation resulted in the publication of the first Human Development Report in 1995 with UNDP support and funding.

Water resources deficit. In Kazakhstan there is a serious deficit of water resources. 27% of rural and 14% of urban population in the country do not have regular access to quality drinking water. In terms of water supply Kazakhstan takes the last place among CIS countries. Half of the population consumes drinking water that does not meet international norms. These data are included into the national Human Development Report for 2003.

Half of the population of Kazakhstan drinks water that does not meet standards in terms of water hardness and salinity and another five per cent consume just dirty water. On top of that the majority of water treatment facilities are in semi-emergency condition. In the course of 11 years in Kazakhstan there have been registered more than 50 outbreaks of intestinal infections, cholera and dysentery among them.

The largest portion of water in Kazakhstan is used for the needs of agriculture. It makes up about 77%. And this indicator has not changed since the beginning of 90-s. However, contribution of agriculture into the GDP since the beginning of 90-s has dropped down from 23 to 9%. Resolution of water resource problems in Kazakhstan depends not only on the country. 44 per cent of water consumed in Kazakhstan comes from contiguous countries. This is why it is important for Kazakhstan to develop cooperation with neighboring countries – China, Russia, Kyrgyzstan and Uzbekistan.

Currently the greatest and most burning issue in terms of preservation of our water resources – is the development of a complex programme of sustainable water use, which must be based on effective and economic mechanisms and mandatory coordination of different state programs. Within the framework of the implementation of the Long-term Strategy «Kazakhstan – 2030» back in 1999 the Government adopted a complex programme «Healthy Life Styles». The concept of «Healthy Life Styles and Healthy Nutrition», quotas for the employment of people in need of social protection have been defined and temporary rules aimed at rendering targeted social help, the Programme of Action of the Government of the Republic of Kazakhstan for 2000-2003 and later for – 2004-2010 have been approved.

3.7. CULTURE

The Programme of the Republic of Kazakhstan «Cultural Heritage» 2004-2006 (hereinafter the Programme) was developed in accordance with the Address of the Republic of Kazakhstan to the People of Kazakhstan «Major Internal and Foreign Policy Directions 2004.»

This Programme outlines the main aspects related to national cultural heritage studies, protection and promotion, continuity of historic and cultural traditions, development and revival, and provides for an integral system of cultural heritage studies, incorporating modern national culture, folklore, traditions and customs; unification of long-standing literature and written language experiences; comprehensive arts and research series, as well as restoration, conservation and representation of historical and cultural monuments in museums; reinforcement and development of science, development, logistics and technical components of cultural heritage issues.

The modern status of Kazakhstan's cultural heritage is supported through a feasible set of measures designed to preserve and to further develop long-standing traditions; opening of new historic and cultural monuments; intense conservation and restoration efforts to turn mausoleums, ancient mosques and old time settlement sites into new historic and cultural reserve museums.

The estimated current number of Kazakhstan's historic, archeological and monumental arts sites in the field is over 25 thousand. There are 11 thousand libraries, 147 museums, 7 historic and cultural reserve museums and 215 archives. There is an extensive network of state museums of history and ethnography and memorials dedicated to memorable events in the history of Kazakhstan. Khodzha Akhmet Yassauï's Mausoleum in Turkistan is a unique monument of Kazakhstan's history and culture, which was included into the UNESCO World Heritage List in July 2003.

The Republic of Kazakhstan adopted and brought into force the laws «On Protection and Use of Historic and Cultural Heritage», «On Culture», «On National Archive Holdings and Archives». At the same time, the current situation with cultural heritage preservation and development requires urgent comprehensive measures to be implemented in order to further develop and intensify efforts in this area.

Many historic, archeological and architectural sites critical in terms of the history of Kazakhstan require urgent support. Most of them have not been protected against deterioration and destruction caused by urbanization, industrialization and technocratization. The system and methods, including studies and use of the monuments of non-material, spiritual and cultural of all times starting with the ancient and including the ancient Turkic written monuments, and transformation of traditional mythologies and images into modern pieces of arts produced by modern authors are underdeveloped.

There have not been any publications of the fundamental works of the world scientific thought in philosophy, history, jurisprudence, as well as belles-lettres for Kazakh speakers since 1990-ies. In this relation, in order to educate the growing generation in the spirit of Kazakhstani patriotism and to fill in the gaps in comprehensive studies of historic and cultural heritage, as well to unify many centuries of Kazakh spiritual experience, there is an imperative to create comprehensive historical, arts and scientific series in the state language. Written heritage and documents made of organic materials (paper, glue, leather, cardboard, etc.) are naturally decaying, which requires urgent preservation and conservation measures.

3.8. RELATED AND CROSS-CUTTING SUBJECTS AND ISSUES

Kazakhstan like other countries of Central Asia experiences formation-related problems that are characteristic of the countries in transition. Evolution of the system of values was obvious in 1990-s initially among young people, which was determined by the process of social system transformation. Cultural sphere commercialization was accompanied by the process of breaking away from the norms and values of «high» culture towards averaged ersatz standards of mass culture, which could not but reflect upon youth system of directions, orientations and cultural values.

Political system and civil society. Political system and civil society formation resulted in the development of a multi-party system. Legal basis of the activities of political parties is determined by the Law On Political Parties adopted in July 1996. The principle of absolute priority of basic general democratic values, rights and freedoms may and must become the basis of constructive dialogue of parties and political movements in the Republic. And on this basis it will be possible to determine specific ways of implementation of this principle in the polyethnic society of Kazakhstan.

Sustainable future. Republic of Kazakhstan as an independent state participated, beginning in 1992, in all the global UN conferences, determining the future global community development. Necessary conditions are being created in the country within the framework of the achievement of national priorities in terms of commitment implementation and introduction of sustainable development principles. Kazakhstan became a member of UN Sustainable Development Commission and of the Global Environmental Fund (GEF) in 1998. In 2003 Kazakhstan became a member of Swiss GEF Group, which allows it to directly influence GEF Council decisions and attract additional financial resources to support environmental protection and sustainable development.

Since 2003 in Kazakhstan there has been functioning the Association of a new type of businessmen – Kazakhstan Association of Nature Managers for sustainable development, which became a member of the regional network of the Global Council of Entrepreneurs for Sustainable Development (GCESD). GCESD once again confirmed the necessity of setting up councils or national commissions on sustainable development in the countries and developing national strategies on sustainable development. Resolution of Security Council of Kazakhstan (January 2003), which was passed under the chairmanship of President N. Nazarbayev on putting up together the National Commission on Sustainable Development, has become an important stage in terms of the implementation of sustainable development ideas and resolutions of the World Summit.

The next important step in the process of transition to sustainable development is the preparation of Kazakhstan Agenda for the 21st century as a program of transition to sustainable development. The development of Kazakhstan Agenda-21 is a link with the global process of transition to sustainable development and achievement of the Millennium Development Goals and implementation of sustainable development principles at the national and local levels.

In order to begin the process of preparation of Kazakhstan Agenda for the 21st century the Ministry of Environmental Protection, as a working body of the Council on Sustainable Development under the Government has set up an Interagency Task Force. Kazakhstan Agenda-21 must take into account available international experience and be based on Millennium Development Goals and World Summit priorities. Activities on priority achievements must include many elements and institutional structures, decision-making mechanism, legislation, awareness raising and education of the society, norms and indicators, implementation tools, monitoring and feedback are among them. Thus, institutional foundations necessary for the effective transition of the Republic to sustainable development, including public education as one of the priority elements of this process, are actively developed in Kazakhstan.

Initiative «Gender and water in Central Asia» and a Network of Women – water sector specialists (Net water) has been proposed by Global Water Partnership for Centrals Asian (GWP CAC) and Caucasus region, Scientific Research Centre (SRC) of the Interstate Coordination Water Commission (ICWC) with the aim to establish cooperation between organizations and individuals on gender related issues. Objectives of the Initiative are as follows:

- ◆ To raise the awareness and facilitate gender introduction as an integral factor in the region.
- ◆ To achieve better understanding of gender issues in water resources management.
- ◆ To exchange the best methods related to the problem, to translate theoretical gender concept into practice.
- ◆ To form the basis for boosting gender issue and a platform for the women's voice in managerial structures of the region.
- ◆ To lay the foundation for further cooperation, leading to successful management of water resources with due regard to gender equity.
- ◆ To form a network of contacts between interested organizations and individuals, both at the national and regional levels aiming to stimulate further cooperation.

The value of this initiative is in that its implementation is planned as:

- ◆ An open forum, which will be targeted at multilateral cooperation and provision of mutual coordination of different organizations and individuals given their specialization and experience;
- ◆ It is based on the on-site involvement of stakeholders;
- ◆ It aims at overcoming interdisciplinary borders given that gender is a comprehensive concept;
- ◆ It will include analytical methods in order to attract the attention of individuals, who are decision makers at different levels;
- ◆ It will develop practical approaches to linking gender and water.

Gender education in Kazakhstan is making its first steps and its important task today is gender education further development given the current cultural, social and political context. The Almaty center of gender research has declared the initiative, which is targeted at uniting efforts of researchers already involved into gender discussion and holding seminars to discuss ways of gender education arrangement.

Conditions of successful gender education institutionalization into the higher school curriculum include:

- ◆ Gradual increase of the number of teachers and researchers;
- ◆ Setting up the first centers of gender research (Karaganda, Almaty) targeted at development of research-educational practice and informational networks;
- ◆ Publication of articles, books, methodological and training manuals, touching upon or linked with gender issues and feminist theory;
- ◆ Activity of women's organizations oriented not only at social and political tasks, but also at population gender information and education;
- ◆ Development of the national action program with respect to the improvement of women's position in the Republic, integration of this issue into the day-to-day agenda of the local power bodies;
- ◆ Growth of public interest to the interrelation of sexes and female problems due to the expansion of these issues coverage in mass media and on TV.

Recent experiences of the Center of Gender Research with regard to programme development for an interdisciplinary course «Gender Theory» and its implementation in one of the leading higher schools of the Republic in Almaty are of particular interest. The task was: to try the course at one of the faculties and in future to include it into the list of mandatory tertiary school subjects, which would give it a high status. In the course of one semester teachers from different chairs were involved in delivering lectures on their respective themes (philosophy, sociology, law, economics and etc.). The resulting valuable experience allowed conclusions to be made, important for further organizational efforts regarding gender education popularization.

3.9. PUBLIC HEALTH

The recent social and economic hardships entailed a significant reduction of public living standard in Kazakhstan; this resulted in increased social inequality and created difficulties related to psychological adaptation to the changes in the country. All of which has had an adverse effect upon public health. The 2002 human development index in Kazakhstan was 0,78 versus 0,738 in 1997.

The average life expectancy in Kazakhstan was 65,8 years in 2002 as compared to 64 in 1997. Infant mortality rate in 2002 was 17 per 1,000 newborns versus 24,9 in 1997. The population growth rate and birth rate in Kazakhstan are going down. Women and children's health indicators remain low. The crude mortality rate is still high. The situation with tuberculosis and viral hepatitis has worsened; there are grave concerns about sexually transmitted diseases and AIDS. The major death cause in Kazakhstan is cardiovascular diseases. They accounted for 50% of all diseases on average in the recent years; over 45 thousand patients die of these diseases in Kazakhstan every year. Among other prevailing death causes are accidents, poisoning, traumas and tumors.

The Republic of Kazakhstan is one of the countries with poor epidemiological situation for tuberculosis. Up to 13 – 14,5 thousand TB cases are diagnosed in the Republic every year; the total number of administered patients is 52,2 thousand, 14 thousand of them discharge bacteria. 12,1 thousand patients serve their sentences in correctional colonies. Up to 6 thousand patients die of tuberculosis every year.

The recent years have been characterized by a growing number of drug users. The average age of drug addicts is decreasing. The problem is aggravated by the high crime rate and the risk associated with various infections, including AIDS and hepatitis. According to the Health Committee, there were 20,683 drug addicts registered in 1996 and 26,584 in 1997. Of special concern is the increasing use of drugs by the minor and adolescents, who account for at least two thirds of all drug users. According to the Republican AIDS Prevention and Control Center, 667 HIV cases were detected in the country as of May 1, 1998; 18 patients, including 10 children under 15, have AIDS. In 83,3% of cases HIV is spread through intravenous drug use primarily among the unemployed. An alarming trend is that these indicators are continuously growing.

The situation with viral hepatitis and acute intestinal infections was dramatically aggravated and tends to continue worsening. 44 - 55 thousand cases of viral hepatitis and acute intestinal infections are registered every year, 80% of cases are in children. Control of these diseases is seen as one of the major healthcare problems. The incidence of viral hepatitis increased by 30,1% and the incidence of acute intestinal infections increased by 18,7% in 1997 versus 1996.

The major factors contributing to the current situation are the following:

- ◆ Unsatisfactory condition of public drinking water supply and water supply networks and facilities;
- ◆ Worsening sanitation of populated localities, insufficient sanitary purification and improvement efforts;
- ◆ Poor sanitary and technical conditions of schools, crowded schools, lack of organized catering services and conditions to ensure proper drinking and temperature standards.

3.10. ENVIRONMENTAL EDUCATION

In Kazakhstan the Environmental Education Programme was adopted in 1998 and approved by orders № 1 of the Ministry of Education and order №207/п of the Ministry of Environmental Protection. Universality and continuity of EE, legal and environmental focus in the area of environmental protection are enshrined in the respective sections of the «Environmental Security Framework of the Republic of Kazakhstan», the law of the Republic of Kazakhstan «On Environmental Protection», the laws of the Republic of Kazakhstan «On Education», «On Natural and Man-Made Emergencies», «On Civil Service in the Republic of Kazakhstan» and a number of Government resolutions. In 2002 the EE Framework of Kazakhstan was prepared; it was developed in accordance with the objectives of the fundamental regulatory documents and was authorized by the order of the ministers of Education and Science, and Environmental Protection of December 9, 2002.

Preschool EE. The basic curriculum approved by the Ministry of Education of Kazakhstan on February 15, 1996 introduced an integrated course «Introduction to Environment» to the education process of all age groups in the preschool institutions of Kazakhstan. All education programs in kindergartens contain a section on «Environmental Education». Unfortunately, actual work is performed in just a few of such institutions.

Secondary school EE is the second level in the system of continuing environmental education. Currently the course of «Ecology» in schools of the Republic of Kazakhstan with over 3 million students is optional. In secondary schools environmental issues are included into the curricula for biology, chemistry, geography, history and other subjects. According to the regional departments of education, in 2000 221 schools had advanced studies of biology, 238 – chemistry, 229 – physics, 90 - geography with a focus on individual environmental aspects.

Textbooks and methodological guidebooks on ecology used in the learning process are outdated and do not always reflect the specific environmental problems of Kazakhstan. In some cases, mostly exceptional ones, EE activities are consistent in some schools, gymnasiums and lyceums, the average percentage of which does not exceed 5% of the total number in the country. Under the actual conditions in secondary schools EE at the best is implemented through environmentalization of the content of individual subjects and introduction of optional classes.

In 1998 the Almaty Institute of Advanced Studies and the Ministry of Education developed a «Methodological Collection Book on Environmental Education in Schools, Gymnasiums and Lyceums», which includes the programs of environmental education for grades 5 through 11 and the program of the special courses: «Ecology in Lower Grades of Elementary School», «Human Ecology» for the students of the 9th grade of secondary schools, lyceums and gymnasiums, «Environmental Education» for the students of the 10-11th grades of secondary schools, gymnasiums and lyceums.

The Departments of Education of the East Kazakhstan, Karaganda, Kostanai, Pavlodar regions and the city of Almaty are seeking to develop and implement the programs of environmental education. Thus, the teachers of gymnasium №140 from Almaty G.B. Beiseyeva and B.Kazykhanova produced the workbook «Adam Ekologiyasy», the public organization «Eco-Obraz» from Karaganda developed the workbook «the House That I Live in» for 5-6th grades, «My City» for the 7th grade, a methodological guidebook for teachers «Games for Biology Classes», the children's environmental and legal magazine «Me and Earth» is regularly issued, the program «the House That We Live in» has been developed. The workbook «House That I Live in» has been introduced to a number of schools of the Karaganda region with the financial support of the regional environmental fund.

Of great interest are the experiences with implementing the environmental education program «Grow a Tree» in rural secondary schools, which is led by L.P.Galitskaya, the director of the school union «Ecos» in Chkalovo village of the «North-Kazakhstan» region. It includes 4 stages: «Plant the seed» (preschool age), «Sprout» (students of the 1-4th grades), «Sapling» (students of the 5-8th grades), «Crown» (students of the 9-11th grades). This experience was extensively covered at the Seminar on the Aarhus

Convention in June 2001 at the Ministry of Environmental Protection and Extended Collegium for Environmental Education in November 2001 in the Parliament of Kazakhstan.

High EE education. According to the Ministry of Education and Science data, Kazakhstan currently has 15 higher education establishments with ecology related departments embracing about 1300 students. Training is provided under the following specialties: «Ecology and Monitoring», «Industrial Ecology», «Chemistry and Ecology», «Biology and Ecology», «Geography and Ecology», etc. Higher schools have had some positive experience with environmental education, generally integrating it into many school disciplines. Besides that, there are two directions of environmental training: general (basic) for students of all specialties («Fundamentals of Environmental Knowledge», «Environmental Protection», «Nature Management Economics», etc.) and profile (in-depth) for the students of environmental, geographic, chemical and biological departments. Such departments train environmental specialists for the environmental conservation area («Ecology», «Ecology and Nature Management»). A number of universities train environmental engineers to work in production («Applied Ecology», «Engineering Environmental Protection», «Agro ecology»).

The system of EE includes graduates of the above specialties as well as graduates of natural sciences departments, such as biology, geography and chemistry. Many higher education establishments of Kazakhstan that train personnel in environmental issues have environmental departments and chairs, which train specialists of all profiles and specialties, including training of educators and scientists. Thus, the Al-Farabi Kazakh National University developed and implemented the integrated program of EE for students of all departments covering the whole learning period. The Gumilyev Eurasian University, Kazakh State Academy of Architecture and Construction, K.Satpayev Kazakh National Technical University, Kazakh National Agricultural University and Almaty Institute of Energy and Communications, as well as all universities in the regions have been training young specialists -bachelors and masters majoring in the area of bioecology, chemical ecology, nature protection, environmental protection and monitoring for several years. Training, retraining and advanced training of specialists in the area of environmental protection is provided by the Institute of Advanced Training for Educators, as well as public universities and academic institutions, such as the Institute of Environment and Sustainable Development (Almaty), M. Shokai Independent Institute of Environment (Kzyl-Orda), Kh.A.Yassavi International University (Kantau). In 1996 the Chair of Ecology was established under the Department of Biology of the Karaganda State University to train specialists for the governmental environment and education institutions. The curricula of the chair were developed by the University staff and sometimes involved direct practices borrowed from the experience of NGOs, for instance, teaching methods.

Thus, EE in modern universities of the Republic of Kazakhstan, which play the main role in the education system, is not being developed quickly enough; it does not have a strong logistical base and is not integrated into a single system, which is related to economic difficulties, on the one hand, and to the underestimated role of environmental education in moral, psychological, educational, environmental and economic areas of societal development at the current stage, on the other hand.

NGO activities in the area of EE in Kazakhstan are getting increasingly more significant. NGO activity focused on EE has over ten years of history. It started with environmental sections, often emerging from environmental optional courses taught at schools by creative teachers. For instance, one of the oldest environmental clubs of Kazakhstan «Edelweiss» in Karaganda has been in existence for 11 years. It was initiated by L.N.Bushman, a teacher of biology, and currently a member of the non-governmental organization «EcoObraz». The experience generated by the club has been compiled in a number of methodology handbooks: «Aid to the Leader of Children's Environmental Union», «Environmental Theater», «Environmental Games», «Biological and Environmental School Parties» and a number of other handbooks. Among the organizations devoted to environmental education are the following: NGO «Youth for Ecology and Future» (Kostanai), «Environmental Education Support Center» (Taraz), EE section of the Karaganda «EcoCenter», Temirtau organization «Otrazheniye», NGO «TAU» and a number of other organizations.

NGOs conduct seminars and trainings to share experiences. One of such projects is the joint British-Kazakh project «EE and Sustainable Development»; a team of trainers on education for sustainable development was put together within the framework of this project from the NGO staff and creative educators practicing environmental education; a methodological guidebook on education for sustainable development «Choosing the Future» has been published, a web site to disseminate generated experience has been developed. NGOs actively disseminate their experience in the form of methodological guidebooks on informal EE. «EcoOraz» created a series of 5 handbooks devoted to the activities of children's environmental associations.

On March 27-28, 2001 the UNESCO office in Almaty in cooperation with the Academy of Sciences of the Republic of Kazakhstan conducted a consultative meeting on scientific, technical and EE «Environmental Education Challenges in the CA Countries». A relevant UNESCO project is currently under development.

In 2001 a number of NGOs of Kazakhstan were invited by the Norwegian Environmental Society to take part in the energy and resource saving program for school students. A guidebook for students and teachers, explicitly explaining how to save resources in households was developed within the framework of the SPARE program. In 2002 the number of participants of the program expanded after the Children's Environmental Conference «Ecology and Children» was conducted in Karaganda.

CAREC, in cooperation with the Ministry of Education and Science, NGOs of Kazakhstan and FSCEE, under European Commission and British Council support, implemented the project «Environment for future generations» and produced the EE and ESD textbook for secondary schools. The textbook was written by a team of teachers and NGOs' representatives – specialists in the field of ESD. In February 2004 we have got affirmative decision of the Ministry of Education and Science (ME&S) of Kazakhstan expertise for using it in Kazakhstan secondary schools. Textbook presentation and training for Kazakhstan secondary schools teachers were held with participation of CA WG on EE members on March 30-31 2004. On May 12, 2004 textbook presentation

in cooperation with British Embassy and British Council was organized at the ME&S, Astana. «TAU» NGO translated textbook into Kazakh language under Soros Foundation-Kazakhstan support. Project team prepared a methodic manual on textbook application and disseminated it among 20 experimental schools of Almaty and Karaganda-cities, as well as the Russian and Kazakh textbooks. Since approbation is over, the project executors will get comments and feedbacks on textbook through teachers' survey. We suppose to prepare applications for textbook further elaboration and spread in CA region to forward them to donor organizations.

Also CAREC under support of OSCE centre in Almaty implemented the project «Promotion of EE in secondary schools in the Republic of Kazakhstan» in 2004. The project foresees development of educational module on Environmental Education for secondary schools teachers, reforming of legislation in the field of EE and development of library and video archive with methodic materials, authoring programmes, educational and informational sources, including multi media technologies in the field of EE and ESD. At the moment the following materials on the project are prepared: Analysis of international and Kazakhstan EE legislation; Proposals on amendments of national legislation to be included into the Environmental Codes; Two days training module on EE and ESD to introduce them to the system of re-training and improvement natural sciences teachers' qualification through institutions of improvement teachers' qualification (IITQ); Project on development of coordination and EE interaction mechanisms.

Training for secondary schools teachers on EE and ESD was held and supported by trainer Mr. Kalinin (Russia), Director of Centre for Environmental Research of Obninsk city, Coordinator of «EE» Association. Information of SD course worked out by author was presented to teachers: SD concept, environment, EE and ESD. Experience of Russian Federation in the field of EE and ESD at legislative, governmental, public and pedagogical levels was presented. 20 teachers, NGOs and specialists on EE and ESD of 9 Kazakhstan cities: Almaty, Astana, Karaganda, Temirtau, Balkhash, Taldy-Kurgan, Shymkent, Kokshetau, Pavlodar were taught SD, EE and ESD theories to raise their capacity.

4. SITUATIONAL ANALYSIS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT IN KYRGYZ REPUBLIC



4.1. INFORMATION AND PUBLIC ACCESS

In 1992 Kyrgyzstan adopted its Mass Media Law, which is still in effect. In October 1998 the referendum supported adoption of the constitutional norm that outlawed legislative initiatives restricting the freedom of speech and the freedom of press. This norm was reinforced by adoption of the laws on protection of professional journalistic activity and on guarantees and freedom of access to information. In 2000 Kyrgyzstan had 415 registered print media, 96% of them were the newspapers. Out of 75 registered broadcast media 7 television companies and 12 radio stations broadcast on the air. 111 media are owned by the state. Environmental information is communicated to the population of the Republic through the mass media. There are specialized newspapers and magazines; environmental and educational NGOs have provided an extensive coverage of issues related to interaction of humans and the environment (EMTV, Piramida, National Radio and Television).

4.2. KNOWLEDGE SYSTEMS

The adult literacy rate in Kyrgyzstan is rather high (96,4%), 80,5 thousand people out of 4 million 729, 6 thousand people are illiterate (as of January 1, 1999.) Almost two thirds of adults completed at least a secondary school. However, given the high literacy rate, the rate of functional literacy and adaptability to change appear to be going down. At the beginning of the 1999/2000 academic year the Republic had 1,985 operating full-time general education schools (including 29 non-governmental schools) with 1103,6 thousand students, which is 2 per cent greater than at the beginning of the previous academic year.

The network of higher education institutions in the Republic continues to develop. At the beginning of 1999/2000 academic year 39 higher education institutions trained highly qualified personnel, such schools had 159,2 thousand students. 26 higher education institutions were state-owned and had 146 thousand students. 13 non-governmental higher education institutions had 13,2 thousand students.

Education availability and quality have been enhanced, as for the years of sovereignty the number of general secondary education schools in the Republic has gone up from 1,794 in 1991 to 2,029 in 2003. Apart from the ordinary schools there are 406 advance studies schools, including 113 gymnasiums, 48 lyceums and 416 preschool institutions. By the beginning of the new 2003/2004 academic year 1 million 590 thousand copies of school textbooks and training manuals covering 45 subjects were produced.

The effective mechanisms employed to ensure universal enrolment of children and adolescents are defined in the President's Programme «Access to Education («Zhetkinchek») and the State Programme «New Generation», which are implemented in close cooperation with the local self-governments aйл nokmoty and through partnerships with NGOs and international foundations, including «Meerim» Found, ADB, UNESCO, UNICEF, USAID, ACCELS, «Saving the Children», etc.

In 2001 the school education system started adjusting the curricula and training programs for sustainable future. The Republic has the Universal Education Action Plan, which is targeted at achieving six Dakar Forum goals by 2015. A special course «Environmental Protection and Efficient Use of Natural Resources» was introduced in vocational and special secondary educational institutions. Eight universities of the Republic train professional environmentalists and have environmental chairs. The number of graduates specializing in ecology, environmental protection and development increases every year.

4.3. ENVIRONMENTAL PROTECTION AND MANAGEMENT

Though Kyrgyzstan occupies only 0,13% of land on the Earth, the country has about 3% of the world's fauna and over 7,400 plant species. The physical and geographic features of the area vary greatly; the country has mountain ranges covered with glaciers and river valleys with a hot dry climate. Despite all efforts made by the state ratification of the Biological Diversity Convention (1996), the package of laws in support of biodiversity, the Kyrgyz Republic Biodiversity Preservation Strategy and Action Plan (1998), about 10 laws adopted since 1992, 6 reserves and 8 national parks, there is practically no single natural ecosystem left in the country that is not affected by human activities.

71 plant and 122 animal species are endangered, all of the plant species and 67 animal species are included into the Red Book, commercial hunting and poaching are not controlled. It is hard to overestimate the importance of forests in Kyrgyzstan, which is the country where freshwater runoff is formed for the whole Central Asian region.

Kyrgyzstan's accession to the Montreal Protocol on Ozone Depleting Substances and ratification of the UN Convention on Global Climate Change boosted the development of the National Strategies and implementation of effective measures to reduce the level of greenhouse gases and ozone depleting substances in the country.

Efficient land resource use, soil fertility restoration and regulation of land relations are predetermined as a major priority of the country, which is ensuring food independence and food security given a severe scarcity of land resources. The arable land per capita is 0,26 hectares, which is barely enough to provide for the smallest food minimum of an average statistical citizen in the country. A sound legal framework has been established in Kyrgyzstan to ensure sustainable and efficient land use. Private land property was introduced and a special pattern put together to allocate and lease natural pastures to the local communities responsible for the conditions of the pastures, their degradation level, commercial use and regeneration.

Specially Protected Natural Areas (SPNAs). The Republic has operating SPNAs inherited from the former USSR and designed to preserve biological diversity and natural ecosystems of Kyrgyzstan. The current network of SPNAs is rather extensive, covering all types of Tianshan and Pamirs-Altai ecosystems. Under the classification adopted by the International Environmental Conservation Union (IUCN), the Republican SPNAs has four categories. The first category includes 7 reserves with a total area of 270,7 thousand hectares protected by a ban of any commercial or other activities, which disrupt the natural development of environmental systems. The second category embraces 8 national nature parks with the total area of 258,5 thousand hectares protected through differentiated section-specific security levels. The third category includes about 18 natural sites or geological reserves (60 hectares) and the fourth category covers woodland, botanical and game reserves, as well as 2 integrated reserves. The total area of reserves in the Republic is over 283 thousand hectares.

4.4 PEACE AND EQUALITY

The Kyrgyz Republic joined all major international human rights instruments. It ratified six fundamental international human, civil, political, economic and cultural rights treaties, as well as children's rights and race and gender discrimination elimination treaties. They include the International Pact on Civil and Political Rights, the International Pact on Economic, Social and Cultural Rights, Convention against Tortures, Convention on the Elimination of All Forms of Discrimination against Women, Convention on the Elimination of all Forms of Racial Discrimination and Convention on Child's Rights.

Article 16 of the Constitution provides that human rights and freedoms are recognized and safeguarded in accordance with the generally accepted norms and principles of the international treaties and agreements ratified by the Kyrgyz Republic. Therefore, Kyrgyzstan is committed to adhere to the agreed procedures, including presentation of periodic human rights reports prescribed by the UN treaties. The Human Rights Commission and Ombudsmen have been established.

Public awareness and educational programmes on international human rights standards are relatively new and are not found outside of Bishkek and the urban centers. There is still no sufficient governmental and non-governmental capacity to monitor and develop human rights violations reports. There is a growing number of NGOs active in the area of human rights, which cooperate with the government in developing reports for the UN treaty bodies and drafting alternative reports. The unique characteristics of Kyrgyzstan are segregation of powers, limitation of the president's power, relative freedom of press and opportunities provided to the political parties and NGOs, including the groups tracking human rights processes, to obtain and disseminate information and to conduct campaigns.

4.5 LOCAL CONTEXT

The Kyrgyz Republic was one of the first transition economies to start its local self-government reform. 460 of 1,315 rural localities switched to local self-governance. Bishkek and 11 district subordinated cities out of 49 cities and urban localities implemented a transition to self-governance. The Congress of Local Communities and the Association of the Cities of the Kyrgyz Republic has been established. Offices of the Congress of Local Communities currently operate in all oblasts, regions, cities and villages.

The function of the local self-governments is to administer natural resources and social and economic development. Local government authorities are a real sustainable development tool for the local communities. Local self-governments handle local issues and exercise delegated state powers. The major local issues administered by the local self-governments under the law are integrated social and economic developments of local communities and their unions; housing, utilities and area improvement; public transport and roads; services and trade; local health care; preschool, school and professional education, which is to be compliant with the state education standards; preservation and development of historical and cultural traditions of local communities; environmental protection; etc.

4.6 TRANSFORMATION

65% of the population or about 3,3 million people live in rural areas. The poverty rate is 51% in rural areas and 41,2% in urban areas. Social and engineering infrastructure is poorly developed in rural areas. The total housing per person is 11,7 square meters in rural areas and 14,1 square meters in urban areas. Only 13,3% of the rural population have access to the water supply system, while in the urban area 72,4% of people have access to the water supply system; gas networks are accessible to 17,8% of the rural population (54,5%); central heating is accessible to 4,7% (55,9%) and telephones are accessible to 11,8% (47,6%) of the population.

Limited access to social and cultural amenities, high unemployment rate, unequal educational and targeted job placement opportunities, poor quality health services, restricted access to loans and investment required for successful rural production development and marketing networks are some of the serious problems standing in the way of sustainable rural development. Considering all of these factors and realizing the importance and the need to improve the welfare of the rural population, the following documents are currently under development: the Integrated Rural Development Activities for 2003-2005 (including

the Implementation Plan); the State Integrated Rural Development Program until 2010 (including the Implementation Plan) and methodology recommendations related to rural community development.

In 1996 the Government of the country developed its Food Security Framework and National Program. About 45,5 million euros were allocated to the country to support the program under the aegis of the European Commission. The Kyrgyz Agricultural Corporation, established to provide loans to farmers, disbursed about 1,5 billion soms since 1997. All that contributed to the improvement of yields of all types of crops.

There is great concern about the prospects of urban and rural localities development. The Local Agenda 21 for the city of Bishkek was developed as a model to be followed when developing a sustainable development policy for a specific locality. Considering the natural limitations restricting development of Bishkek, realizing the responsibility for the contribution made by the capital to support the vital functions of the country and willing to maintain leadership in the local initiatives designed to advance the Kyrgyz Republic towards sustainable development, the Bishkek City Administration defined the Capital Development Framework.

4.7 CULTURE

The Kyrgyz people have many cultural traditions. «Manas» heroic epic is a masterpiece reflecting the history and lifestyle of the people, and their struggle for freedom and independence. The epic was entered into the Guinness Book as the longest folk epic. Kyrgyzstan's culture is very diverse, as in the course of its long history it accumulated cultures of many ethnic groups residing in the country. The Kyrgyz, Russians, Kazakhs, Uzbeks, Dungans, Ukrainians, Germans, Koreans, Uigurs, Tatars, Chechens and many other ethnic groups are represented in Kyrgyzstan. During the Soviet period in the history of Kyrgyzstan the Russian language became the language of interethnic communication, facilitating communication alongside mutual cultural enrichment. Literature, arts and even national cuisine of the peoples of Kyrgyzstan reflect the interchanged national features. The Assembly of Kyrgyzstan's Peoples was established as a consultative and deliberative council under the KR President. In addition there are eleven national and cultural centers.

4.8. RELATED AND CROSS-CUTTING SUBJECTS AND ISSUES

Kyrgyzstan, similarly to other newly independent states established in the place of the former USSR, is faced with social and economic challenges brought along by the transition, which have an adverse effect upon the overall process of democratic reform. The poor living standards, high unemployment rate, challenging crime situation, all make the overall rural civil society development process more complicated. We should build on the success stories, consolidating the activities of fragmented and isolated governmental and public organizations operating in the Republic, in order to streamline the joint efforts.

Governmental agencies are primarily engaged in improving the legal framework, enhancing cooperation with international organizations in the area of democratic institution reinforcement and involving international assistance and support in the process of improving democratic culture and legal education. Non-governmental human rights organizations are mainly engaged in monitoring and gathering mostly negative information about the status of affairs in this area without suggesting their vision of the problems or ways to resolve conflict situations.

Gender equality. Women's role in sustainable development. Men (49,4%) and women (50,6%) (1999) represent the large groups of population, whose relations are harmonized within the framework of a new gender equality format. The state has kept statistical gender records since 1997, a specialized National Council on Women's Affairs, Family and Gender Equality Development was established under the President's Administration, two national programs Ayalzat were developed; the domestic laws and programs are reviewed from the standpoint of gender development. Men and women have equal legitimate rights to own land. Representation of women at the middle level of public administration is about 30% and 6-7% at the decision-making level.

The civil sector plays a key role in democratization, human rights and social partnership processes. Besides being independent, the civil society has diverse and profound knowledge in the areas, which ensure social reliability and environmental security in the processes of sustainable development. Environmental NGOs and their associations participated in the development of the projects Healthy Nation (1994), National Environmental Plan (1997), Biodiversity Preservation Strategy and Action Plan (1998) and in discussions of the environmental laws.

The Civil Sector of the Kyrgyz Republic (as of 2000) is comprised of the following types of voluntary public associations: 3,019 NGOs, including 200 environmental NGOs, 500 mass media, including 388 print media and 51 electronic media; 335 science and technical associations and cultural and educational associations.

Environmental NGOs organized a public campaign opposing Kyrgyz-Chinese paper mill construction in Chui-Tokmok and a public campaign opposing an incineration plant construction in Bishkek. They also promote the principles of sustainable development among the general public and teach the principles to civil servants, participate in documents drafting for RIO+10 and actively involve the public in the process of developing the Earth Charter.

4.9 PUBLIC HEALTH

The Kyrgyz Republic appears to be experiencing a deterioration of public health and reduction of access to health services, which contributes to growth in poverty and creates a risk of further development of poverty. The population at large has to cope with an increasing burden of poor health caused by poverty and increased incidence of diseases such as brucellosis and tuberculosis (114-127 cases per 100 people in 1999 – 2001.) Increased incidence of hepatitis B and other blood infections are signs of poor conditions in the hospitals.

Growing incidence of diseases related to poor quality water is an indicator of worsening living conditions, especially unavailability of common access to safe drinking water and poor sanitation in schools and homes. Though almost each of the families has access to electricity supply, over 75% of families do not have adequate sanitation and one sixth of the families (primarily rural families) do not have access to clean drinking water.

Health indicators also reflect increased cases of risky behavior related to rough social climate, including drug abuse and unsafe sex. Sexually transmitted diseases, including HIV/AIDS, are turning into an ordinary phenomenon. The estimated number of drug addicts in the Kyrgyz Republic is between 80,000 and 100,000 (68% of them are injection drug users; 93,4% are males), which is about 2% of the total population of the country;

Approximately two thirds of women in rural areas suffer from anemia. The findings of the Demographic Survey 1997 illustrate that the newborns' mortality rate (NMR) is three times higher (66,5 per 1,000 live births) than the official data (only 22,3 according to the official sources.)

The public spending on health has been continuously going down, it decreased from 4,0% of GDP in 1995 to 1,9% of GDP in 2001 as a result of general expenditure reduction and diversion of funds from the health sector. Budgetary allocations cover only 50% of costs in the health sector; the rest has to be paid by the patients.

Health sector reforms were launched in 1993 (within the framework of the «Manas» National Programme) with support of the World Bank, USAID, Swiss Development Corporation and other donors. These reforms are focused on hospital restructuring and sanitary and epidemiological services to strengthen the primary health care and to replace policlinics with family doctors' groups at the primary level. The reforms also include the mandatory health insurance (MHI) system; payment related incentives, health information system development and improved drug management.

4.10 ENVIRONMENTAL EDUCATION

Public Environmental Education Policy. The EE system in the KR is generally coordinated and regulated by the Ministry of Education and the Ministry of Ecology. EE priorities are highlighted in the Presidential Education Programme «Personnel of the XXI Century» and in the «Kyrgyz Republic Environmental Security Concept». The KR Education Law adopted in 1994 clearly emphasizes the environmental imperative. The National Sustainable Human Development Strategy of the Kyrgyz Republic provided for the introduction of universal environmental education in 1999. Within the framework of the EE Concept implementation the Kyrgyz Republic will readjust and develop new EE curricula and programs focusing on sustainable development (ESD).

Preschool EE is the first step in the system of continuing environmental education, the step designed to ensure that children get a grasp of the fundamental environmental knowledge. The basics of the environmental perspective, knowledge, ideas about the environment and elementary skills of environmental behavior are developed at the initial stage of personality development and education in families and preschool institutions. Popular pedagogy, rich in long-standing traditions of caring for nature and its creatures, is a critical component of preschool environmental education in our country. In Kyrgyzstan the fundamentals of environmental education are taught at children's preschool institutions in compliance with the «Kindergarten Education and Training Program», containing the section «Getting to Know the Environment». In addition, in 2001 the program «Mother's School» was developed, it is designed for parents and educators. EE is one the priorities stated in this program.

EE in Secondary School. Environmental education in secondary school is the second step in the system of continuing environmental education. Under the Education Law of the Kyrgyz Republic the schools are free to use an additional educational component, in other words, may introduce such discipline as «Ecology». Teaching is also based on the Russian, Bulgarian, US and other countries' programs adjusted for regional conditions. 20 schools in the Republic operate specialized environmental programs. A great number of classroom hours in such schools are allotted to humanities, 68 hours in ordinary schools versus 136 hours in specialized schools. Individual new type schools have environmentally focused courses of physics, chemistry, biology and geography taught to 7-11 grade students and alternative courses «Nature and Humans», «Human Studies», «Healthy Lifestyle». Another widely applied form of environmental education is learning in study groups, clubs and learning through optional courses.

EE is a continuous process in the family – school – university system. General secondary education schools have taught «General Geoecology» since 1996, scheduling 1 hour a week for the 11th grade students. EE is also incorporated into the training programs on natural science, homeland studies, regional studies and children and adolescents' movements «Tuulgan Zherim», «Living Earth», Green and Blue Patrols, etc.

Public non-governmental environmental organizations have been partially providing EE to the population of the Republic. The public environmental movement is developing rather rapidly in the major cities of Kyrgyzstan, which is not the case in the rural area of the Republic.

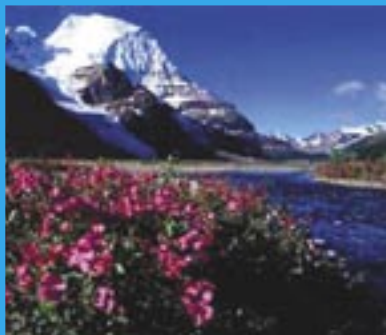
EE in Higher School. In 1989 the Ministry of Higher and Secondary Education of the Kyrgyz SSR issued a decree introducing an integrated plan aimed at educating the students in ecological issues, efficient nature use and environmental protection. This was an inception of such courses as «Environmental Conservation», «Environmental Protection», etc. The next stage of environmental education development in the higher school of Kyrgyzstan started during the period of independence and is linked to the Kyrgyz Republic Education Law adopted in 1994.

In 1994 the training course «Ecology» (Fundamentals of Ecology) became a mandatory element of the educational standards used to train bachelors and specialists in practically all fields and specialties. Sometimes a course of ecology is built into another mandatory course, namely «Concepts of Modern Natural Science».

In 1996 a model program «Fundamentals of Ecology» was developed for all university specialties except environmental specialties. At the same time the UNESCO Environmental Education Chair was established under the Kyrgyz National University, operating within the framework of the President's Education Program «Personnel of the XXI Century» and in compliance with the priorities of the Kyrgyz Republic Environmental Security Concept. Over 550 young specialists were trained in 2000.

NGOs' Contribution to Environmental Education. Kyrgyzstan's advancement towards sustainable development is impossible without cooperation with the civil sector, in particular, the NGOs. The NGO movement started in Kyrgyzstan as a result of the democratic reforms implemented in our society. NGOs made a great contribution to the EE development in Kyrgyzstan. NGOs received a much greater access to international experience in this area than the representatives of the state education system. Additional sources of funding such as grants, internships and exchange visits to foreign countries, opportunities to receive information via electronic mail and Internet, participation in NGO forums and, as a result, experience sharing in this area played a great role in this process. Currently there are about 3,019 officially registered NGOs in Kyrgyzstan. Over 200 of them are environmental NGOs. Most of them have training as one of the components of their activities. Trainings based on interactive teaching methods are rather well developed and widely applied in the activities of the environmental NGOs. The youth environmental movement «BIOM» conducts trainings in the regions of the Republic, covering such topics as «Fundamentals of Public Environmental Activities», «Environmental Education Activities», and «Environmental Information Processing». It is also noteworthy to mention such NGOs as «Life Tree», «Teachers' Club» and many others. Various NGOs, public funds and organizations dealing with ecology and environmental issues play a great role in the process of enhancing social involvement of the population. Among those NGOs are such as «Meerim» Fund, «Soros-Kyrgyzstan» Foundation, Kyrgyzstan's Environmental Movement «Aleine», NGO «Tabiyat», NGO «Biom», and Kyrgyzstan's Environmental Protection Fund. A network of children's and adolescents' clubs created in the Republic reflects an increasing interest in environmental issues and conservation efforts.

5. SITUATIONAL ANALYSIS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT IN THE REPUBLIC OF TAJIKISTAN



5.1. INFORMATION AND PUBLIC ACCESS

Information supply for decision makers in globalized international political and economic relations becomes important in any modern state as a strategic factor of sustainable development. Sustainable development of any country is problematic without a clear-cut information policy in the area of EE and development.

One of the most critical components of the «State Public Environmental Development and Education Programme of the Republic of Tajikistan until 2000 and Prospects until 2010» and the National Environmental Action Programmes in Tajikistan is organizing a system of public awareness of environmental, efficient natural resource use, health, demographic and gender development problems.

The State Environmental Protection and Forestry Committee of the Republic of Tajikistan provides public administration bodies, companies, organizations and general public with information about natural phenomena and environmental pollution. Catalogues, environmental information and literature, develops the national environmental information network and provides information about international cooperation in the area of environmental protection.

In the view of the urgency of environmental problems, Tajikistan has joined and ratified 9 international Conventions and 5 Treaties, including the Vienna Convention on Ozone Layer Protection (1997), Convention «On Biological Diversity» (1997), Convention «On Climate Change» (1998), Convention «On Combating Desertification» (1998), Convention «On Wetlands» (2000), Convention «On Preservation of Migrating Wildlife Species» (2000 the Aarhus Convention 2002), Agreement on Information Cooperation in the Area of Ecology and Environmental Protection (2000), Agreement on Fundamental Principles of Interaction in the Area of Efficient Use and Protection of Transboundary Water Bodies (2000), Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (2001), Environmental Monitoring Cooperation Agreement (2001), Agreement between the Governments of the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Uzbekistan and the Republic of Tajikistan on Cooperation in the Area of Environmental Protection and Efficient Natural Resource Use.

The modern global information and communications technologies, particularly, the World Wide Web or Internet, should play an important role in ensuring public awareness. The current national information related legislation of the Republic of Tajikistan consists of the Law «On Print and Other Mass Media» (1990), «On Publishing» (1994), «On Communications» (1994), and «On Television and Radio Broadcasting» (1996) and «On Informatization» (2001). The governmental agencies are currently reviewing the draft laws «On Legal Information», «On Personal Data», «On Telecommunications», «On Regional Informatization», «On Information Supply for Governmental Authorities» and «On Confidential Information». Adoption of the above laws will facilitate the advancement of our state towards the information society.

Tajikistan pays a great amount of attention to the development of NGOs, which deal with environmental protection issues. The number of NGOs, including environmental NGOs, is growing. The representatives of NGOs have established the Independent Public Environmental Council for the purpose of implementing social and environmental projects. The Council, acting as a coordinating center for environmental organizations active in the area of environmental development, education and natural resource protection, in cooperation with the governmental organizations conducts conferences, «roundtables», seminars and other events resulting in development of specific recommendations by experts and specialists.

5.2. KNOWLEDGE SYSTEMS

Allocation of land plots to expand private subsistence farms played a significant role in the growth of agricultural production, primarily cereals production. 75 thousand hectares of land were leased out on a long-term basis in accordance with the Decree of the President of the Republic of Tajikistan.

Agricultural enterprise reforms have been recently intensified. In 2001, 120 agricultural enterprises were transformed into 1,355 dekhans, 296 land use and land plot certificates were issued. Certain activities are underway to create investment incentives that would promote investment to support promising projects. Health reforms have been launched to improve public health alongside with health care coverage expansion.

Educational reform is an urgent imperative geared towards developing new knowledge and professional capacity based on the market economy needs. A key component of transitioning from the planned system to an efficiently functioning market economy is establishing the financial markets matching the needs of economic development.

The financial sector reform is coupled with macroeconomic stabilization, structural reconstruction of enterprises and formation of the appropriate legal institutes.

The banking reform is underway to meet the needs of the new emerging economy and to keep up with the enhanced requirements to its liquidity. The effective tax system is getting organized to meet the demand for funds in the state given the market conditions without turning it into a heavy burden for the economy.

5.3. ENVIRONMENTAL PROTECTION AND MANAGEMENT

The Republic of Tajikistan ratified and acceded 8 conventions and 5 agreements on environmental issues and sustainable development, the Montreal Protocol on Ozone Depleting Substances and the London Amendment. The appropriate regulations, documents, programs and concepts have been developed to implement the environmental policy based on the participation of the Republic in the above conventions and agreements;

Tajikistan signed over 15 bilateral and multilateral Agreements with the CIS and 22 foreign countries providing for cooperation on the issues involving science, equipment, education and information. Being a full-fledged member of the Central Asian Economic Community, Tajikistan signed numerous programmes and agreements addressing the relevant regional energy, transport, trade, science, equipment, information, international cooperation, national security and other issues.

5.4. PEACE AND EQUALITY

After Tajikistan gained its political independence, it got involved in a fratricidal war. It took five difficult years to establish peace. The major national conciliation policy principles were articulated back in November 1992 at the 16th Session of the Supreme Council of the Republic held in Khujand. The internal Tajik negotiations launched in April 1994 did not only restore peace in the country, but also were a great contribution to the global peacemaking experience.

The reforms allowed to overcome economic recession and to ensure GDP growth during the last 5 years, in particular, as compared to 1996; the GDP has grown by over 20% for the last 4 years.

In 2001 the national budget was for the first time executed with a surplus of 0,13% of GDP. The budget deficit level and the inflation rate went down, the prices were liberalized for almost all goods and services, initially, for such socially important products as bread, flour and grain; foreign trade was also liberalized (barter, quotas and licensing were cancelled), tax duties for most of the export items were withdrawn, the state monopoly for fiber cotton and aluminum exports was eliminated and actual reform to change the forms of management and land use in the agricultural sector started.

The industrial output saw a 26% growth in the last three years, from 1997 - 2001. Aluminum production grew by 42,5%, power transformer production – by 3,2 times, cement production - by 47%, cotton fabrics production - by 29%, knitwear production - by 2,6 times and hosiery production - by 2,2 times. Agricultural production started growing in 1996. In 2001 the volume of agricultural production increased by 23%. Agricultural sector reform is a priority poverty alleviation objective in rural areas.

5.5. TRANSFORMATION

Science was rather well developed in the Republic of Tajikistan prior to the breakup of the Soviet Union and the social, political and economic crisis, which were caused by the events of the early 1990-ies. A solid resource and equipment support base was created to promote scientific research in humanities in the Academy of Sciences, science and research institutions and universities, scholars were trained and scientific schools of humanities, medical, agricultural and social sciences were developed. The research was coordinated with the Academy of Sciences and other scientific center of the former USSR.

5.6. CULTURE

The Republic of Tajikistan is an independent state with a long-standing historical and spiritual legacy. The Republic has many cultural and historical sites. Great efforts are made nowadays to revive the culture of Tajikistan. In November 2004 Tajikistan celebrated the 80th anniversary of Dushanbe, the capital of our Republic. Theaters, monuments, museums and parks of the Tajik capital are currently under reconstruction.

5.7. RELATED AND CROSS-CUTTING SUBJECTS AND ISSUES

One of the most critical political lessons of social processes previously observed and currently occurring in Tajikistan is recognition of the fact that one community cannot adequately express the interests of another community, despite all its good intentions and focused efforts. This is relevant for men and women, employers and employees, government and citizens. The representatives of the respective communities and social groups will express their own interests better than anyone else.

5.8. PUBLIC HEALTH

Health of individual citizens or groups of people is affected by a combination of mutually intertwined individual, social, economic and environmental factors; 8-10 % of this impact depends on the status of health care. In recent years Tajikistan significantly cut its spending on health. In 1991 the spending on health per capita was \$192,2, while in 2000 it went down to \$ 1,5, which is not sufficient to satisfy the basic health care needs of the population. All this would definitely affect human health.

5.9. ENVIRONMENTAL EDUCATION

Education reform in the Republic of Tajikistan is underway and there are many difficulties related to the demographic condition of the country, the problem of scarce funding allocated for education and enlightenment, flawed legal and regulatory framework and transition to market economy. However, there are positive changes in the structure and content of education, teaching and management methods.

As compared to 1992, the number of secondary schools, colleges, secondary special schools and higher academic institutions, alongside with the number of learners, students and postgraduate students, has increased.

The appropriate legal framework enabling education enhancement in the Republic of Tajikistan was developed during the years of independence in the country.

The Majilis Oli (Parliament) of the Republic of Tajikistan adopted the Law of the Republic of Tajikistan «On Education» (1993). The Government of the Republic of Tajikistan approved the «Model Provision on Secondary Education School in the Republic of Tajikistan» (1995), the «State Standard of Secondary Education Schools», the «Model Provision on Higher Professional Education Institution in the Republic of Tajikistan» (1996), the «State Education Standard of Secondary and Higher Professional Education» and the «National Education Concept of the Republic of Tajikistan» (2002.)

The Government of the Republic of Tajikistan approved the «State Public Environmental Development and Education Programme of the Republic of Tajikistan until 2000 and Prospects until 2010» and Programme Implementation Activities (1996.)

6. SITUATIONAL ANALYSIS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT IN TURKMENISTAN



6.1. INFORMATION AND PUBLIC ACCESS

In April 1999 Turkmenistan ratified the UNECE Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, which brought along new opportunities, empowering the public to participate in environmentally focused policy-making and facilitate such policy implementation. The most essential information related to environmental protection in Turkmenistan is contained in the second edition of the Red Book. Its third edition is currently under development. The National Sustainable Development Overview has been produced. Relevant overviews and action plans covering the most critical environmental issues are regularly prepared and published. Both the interested agencies and the public contribute to the development of such overviews and action plans.

The Ministry of Nature Protection of Turkmenistan issues monthly informational and analytical bulletin «Tebigat Habarlary» («Nature's Messenger») on environmental protection issues in Turkmenistan to raise the general level of public awareness. The international scientific and practical journal «Desert Development Issues» produced by the National Institute of Flora and Fauna Deserts explores the issues related to studying the capacity of various natural areas, their environmental status and science-based approaches to be employed in order to ensure conservation and efficient development of natural areas. Turkmenistan's Society of Nature Protection, one of the oldest and the most authoritative public environmental organizations in the country, is a specific contributor to environmental efforts. It provides environmental outreach and participates in environmental activities throughout the country.

6.2. KNOWLEDGE SYSTEMS

Turkmenistan has long-standing cultural and environmental traditions. The unique system of domestic environmental knowledge evolved throughout centuries and includes the knowledge of the most effective and efficient ways of natural wealth use. Some of its components are the carpet weaving art, superb breeds of Ahaltekin racehorses, Tazy hunting dogs and numerous varieties of Turkmen melons produced by the national breeders.

Much of this invaluable traditional knowledge is actively utilized in life of the modern Turkmen society in integration with the most advanced innovations. There is still a demand for carpets. The SJSC «Turkmenkhaly» («Turkmencarpet») established a well-structured staff training system and a network of carpet manufacturing enterprises, which use traditional technologies and innovations. Many centuries of Turkmen melon growing experience transferred from generation to generation are still found to be tremendously useful in modern Turkmenistan. People's experience and knowledge are currently used in such areas as livestock production, medicine, jewelry making and many other areas.

Turkmenistan has established and is currently in the process of developing a system of local and environmental knowledge application in both governmental and private sectors. The elements of such knowledge are incorporated into the curricula of training schools at various levels. National scientific institutions conduct continuous research on the use of local and environmental knowledge and are looking for effective and efficient «people's» natural resource development technologies and methods. It is noteworthy that the National Institute of Flora and Fauna Deserts under the Ministry of Nature Protection of Turkmenistan conducts research to integrate the techniques of «people's» hydraulic engineering with modern technologies to use local surface runoff for the development of the most remote desert areas.

6.3. ENVIRONMENTAL PROTECTION AND MANAGEMENT

The major national environmental policy principles and provisions are articulated in such fundamental documents as the «Strategy of Turkmenistan's Economic, Political and Cultural Development until 2020» and the National Environmental Action Plan (NEAP) of the President of Turkmenistan Saparmurat Turkmenbashi. These documents contain the national environmental policy as defined for the future based on the specific natural features of the country and define the steps to address priority environmental objectives. The most essential NEAP section is devoted to the investment measures used to prevent the impact of the oil, gas and energy sectors upon the environment and to preserve biodiversity and unique natural and cultural sites. As prescribed by the Resolution of the President of Turkmenistan, the Ministry of Nature Protection and the Ministry of Economy and Finance of Turkmenistan are responsible for coordinating the activities of ministries, agencies and local self-governments designed to implement the NEAP and to promote investments.

Turkmenistan has acceded to a number of the major international environmental conventions including the Framework Convention on Climate Change, Convention on Biodiversity, Vienna Convention and Montreal Protocol on Substances that Deplete the Ozone Layer, Convention on Combating Desertification, Basel and Aarhus Conventions. In order to ensure successful implementation of these documents the President of Turkmenistan resolved to establish the State Commission to safeguard adherence to Turkmenistan's commitments under the UN environmental conventions and programs.

The NEAP activities included development of the «Biodiversity Preservation Strategy and Action Plan» currently under implementation, publication of the overview «Current Biological Diversity Status in Turkmenistan», which indicates that the nation's biological diversity is comprised of about 20 thousand species (over 7,000 plant and about 13,000 animal species). This variety of

species includes a great number of endemic species found in specific confined areas and wild relatives of cultivated plants and domestic animals. The status of species diversity appears to be positive in general terms; the key flora and fauna species have been preserved in all landscape areas of the country and freshwater and marine ecosystems. There is an extensive network of protected natural areas including 8 reserves designed to protect biodiversity in the country. 1 million 978 thousand hectares or 4,7 % of the total area of Turkmenistan are protected areas. Biodiversity Preservation Strategy and Action Plan implementation includes the project «Institutional Capacity Needs Assessment and Biodiversity Information Management Enhancement». There is currently a whole package of projects being developed and approved, in particular, «Koitendag Mountain Biodiversity Preservation», «Desert Ecosystems Conservation in North-West Turkmenistan», etc. A number of projects are already underway, for instance, «Improving Protected Areas Management System in Turkmenistan». One of the planned activities within the framework of the Caspian Environmental Program is saving seals and sturgeon. In 2004 Turkmenistan started constructing a sturgeon plant on the Caspian seashore, which will have a positive impact upon reproduction of these extremely valuable fish species.

Turkmenistan ratified the Framework Convention on Climate Change in 1995 and the Kyoto Protocol in 1998. These documents were used to take an inventory of the greenhouse gases and to publish a national climate change communication. Further reduction of the greenhouse gas emissions and adaptation of the economy to climate changes have been incorporated into the general and sector specific economic development plans. Power plants are being upgraded, and fuel efficiency is being enhanced. Fuel consumption at the power plants will go down by 8% in 2004-2008, which will result in a significant reduction of the greenhouse gas emissions. In addition, there are plans to develop wind and solar energy generation, especially in the remote areas, and to apply energy saving technologies in utility services and industry. The oil, gas and fuel related power engineering are the prevalent sectors of Turkmenistan's economy. At present these sectors are developing in a dynamic way, therefore, there is a specific section in the NEAP fully devoted to the impact that such sectors have upon the environment. The most critical oil and gas sector development objectives will be addressed through continuous technological improvements and environmental safety enhancement.

Turkmenistan has developed diplomatic relations with over 120 states, joined over 40 international organizations and distinctly established itself as the center of peacemaking in the region. Positive neutrality is an effective tool for Turkmenistan to develop a constructive dialogue and to enhance cooperation with the international community in the atmosphere of mutual understanding and impartiality, facilitating joint efforts towards secure peace, common sense and good will.

6.4. PEACE AND EQUALITY

Turkmenistan is a legal, secular state, which invariable acts for peace coexistence of the states, connecting the future with politics of peaceful disposition and mutually advantageous cooperation. The important step on this way became a finding by Turkmenistan of the status of the neutral state maintained December 12, 1995 on UN General Assembly by 185 states of the world. Having received the international legal status of neutrality, Turkmenistan has undertaken the certain obligations before UN and global community, which are fixed in Constitution and in the legal acts of the country, and also in international agreements, among which is Declaration «About the international obligations of Turkmenistan in the field of human rights». Turkmenistan consistently implements politics on maintenance of human rights; and the large job on creation of guarantees of personal, political, economic, social and other rights of the citizens is done.

Turkmenistan has established diplomatic relations with more than 120 states of the world; became a member of more than 40 international organizations, took the strong positions of the peaceful centre in the region. Positive neutrality is the effective tool of development of constructive dialogue and deepening of cooperation of Turkmenistan with the global community in the atmosphere of mutual understanding and objectivity, association of efforts in strengthening capacity of peace, reason and good will.

6.5. TRANSFORMATION

Turkmenistan is a democracy state. It is one of the Central Asian countries located in the south west of the region. Turkmenistan is a multinational state with over 40 ethnic groups; Turkmens comprise 90% of the population. As of September 1, 2004 the population of the country was 6,455.3 thousand people, with about half of the population residing in the cities. The level of education is high (the literacy rate is 99,8%). The country has over two dozens cities, i.e. large populated localities, with the population primarily employed in industry, trade, services, management, science and culture.

Agriculture is one of the most critical sectors of the economy producing over a quarter of the GDP. Farming in Turkmenistan is directly linked to irrigation. Over 90% of the annual resources are used for irrigation. The stages and pace of agricultural development in 1991-2000 were defined in such programs of the President of Turkmenistan as «10 Years of Stability», «Grain», «New Village», and «the Program of Turkmenistan's Economic, Political and Cultural Development until 2020» covering the nation's development until 2020. Industrial outputs continue to grow. In January-August of 2004 the volume of industrial output reached 22,58 trillion manats, which is a 22,7% growth as compared to the previous year. Within the defined period Turkmenistan generated 7,686.8 million kWatt/hour of power, which is 10% greater than within the same period in 2003; 38,6 billion cubic meters of gas were produced, 27,76 billion cubic meters of gas were exported. Oil production grew by 1% and amounted to 6382,9 thousand tons, the volume of oil refining increased by 4% reaching 4606,4 thousand tons.

6.6. CULTURE

Turkmenistan is a country with great spiritual legacy generated through the long history of its people. There are many cultural monuments in Turkmenistan. There are many activities currently underway to revive the culture of Turkmenistan. There are currently several theaters, the Museum of Arts and the Academy of Arts under construction in the capital of Turkmenistan. Turkmenistan is a multinational state and all ethnic groups represented here have all opportunities to develop their culture, customs and traditions. Turkmenistan is open to cultural exchange and cooperation.

6.7. RELATED AND CROSS-CUTTING SUBJECTS AND ISSUES

Being a dynamic state, Turkmenistan has gained a reputation of a deserving participant of international relations and has created a society of equal opportunities for all its citizens. The reforms in the country are implemented gradually, step by step, which is an important principle, which avoids aggravations of the living standard in the country.

Turkmenistan is consistent in pursuing its human rights policy and improving legal and social protection of rights without any ethnicity, confession or gender based prejudice. The legal framework of Turkmenistan is designed equally in the interests of both women and men. The action plan has been developed with a wide range of activities to ensure active involvement of women in all areas of social and state life. The country has demonstrated high women empowerment index, in fact, Turkmenistan is ahead of the CIS and Asian countries in this respect. The share of women in the Parliament is high, 26% versus 15% on average internationally.

Following the generally accepted democracy principles Turkmenistan is consistently implementing the programme of governmental development. The Constitution served as a basis for establishing the institutes of state power and governance in line with the nation's great political and legal culture. The country has reached social accord and instituted interethnic and interconfessional harmony.

6.8. PUBLIC HEALTH

The Programme of the President of Turkmenistan «Saglyk» («Health») was adopted shortly after Turkmenistan gained its independence to improve effectiveness of health care. Originally it had a specific focus on disease prevention. The National «Health» Center was established in 2000 to serve this purpose and in 2003 was reorganized into the Health Information Center under the Ministry of Healthcare and Medical Industry of Turkmenistan. The major function of the Center is providing information to the population, especially adolescents, to promote healthy life style, to develop cooperation between the community and health agencies in order to enhance mother and child health, to promote healthy nutrition and sanitation and to prevent bad habits and STDs. Center's activities represent one of the essential ways to access information.

One of the national healthcare improvement priorities is developing and implementing preventive interventions with proper consideration given to social, economic and demographic factors, mother and child healthcare and enhancing public awareness of health related information.

Turkmenistan has developed reproductive health programs involving medical personnel alongside with experts from the Ministry of Education and public organizations. The reproductive health service is represented by a whole network of velayat (regional) centers and specialized consultation rooms in 49 etraps of the country supplied with the most advanced equipment.

6.9. ENVIRONMENTAL EDUCATION

People and the level of their EE play a critical role when it comes to environmental issues. Environmental education is one of the institutional fundamentals of environmental management. The NEAP contains a whole range of related activities, including, first of all, developing and improving the curricula covering the relevant disciplines at the preschool and other levels, as well as training of highly qualified professional environmentalists specializing in various areas, such as economics, management and audit. Therefore, year after year environmental subjects get increasingly accentuated in the higher school.

A special emphasis in institutional EE activities is placed upon a wider use of mass media for the purposes of public awareness raising and application of modern computer technologies including Internet, as well as increasing the amount of publications with an environmental focus.

7. SITUATIONAL ANALYSIS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT IN THE REPUBLIC OF UZBEKISTAN



7.1. INFORMATION AND PUBLIC ACCESS

Independence ensures pluralism and coverage of a variety of opinions in the press. The absolute majority of 450 newspapers and 115 magazines published in Uzbekistan and over 30 television channels and studios already have non-governmental founders. The National Association of Uzbekistan's Electronic Media (NAUEM) was established in January 2004 as a professional union of non-governmental broadcasters and currently has about fifty members represented by the regional radio and television stations and cable television networks. 60% of all television viewers and radio listeners in the country are the audience of the television and radio stations incorporated into the Association. NAUEM's major goal is to establish a civilized electronic media market in the Republic of Uzbekistan, to create favorable equal conditions for the development of all broadcasters and to ensure active involvement in civil society development. The Charter declares independence of the Association from the government and its aspiration to develop a civilized media market and to promote conditions for the effective activities of independent electronic media. Many media provide coverage of environmental topics and sustainable development issues (about 30 media cover environmental issues in the capital). Festivals of Journalism are conducted in the Republic to provide incentives to environmental journalists. Meetings and roundtables involving journalists and environmentalists are conducted on a regular basis. There are many currently produced environmental publications. Given the increasing openness, the publications increasingly reflect the actual environmental problems and explain the people's rights to a healthy environment. Many books covering the people's rights to a healthy environment and other issues, including the publications supported by donors, are circulated among the population free of charge. The «Environmental Messenger» magazine is published regularly. The international organizations provided their assistance in establishing the system of accessible Internet services. Over 10 environmental sites have been developed. Some activities are underway to introduce e-government in the country, in particular, such e-government services, as «Government to Government», «Government to Business» and «Government to Population».

7.2. KNOWLEDGE SYSTEMS

Spiritual and historical values of the Uzbek people and the legacy of the great ancestors are turning into the world's property. The Swiss Cooperation Bureau is providing its assistance in revitalizing such arts as production of colorful wall paintings (suzani), pillowcases (takiya push), prayer mats (dzhoinamoza) and Denau ceramics, which were created in the VIII-IX centuries AD. This knowledge is transferred to the youth. Integration of traditional and modern technologies is extensively used in the educational process. The Program «Internet in Uzbekistan's Schools» is currently being implemented to provide assistance to Uzbekistan's teachers, ensuring the productive use of new technologies in the class; to support democratic reforms in schools and to promote civil society development. The Program has recently announced the opening of the 60th Internet Training Center. The Program developed the leading electronic educational portal in Uzbekistan www.connect.uz. 11 colleges are implementing the joint project on electronics, programming and business, which was developed in accordance with the professional European educational standards.

7.3. ENVIRONMENTAL PROTECTION AND MANAGEMENT

Uzbekistan has significant hydrocarbon resources. The total estimated cost of potential mineral and raw material resources exceeds 3,3 trillion US dollars. Uzbekistan is one of the ten largest international gas producers. Uzbekistan is also one of the world's leaders in gold, copper, uranium, silver, zinc and tungsten reserves. Uzbekistan ranks seventh among the world's gold producers and has the fourth largest gold reserve in the world. The Republic has about 100 types of minerals, which are in significant demand in world markets.

The National Environmental Action Plan defined the following three major environmental problems: degradation of water resources and related salination of irrigated areas and mineral water and shortage of drinking water; desertification; disruption of ecosystems and their increased exposure to natural disasters and man-caused impact. 90% of the total water consumed in Uzbekistan is used for irrigation. The special hazards are water transfer of mineral fertilizers and plant chemicals from agricultural fields and penetration of contaminated wastewater from livestock production farms into the surface and ground water. 40% of the known underground freshwater sources have become unsuitable for drinking as a result of the antropogenic load. The Aral Sea shrinking is an unprecedented environmental disaster, which created a complex set of social and economic problems and consequentially global in nature. The major biodiversity threat in Uzbekistan is the loss and changes of habitats. 80% of clay deserts, 95% of tugai bushes, 20% of sand deserts and 40% of mountainous areas have been adversely affected by irrigated farming, inefficient use of natural pastures, extractive industry and energy generation operations. The total emissions of pollutants in Uzbekistan include 51,9% carbon oxide, 16,0% sulfur dioxide, 17,9% hydrocarbons, 8,9% nitrogen oxides, 6,1% solids and 0,2% other specific hazardous substances. There is a very serious problem in the Gissar valley on the border of Uzbekistan and Tajikistan. The emissions of the Tajik aluminum plant (primarily anhydrous hydrogen fluoride) affect the agricultural regions of Uzbekistan.

The Republic established its State Environmental Protection System managed by the State Nature Protection Committee (Goskompriroda). Goskompriroda is a specially authorized top level coordinating body, performing state oversight and intersectoral

ral management in the area of nature protection, natural resource use and reproduction. The Ministries of Health, Agriculture and Water Resources, Internal Affairs, «Sanoatkontehnazorat» and the State Land Committee also perform the state oversight functions in the area of nature protection. Uzbekistan has acceded to over 15 international environmental conventions. Over 30 laws regulating environmental protection, public health and efficient natural resource use have been adopted.

The following programmes have been developed: the National Environmental Action Plan, the National Biodiversity Preservation Strategy and Action Plan of the Republic of Uzbekistan, the National Programme to Phase out Ozone Depleting Substances, the Climate Change Response Programme, the Landscape Desertification Response Programme, the National Environmental Hygiene Action Plan, etc.

The following environmental projects are being implemented with support of international organizations: «Institutional Capacity Building; Supplies of OPB Detection Equipment Kits for Customs Services»; «Institutional Capacity Building; Establishing Ozone Depleting Substances Replacement Management Office»; «Training Refrigeration Instructors and Technicians»; «Establishing Nuratu-Kyzylkum Biosphere Reserve as a Model of Biodiversity Preservation in Uzbekistan»; «Improving Cost-effective Productivity and Environmental Adherence in Uzbekistan's Industries by Establishing the Cleaner Production Center»; «Central Asian Transboundary West Tiyan-Shan Biodiversity Preservation Project»; «Technology Transfer for the Local Production of Solar Water Heating Collectors»; «National Self-Assessment of Environmental Convention Implementation Capacity».

7.4. PEACE AND EQUALITY

Official diplomatic relations have been established with over 120 countries. 35 states opened their embassies in Tashkent, 19 foreign ambassadors and 88 foreign representative offices are accredited in the Republic. Uzbekistan is confronting the threats of terrorism, drugs and weapons trafficking in cooperation with the Central Asian countries. The UN and OSCE supported the initiative of the Republic to announce Central Asia a nuclear weapons free zone. The Law «On Combating Terrorism» adopted in December 2000 has a great importance for national security. Uzbekistan adopted all effective UN conventions and protocols on combating terrorism.

The reform policy is aimed at creating the fundamentals of a democratic jural state in Uzbekistan, protecting the critical rights and freedoms of citizens, such as the right to political choice, the freedom of conscience, enterprise, speech, the right of ownership. These rights are enshrined in the Constitution, Codes and Laws of the Republic of Uzbekistan and are secured by the Ombudsman, the Human Rights Representative of Oliy Mazhlis (Parliament). The Universal Declaration of Human Rights and over 30 other international human rights documents have been ratified. A new factor of public life democratization in Uzbekistan is a growing activity of political parties, including: "Vatan Tarrakiet", "Adolat", "Miliy Tiklanish", "Fidokorlar", People's Democratic Party". Their civil position supports the balance of interests in the society and serves as a counterbalance to governmental structures.

There are no significant differences in the country between the poor and the wealthy strata of the population in terms of the literacy rate and accessibility of elementary, general and secondary special professional education. As a result of the «small privatization», implemented during the first years of the reform, practically all the families (96%) got to own the housing, which was municipal property earlier. Rural water supply coverage rate grew by 1,5 times in 2003 reaching almost 75%, natural gas supply coverage rate went up by 3,6 times embracing 78% of the households. The country has basically retained the system of free health care, which in many ways facilitated the accessibility of health services to the poor families.

7.5. LOCAL CONTEXT

One of the most important administrative changes in the last few years was the creation of the mahalla (local community) governance system. Mahalla, being a traditional local self-governance instrument not included into the system of public administration, has been vested with increasingly broad social assistance distribution powers. The Mahalla self-governments have become major elements of power decentralization and local community development. The Republic encourages their participation in addressing local social issues, limiting the role of the government in establishing the rules used by the mahalla to make their decisions and ensure their accountability.

With support from CAREC the country is implementing the projects of developing the LEAP environment in the country. The initiative is designed to share experience and to establish the institutional foundation and LEAP development tools with proper consideration given to regional conditions. A network of the «Cities of the Future» is planned to be established within the framework of the project. The idea is centered on developing new approaches to environmental management for large megapolises, when the environmental policies priorities are defined taking into account the interests of all the strata in the society. The number of registered NGOs in Uzbekistan grew by 66% from 1996. The NGOs include public organizations, social funds, consumer cooperatives, associations and self-governments. The Law on Non-Governmental Non-Commercial Organizations was adopted in 1999. The NGOs tend to unite their efforts in addressing their objectives. The Uzbekistan's NGO EcoForum was recently established and the general conference of all Uzbekistan's NGOs was held in late October 2004.

7.6. TRANSFORMATION

The area of Uzbekistan is 447,400 square km. The population is 25,98 million people (as of July 2003), 37% are the urban population and 63% are the rural population. The density of population is 60 people per km². The population growth rate is 1,4%. The average life expectancy is 70 years. Bearing in mind the role of agriculture and the rural population in the economy, there are plans to enhance the reforms in this sector, placing an emphasis upon the land reform, restructuring of agricultural enterprises, improvement of the pricing and lending systems, water use system reform and promotion of SMB development. To support and organize farm operations in the field, a network of infrastructure facilities has been established, including 196 mini banks, 236 fuel and lubricant supply facilities and 205 mineral fertilizer supply facilities, 267 alternative enterprises, and 222 water users' associations. The system of direct preferential farmer lending was introduced in the eight oblasts to support agricultural reforms. ADB and IBRD are providing their support to the project aimed at transferring a number of cotton producing enterprises to the set cotton purchase quotas instead of assignments for the purchase of raw cotton. The World Bank supported the improvement of clean drinking water supply for about 2 million rural people. There is a 2003-2009 programme aimed at providing the centralized water supply system in rural areas, a 2003-2005 programme aimed at providing natural gas supply, a 2003-2009 programme designed to provide alternative water supply sources in remote and scarcely populated rural areas and a 2003-2005 programme to provide liquefied gas and other types of fuel.

7.7. CULTURE

The Republic of Uzbekistan is a multinational state. There are representatives of 100 nations and ethnic groups. The greatest shares of the population are Uzbeks. The Constitution of the Republic of Uzbekistan guarantees respects for all languages, customs and traditions of the nations and ethnic groups residing in the Republic and enabling conditions for their development. While retaining their identity, the peoples residing in Uzbekistan are forming a new mentality and common behavioral philosophy, developing the multinational features of Uzbekistan culture. 90 national cultural centers have been established and put into operation in recent years, providing an opportunity to all citizens of Uzbekistan to study the unique culture of various ethnic groups and to develop their national traditions and customs. In the cultural centers children can communicate and develop in accordance with their national traditions and culture. The Republican International Cultural Center based in Tashkent coordinates operations of the cultural centers. The existing cultural centers, foreign embassies and representative offices provide a favorable environment for cultural exchange, communication and retention of national traditions and customs.

7.8. RELATED AND CROSS-CUTTING SUBJECTS AND ISSUES

Uzbekistan committed itself to achieving the Millennium Development Goals adopted by the UN General Assembly in 2000. They provide for the following priorities: fair and equal access to resources and the greatest use of the nation's capacities; equal access of citizens to social assets, social capacity enhancement at all levels of civil society; economic growth supported by a broad social foundation; improved access to the major elements of social infrastructure and social services for all groups of people; effective employment and sustainable sources of income; equal access to production assets, financial resources and credit; social protection of vulnerable groups through targeted social programs; gender equality and comprehensive participation of women in public and economic processes; conservation, efficient use and restoration of natural resources.

7.9. PUBLIC HEALTH

The country is implementing the State Health System Reform Programme designed to ensure the constitutional rights of the population to receive qualified health care and social protection; to establish organizational, economic and legal conditions for improving the quality of health services, bringing up a healthy generation and bringing the healthcare system into compliance with the reforms being implemented in the country. Implementation of «Health – 1» primary healthcare development project brought significant success in the pilot regions. The integral emergency medical service has been established. The preparatory work is currently underway to implement «Health – 2» Project in order to replicate the positive outcomes in all regions of the Republic. The country is illustrating a favorable trend of birth rate reduction from 28 pro mils in the early 1990-ies to 20 pro mils in 2002. The average life expectancy has increased reaching 71,2 years in 2002. The average life expectancy for women is 73,2 years and 68,6 for men. The crude death rate has gone down to 5,4 per 1000 population. However, the situation with a number of socially important diseases, such as tuberculosis and diseases caused by iodine, iron and vitamin A deficiency remains to be very difficult. In early 2004 there were 3,596 HIV/AIDS cases registered in Uzbekistan, including 2,118 drug addicts. There is an alarming trend demonstrating the growing share of HIV infected women. The Government issued the HIV/AIDS Prevention Resolution instituting a sub-committee of the Republican Emergency Anti-Epidemic Commission to coordinate the Strategic HIV/AIDS Epidemic Counteraction Programme. Various preventive activities are conducted in the country. Over 230 confidence offices, anonymous counseling facilities, disposable needles and disinfectants distribution facilities were established to serve the groups of risky behavior. The Ministry of Health of Uzbekistan received the International Jonathan Mann's award for its

efforts to mobilize the resources and to implement the actions in order to develop sector specific plans to stop the spread of HIV and its efforts to manage the development of the National Strategic Epidemic Counteraction Programme. The World Bank and the Governments of the four Central Asian Republics signed the Grant Agreement to support a regional HIV/AIDS project developed to minimize the potential adverse effect of HIV/AIDS epidemic upon the economy and the population.

7.10. ENVIRONMENTAL EDUCATION

The Decree of the President of Uzbekistan «On the National School Education Development Programme 2004-2009» defined the objectives for the educational sector to update, adjust and amend the state educational standards, training guides and courses. A special interagency commission has been established to finalize the concept of continuing EE. Special attention is given to EE in the preschool education development program «Children of the Third Millennium». All training courses and disciplines taught in secondary schools appear to be environmentally oriented. The public education system has an extensive network of additional educational institutions, including the environmental centers embracing 1,616 study groups and clubs attended by 70,000 students. A number of publications were produced to teach the fundamentals of ecology in schools. The capital alone has 7 universities training environmentalists specializing in technologies, pedagogy, biology, law, audit and chemistry. The training guidebooks «Ecology and Rights», «Water Law», «Land Law» and «Ecology» were published for university students. NGOs pay a lot of attention to EE and public awareness raising, publishing the information that presents the fundamentals of ecology and law using generally understandable terms.

8. CONCLUSIONS, RECCOMENDATIONS

Consequently, the Central Asian sub region could be considered as a sub region with general heritage of post-Soviet era, where environmental problems are closely intertwined with global issues and are directly linked to economic issues, where vulnerable ecosystems: mountainous, arid area and semi-deserts exist, and where economy has influence on the environment, people's health, education, standard of living and culture.

The cooperation between the CA countries is undoubtedly based on the historic commonness factor, which has united the peoples of the region for more than half a century. Similar physical, geographical, social, and economic conditions provide common and transboundary environmental problems, and hence, nature protection objectives have to be solved by joint and well-coordinated efforts of the region's countries. This is why we can speak about the sub regional commonality of both the environmental problems and the problems of environmental education in the Central Asian sub-region as a whole.

Despite their variety and distinction in different countries, Central Asian countries have similar roots, the similar past, and nascent problems are being resolved in accordance with the environmental needs and opportunities of various countries in the sub-region. For instance, Tajikistan and Kyrgyzstan have a surplus of water resources and their problem is how to use it to ensure independent energy supply. As opposed to them, Kazakhstan, Uzbekistan and Turkmenistan have a shortage of water for drinking and irrigation.

In spite of these problems of development countries with an economy in transition, at the same time the Central Asian sub region is characterized by a high level of education of people; almost all the population of the CA have a secondary education, many people wish to continue education in universities, and have this opportunity. This is the sub region where people traditionally have strong connections with nature – mountings, steppes, lakes, rivers, forests, animals and depends on them. Central Asia is very rich with traditional knowledge and careful relations with nature, and our task today is to restore these folk traditions and rules of relations between people and nature, and not to allow them to die.

In this connection education for sustainable development is a very important instrument for further development of the Central Asian region, and coming UN Decade on ESD could help the Central Asian sub region in achievement of EE and ESD goals.

EE and ESD are an integral part of one of the expected CA Agenda-21 outcomes – the development of a civil society and democracy; at the same time they are in line with not only the global priorities declared at the WSSD and the regional priorities (European and Asian-Pacific), but also with the sub-regional priorities, which are based on the needs for EE development in the CA countries. Implementation of the Central Asian Initiative ultimate goals: combating ecosystems degradation, improvement of water supply, poverty eradication through strengthening of EE and ESD will help Central Asia to achieve Millennium Development Goals by 2010-2015.

There is a good capacity and many positive things to be developed in the future in Central Asia – understanding of the necessity to move ahead together with the world society; good educational capacity of the people – general public, NGOs, governmental authorities, teachers of schools and universities; help and support of international organizations; good spirit of cooperation, developed mechanisms of intersectoral, interagency, and intergovernmental coordination on ESD. Central Asian experience of decision-making in the field of EE and ESD for the last two years by means of the Joint CA Working Group on EE and ESD involvement and collaboration on the EE projects management is considered unique by international partners, working on EE and ESD. Central Asia has a strong wish to continue this cooperation and joint work on EE and ESD in the future, and to make a strong and significant input into the opening United Nations Decade on Education for Sustainable Development.

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