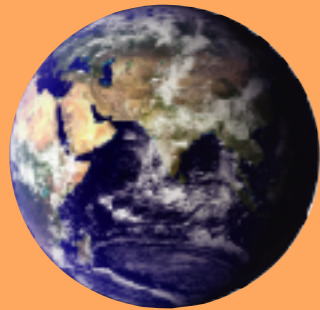


# Regional Resource Centre for Asia and the Pacific

"Our world has enough for each person's need, but not for his greed."



"You must be the change you wish to see in the world."

Mahatma Gandhi (1869-1948)

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## Sustainable Development Priorities for Central Asia



# **Sustainable Development Priorities for Central Asia**



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# FOREWORD

The Sustainable Development Priorities for Central Asia is published by UNEP to present the sustainable development challenges and priorities for the Central Asian region over the next decade. The report aims to focus on the existing set of policy initiatives, various strategies to implement the policies, and the challenges which need to be overcome in Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.

Chapter 1 assesses the effectiveness of achievements with regard to multilateral environmental agreements, and the institutional arrangements since the implementation of Agenda 21. The effectiveness is assessed in terms of a number of factors: institutional framework; environmental conservation; strengthening the role of major groups; social and economic dimensions; and poverty.

The next chapter provides the priority issues for sustainable development and the strategies to address these issues in the region. The priority issues have been developed into six subregional action plans for sustainable development. These include waste management, air pollution, water pollution, land degradation, and mountain ecosystems degradation.

The last chapter reviews the status of implementation progresses regarding to Johannesburg Plan of Implementation and inter-government forums in Central Asia. The progress on Millennium Development Goals (MDG) in Central Asia is also included in this chapter.

UNEP hopes that the Sustainable Development Priorities for Central Asia would be useful for government, non-government, private, regional and international organizations in the pursuit of developing policies, strategies, and action plans. UNEP gratefully acknowledge the contribution of organizations, institutes, and individuals in the preparation of the report.



A handwritten signature in black ink, appearing to read 'Klaus Toepfer', written in a cursive style.

**Klaus Toepfer**

United Nations Under-Secretary  
General and  
Executive Director, United Nations  
Environment Programme

# ACKNOWLEDGEMENTS

UNEP would like to thank many individuals and institutions who have contributed to the preparation of Sustainable Development Priorities for Central Asia 2004. They included individuals from Government Departments, intergovernmental organizations, academic institutions, and Civil Society Organizations. A full list of contributors, reviewers and participants are included in the Annex 10 and 11. Special thanks are extended to:

- Mr. Kimo Karini, Infrastructure and Environmental Consultant from UNDP, for preparing the report;
- Dr. Irina Mamieva, Scientific Adviser to Scientific Information Center of Interstate Sustainable Development Commission, for reviewing and providing valuable inputs to the report;
- Division of Policy Development and Law for providing funding support to the report.

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# Executive Summary





# Executive Summary

This report focuses on Central Asia, consisting of the newly independent states of Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. Part A of the report presents the achievements of the countries and subregion as a whole, the lessons learned, and constraints faced in the process. Part B presents the priority issues in the subregion, the strategies, and mechanisms for addressing these issues. Part C presents an updated review on the status of implementation progresses to accommodate all developments in the light of Johannesburg Plan of Implementation and subsequent inter-governmental forums in the Central Asian Region. Information in all parts of this report was obtained from national agencies, stakeholder contributions, and other publications.

The pace of changes and commitments varies from country to country in CAR's depending on several facts and challenges; as economical and political wills. There is a general consensus among all countries of region that the formal outcomes of the WSSD are important in their own right, but a set of less formal outcomes is likely to be at least as important over the longer term. For both, sustainable development is not simply about foreign policy or international law; it is also about what they do at their countries. In fact, their next steps on domestic policy on sustainable development may be more important than foreign policy in this area.

To date, the economic declines over the transition period have contributed to cooperation for environmental management mainly through the facilitation of western donor investments. While the states themselves donate a great deal to this process, it has been proposed that without such third party action, the level of environmental cooperation in the region would be minimal. Furthermore, competition for funding may have worked against cooperation in the subregion with the struggle to maximize national allocations of funds earmarked for "Central Asian" projects. Ecological conditions in the Central Asia subregion have become critical. The acute and persistent environmental problems are transboundary and global issues. At the present stage of economic development, many of the aforementioned problems require attention and financial support from international organizations. Many countries in the subregion have found it difficult to raise the necessary investment for improving environmental infrastructure. Securing financial resources for the implementation of Agenda 21 remains a problem for the countries of the subregion.

The emphasis on implementation is particularly important because in relatively little, international progress toward sustainable development was made in the past ten years (including Central Asian Sub Region). CAR's initiatives towards Sustainable Development have generated many recommendations but variable governmental actions. However, unlike most of other countries, and regions,

most of the CAR's has national entity responsible for coordinating or implementing sustainable development besides entities for regional cooperation and coordination of WSSD.

The overall development outlook for CAR's the next decade is being shaped by worldwide and regional trends. Global trends provide an increasingly challenging environment within which the subregion and individual countries therein must pursue sustainable development and promotion of their peoples' well-beings. These trends have both negative and positive implications:

**On the negative side:** Globalization, Rapid technological advance especially in information and communication technology (ICT) and Growing urbanization, Climate change, The rise of international terrorism.

**On the positive side:** Widening awareness and concern for sustainable development, strengthening of global civil society and multi-stakeholder partnerships.

The CSO in CAR truly believes that sustainable development requires effective and supportive national governance and adherence to the rule of law. This is surely true, and it applies to all countries in the region. As a result, it provides a key to understanding what the SD should mean for the countries in the region in the years to come.

## Central Asia sub-regional Report for the World Summit on Sustainable Development

### Introduction

At its 55th session in the year 2000, the United Nations General Assembly called for the ten-year review of progress achieved in the implementation of the UNCED recommendations from Rio in 1992. The Rio+10 summit (World Summit on

Sustainable Development, WSSD) was held in Johannesburg, South Africa in September 2002. The WSSD conference has intended to reinvigorate, at the highest political level, the global commitment to sustainable development.

The major objectives of the WSSD included a review of progress achieved in the implementation of UNCED recommendations by local and national governments and regional and international agencies. The completed WSSD in Johannesburg was intended to review actions taken to foster sustainable development in the past ten years, to reinvigorate efforts to achieve sustainable development, and to "focus on action-oriented decisions in areas where further efforts are needed." Thus, the idea was not to renegotiate Agenda 21, but to make further progress in implementing it.

UNCED in 1992 represented a significant step in reaching a global consensus on the need for an innovative approach to economic and social development inclusive of environmental protection. WSSD will follow in that tradition by reviewing practical achievements over the past decade in the alleviation of poverty and a more equitable sharing of the benefits of economic growth, while ensuring environmental protection and the social and cultural values of all nations. WSSD will formulate action-oriented programs to ensure a balance between economic development, social development, and environmental protection, as these are interdependent and mutually reinforcing components of sustainable development.

THE ROAD TO JOHANNESBURG - Agenda 21 and the Rio Declaration modified an international understanding of development that went back to the end of World War II. Essentially, development in this context is an international term of art encompassing four basic elements that are necessary to ensure and improve human quality of life and

opportunity. These are 1) peace and security, 2) economic development, 3) social development or human rights, and 4) supportive national governance. For more than half a century, we have measured human progress in these terms, and there has been a great deal of progress. Environmental degradation has been considered a price that we necessarily pay for this progress. The concept of sustainable development changed this definition of progress by incorporating environmental protection and even restoration into the definition of development. Instead of making progress in conventional development at the environment's expense, or protecting only the environment, the idea is to work toward both conventional development and environmental protection at the same time. That concept is the irreducible core of Agenda 21 and the Rio Declaration.

**JOHANNESBURG PLAN OF IMPLEMENTATION** - The emphasis on implementation led much of the negotiation to focus on "targets and timetables," commitments to achieve specific results by stated dates. More than 30 such targets and timetables are contained in the Plan of Implementation. Some of these reaffirm commitments that were previously agreed to in the U.N. General Assembly's "Millennium Declaration" in 2000.

In addition, many important outcomes are not stated as targets and timetables. For instance, countries agreed to "enhance corporate environmental and social responsibility and accountability" through various means. They also agreed to ask the Global Environment Facility, which funds sustainable development activities in developing countries under certain conventions, to make activities under the Desertification Convention "a focal area" of its funding.

This revised priority paper (implementation progress) updates the existing SD paper of CAR's focusing more on implementation plans and related actions (formulation and elaboration of national strategies for sustainable development and their implementation timetable) in the region. It is a forward looking and promising; it highlights all country reports, WSSD outcome, Millennium Development Goals MDG and other post-WSSD events relevant for CARs.

The paper was presented (with an active input from respective members of Civil Society Organizations (CSO)) at the UNEP Asia-Pacific Civil Society meeting during 12-13 November 2003 in Bangkok, Thailand, and at the working session of ICSD during 24-25 February 2004 in Dushambe, Tajikistan. The paper was also intended to be presented at the fifth Global Civil Society Forum (GCSF) and Global Ministerial Environment Forum (GMEF) in the Republic of Korea in March 2004. One of the priority paper specific objectives is also intended to strengthen engagement between UNEP and CSOs in Asia Pacific and CARs as an out put of these activities.





# Chapter 1

Where We are Now:  
Challenges and Achievements





# Chapter 1

## Where We are Now: Challenges and Achievements

### 1.1 National Level

This section of the assessment focuses on achievements with regard to multilateral environmental agreements (MEAs), and institutional arrangements including co-operation mechanisms and NGO networks. Secondly, the main achievements in the five countries of the subregion are assessed in terms of institutional framework, environmental conservation, strengthening the role of major groups, social and economic dimensions and poverty. Lastly, this section assesses several lessons learned in the subregion since the UNCED in the implementation of Agenda 21.

As a result of the collapse of the Soviet Union, the Central Asian Republics can now formulate and implement independent policy on nature protection as well as foster regional cooperation in the field of environment. The transition to environmentally sound and sustainable development has become a high priority for the development process in Central Asia.

The countries of the region are signatories to the Rio Declaration (UN Conference for Environment and Development, 1992). The Central Asian Republics have ratified or acceded to most of the multilateral environmental agreements and international conventions and treaties adopted prior to or during the 1992 UNCED meetings (Appendix 2).

By signing and ratifying international conventions, the CARs are striving to become full-fledged members of the global community in the area of sustainable development. Each of the CARs is committed to observing international law, and reforming their national existing legislation in accordance with international norms and standards.

Achievements in sustainable development vary among the CARs depending on institutional capacities, human resources, economic resources, and political will. Consequently, each country has taken a different path towards the realization of its national development goals. Strategies include economic incentives, new or reformed legislation on issues such as air quality, regional water management, mountain ecosystem and biodiversity protection, desertification prevention, and social reform, among others. An Interstate Commission for Sustainable Development (ICSD) has been established to coordinate the planning and implementation of sustainable development programs.

A region-wide economic depression resulting from the collapse of the Soviet Union in 1991 has hindered the CAR's capabilities to advance with sustainable development programs. The CARs are heavily dependent on foreign donor support for the development and implementation of sustainable development programs.

Annex 3 presents the progress of the countries in terms of the indicators of International Development Goals (IDG), Annex 4 presents a summary of UN Millennium Development Goals (MDG) and Annex 5 presents a summary of achievements of each country in Central Asia.

### **Lessons Learned**

During the ten years since UNCED, there has been an increase in awareness of sustainable development issues in the region, particularly among the urban, well-educated segment of the population. In most of the CARs, members of civil society have joined in the discussion of the concept of sustainable development, though they have yet to become active participants in the design of sustainable development programs. There is an opportunity for NGOs to become active contributors to discussions of sustainable development issues at the national government and regional levels. Currently, however, there is a lack of understanding of how partnerships between different stakeholders can result in more informed policy-making and coordination of sustainable development activities.

As is the case in other subregions, environmental protection is still not integrated into economic and social development programs of the CARs. As a result, it is difficult to assess the sustainability of existing economic and social development programs.

In the Central Asian Republics, there is minimal information on progress in the implementation of Agenda 21. The complexity of the sustainable development process, inclusive of all its necessary components and layers of society, makes it difficult to monitor. There is a need to establish a systematic monitoring of standardized social, economic and environmental indicators. (Indicators of sustainable development for each of the CARs are included in Annex 3.)

Though the CARs are signatories to a growing number of multilateral environmental agreements, there is a lack of institutional capacity and financing to help the countries meet their obligations. Existing institutional frameworks, many of which are holdovers from the Soviet Union, were not established with a mandate to administer such agreements. Consequently there is confusion over responsibilities in meeting international commitments.

A variety of command and control mechanisms embraced during the Soviet period remain in-place in many of the states of the sub-region. The capacity for monitoring and enforcement, and the duplication of responsibility and subsequent economic decline, has all placed real pressure on the ability of many central and regional administrations to effectively deliver on policy objectives.

Legislation on sustainable development does exist within the subregion and includes approaches to establish clear liability, clear jurisdiction over polluters, and incentives against pollution, public oversight and transparency guarantees. However, in practice, enforcement of compliance is severely lacking throughout Central Asia.

## **1.2 Subregional Level**

The Central Asian Republics have a long history of fruitful environmental cooperation, on both bilateral and multilateral bases. There are several established regional cooperative bodies, such as the Interstate Foundation for the Aral Sea (IFAS) and the Interstate Commission for Sustainable Development (ICSD). Annex 6 provides a table of institutions for sustainable development in Central Asia. Annex 7 presents the various subregional cooperation mechanisms.

## Lessons Learned

There is a growing recognition in the CARs that complex, long-term environmental problems could be more effectively addressed by sharing information and experience. In addition, a number of pressing environmental issues in the region are transboundary in nature, giving impetus for regional cooperation in the resolution of these problems.

Numerous initiatives have been undertaken in the Central Asia subregion to tackle sustainable development issues at local, national, and regional levels. However, their cumulative impact is still low mostly because these initiatives have been undertaken in an isolated and piecemeal manner. The gravity of the problem demands a more integrated and comprehensive approach to the issues.

Strong national and regional identities and affinities for the environment are evident in Central Asia, together with a common technical language. Furthermore, the levels of harmonization in systems and legislation for environmental management are significantly advanced in comparison to other subregions. Numerous international conventions have been ratified for environmental protection in many of the states. For example, the Central Asian Republics were among the very first countries to join the United Nations Convention to Combat Desertification (UNCCD 1994). Issues of economic and military security, together with the attraction of international financing have also played a major role in recent subregional cooperation initiatives.

The economic down-turn in Central Asia in this decade has continued to mitigate against many of the environmental burdens of industrial production, with industry operating at significantly reduced levels of capacity. However, the potential effects of future capacity expansion present real

concerns for the environment and are stimulating the necessity for cooperation in strategic subregional development, particularly in relation to the exploration of oil and gas reserves. In this context, Central Asia's educational and scientific strengths present extremely valuable tools in meeting the goals of long-term resource efficiency and pollution prevention objectives.

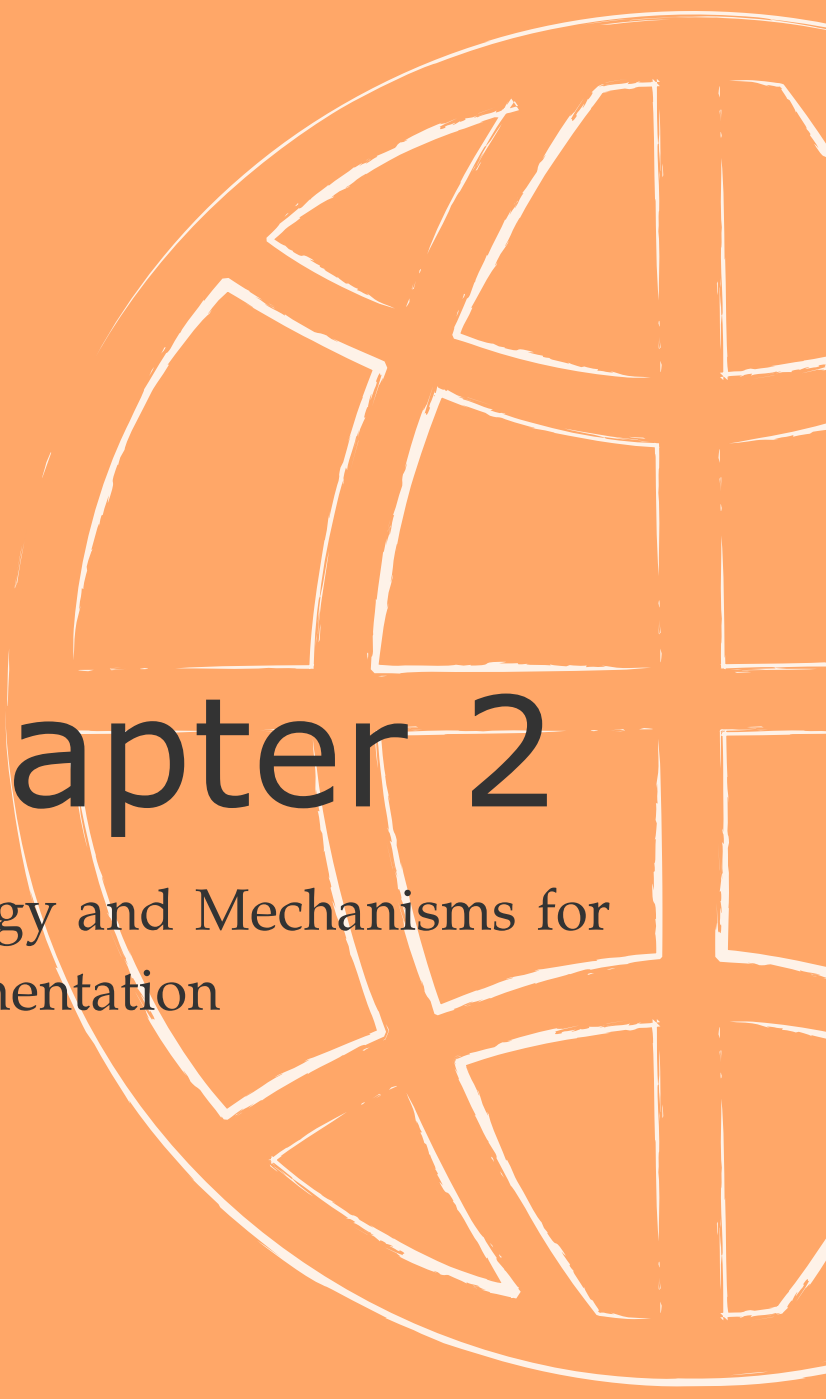
To date, the economic declines over the transition period have contributed to cooperation for environmental management mainly through the facilitation of western donor investments. While the states themselves donate a great deal to this process, it has been proposed that without such third party action, the level of environmental cooperation in the region would be minimal. Furthermore, competition for funding may have worked against cooperation in the subregion with the struggle to maximize national allocations of funds earmarked for "Central Asian" projects. For the transition period to be completed in an economically and environmentally sustainable manner, such trends will need correction through the development of open policies, plans, and programs that are practical, accountable, and implemented. The challenge for Central Asia is to apply emerging concepts and champion new insights into sustainable development, as the subregion may be one of the most in need of, and most capable of, pioneering innovative action.

A major challenge facing the subregion is the inclusion of the environment as a central component within its economic transition and recovery planning framework; linking issues such as public health and productivity, risks of irreversible damage to natural resources, and the diversification of its industrial base.

Increasing public awareness of environmental issues is a fundamental means for tackling environmental problems. Equally important, however, is the translation of the information on environmental issues into

action. There seem to be two constraints in this respect. The first is that the information required as a basis for adopting sound environmental policies is not available. The second is the lack of political commitment necessary to translate public awareness of environmental issues into action. The lack of public awareness of environmental issues leads to human activities that put burdens on the environment. Two major environmental concerns in the subregion, pollution and the depletion and degradation of natural resources, result from such human activities.

Ecological conditions in the Central Asia subregion have become critical. The acute and persistent environmental problems are transboundary and global in character. At the present stage of economic development, many of the aforementioned problems require attention and financial support from international organizations. Many countries of the subregion have found it difficult to raise the necessary investment for improving environmental infrastructure. Securing financial resources for the implementation of Agenda 21 remains a problem for the countries of the subregion.



# Chapter 2

Strategy and Mechanisms for  
Implementation



# Chapter 2

## Strategy and Mechanisms for Implementation

### 2.1 Unfolding Trends and Scenarios

#### 2.1.1 Rural Poverty / Environment

The relationship between environmental degradation and poverty was articulated by the World Commission on Environment and Development (WCED) in 1987:

“Poverty is a major cause and effect of global environmental problems. It is therefore futile to attempt to deal with environmental problems without a broader perspective that encompasses the factors underlying world poverty and international inequality.” Poverty has been defined by the ADB under its poverty reduction strategy as:

“...poverty is a deprivation of essential assets and opportunities to which every human is entitled. Everyone should have access to basic education and primary health services. Poor households have the right to sustain themselves by their labor and be reasonably rewarded, as well as having some protection from external shocks. Beyond income and basic services, individuals and societies are also poor - and tend to remain so - if they are not empowered to participate in making the decisions that shape their lives.”

Poverty reduction in Central Asia is a key policy objective of the agencies which comprise the WSSD Task Force: the Asian Development Bank (ADB), the Economic and

Social Commission for Asia and the Pacific (ESCAP), the United Nations Development Programme (UNDP), and the United Nations Environmental Programme (UNEP). Experience has shown that economic growth can reduce poverty, but that growth alone does not ensure that all people in society will benefit. Clearly there is a role for governments and development agencies to promote pro-poor growth by means of appropriate policy interventions and the delivery of basic services by the public sector.

The World Development Report from 1999 indicates that more than 40% of the population of the Central Asia subregion lives below the poverty line. Tajikistan is the worst affected, with 82% of the population living in poverty, Kyrgyzstan with 60% of population below the poverty line. Turkmenistan fares best with only 4-5%. Overall, the region's poverty rates are among the highest in Asia.

Figure 2.1: Eradication of Extreme Poverty



Source: *Kyrgyz Republic's MDG Progress Report - Bishkek 2003*



Most Central Asian Republics have policies and/or legislation relating to poverty, but few have explicit policies on poverty eradication alone, or policies linking environment, poverty, trade and social development. In addition, few environmental policies specifically target equity or poverty issues. In order to address the crucial situation with poverty, Kyrgyzstan and Tajikistan have each developed Interim National Strategies for Poverty Reduction 2001-2003.

Most Central Asian Republics have national policies on health, although they vary considerably in their commitment to the concept of “Health for All.” The linkage of health, poverty or socio-economic development and environment has not been adequately recognized in many development policies. Health policies and programs are still mainly formulated and implemented in isolation, with no linkages with related sectors. The policies focus on curative rather than preventative measures, particularly in terms of environmental issues (e.g. water and sanitation provision).

Environmental degradation due to pervasive poverty is a matter of great concern in both rural and urban areas in the Central Asia subregion. The interaction of poverty and environmental degradation sets off a downward spiral of ecological deterioration that threatens the physical security, economic well-being and health of many of the region’s poorest people.

It is often the case that people and countries make an explicit trade off, accepting long-term environmental degradation to meet their immediate needs. In many marginal, rural areas population growth inevitably leads to degradation of the environment as people utilize their environment for subsistence. This depletes not only the current resource base, but also future resource availability. Long-term sustainability of resource use in degraded areas with high populations is an urgent issue that governments of Central Asian Republics and

international donors have to address through the promotion of appropriate policy instruments.

The inter-relationship between poverty and environmental degradation is complex and heavily influenced by a range of social, economic, cultural, physical and behavioral factors. These include the ownership of, or entitlement to, natural resources, access to common resources, strengths or weaknesses of communities and local institutions, the individual and community responses to risk and uncertainty, and the way people use scarce time. All of these factors are important in explaining people’s environmental behavior.

While faster poverty reduction requires accelerated growth to generate employment and income, economic growth alone cannot be relied on to eliminate poverty. Complementary well-articulated international, regional, and national strategies for poverty reduction are also essential

Poverty reduction is a necessary condition for Central Asian environmental security. Environmental change, particularly change resulting in resource scarcity and/or human population displacement, has a disproportionate impact on the poor and disadvantaged people of Central Asia.

### *2.1.2 Natural Resources Management*

The CARs face land degradation problems such as: erosion, contamination, deforestation, salinization, etc. These problems are caused both by natural climatic factors and by human activities. The last few years have witnessed an increase of grazing loads per unit of land, a decrease in land fertility due to the leeching of soil nutrients by irrigation and rain water, increasing water and soil pollution, and extinction of certain species of flora and fauna. Taken in combination,

these factors produce a change in the function of soil; i.e. a quantitative and qualitative change in its characteristics, resulting in a decrease of its natural and economic significance. This has led to a low degree of income diversification, decreased agricultural productivity, and increased rural poverty.

The decrease in fertility of agricultural lands poses a serious threat to food security in the region. Marginal agricultural lands have been taken out of production in many areas, further reducing agricultural yields. In the last decade, the area of an irrigated arable land was reduced in Kazakhstan from 2379.5 thousand ha in 1990 to 1386.4 thousand ha in 2001; Tajikistan grows about 9.8? thousand ha (1990-200); Kyrgyzstan decreases by 12 thousand ha (1990-2001); Uzbekistan 97.9 thousand ha has decreased for 9 % (1990-2001) and in Turkmenistan grow on 600.1 thousand ha (1990-2001).

At present, 77% of the useable land area of the CARs is experiencing degradation of vegetative cover, 9.1% is affected by irrigation-induced salinization, 3.6% is salinized due to the Aral Sea problem, 5.9% is affected by water erosion, and 1.5% is impacted by soil drifting.

Desertification has become a pressing problem in the subregion. The total area of desertified lands in Kazakhstan is over 66% of its total territory. In Kyrgyzstan about 40% of pastures are degraded, and the area of forest plantations is estimated to have been reduced from 1.2 million hectares in 1930 to 0.84 million hectares in 1996. In addition, a large part of its arable land (0.80 million hectares out of 1.36 million hectares of tillage area) is subject to water and wind erosion, and a part of irrigated land is water-logged and swamped. In Tajikistan, the extension of cultivation onto steep mountain slopes and cutting down of mountain forests has lowered the stability of the natural mountain environment, aggravating the various natural and anthropogenic

influences. Turkmenistan fully lies in the zone of Central Asian deserts, and its northern territory is a part of the Aral Sea "ecological disaster". In the case of Uzbekistan, deserts and semi-deserts occupy some 80% of the territory. Overgrazing and cutting of forests for firewood and other uses over the years, has led to a considerable reduction in the arboreal-shrub vegetation in the desert zone, with woodlands having decreased by half since 1965.

Mountain ecosystems are particularly vulnerable to disturbance. Anthropogenic impacts are affecting even the sparsely populated mountains of Pamir and Tien-Shan, leading to degradation, particularly the loss of biodiversity and soil erosion.

The overall result of uncontrolled anthropogenic loads on mountain ecosystems is as follows: a general change of natural dominant plant species, land degradation accompanied by an increase in overgrazed areas, and the replacement of useful plant species by weeds. All these factors lead to a progressive depletion of biodiversity, and consequently, to desertification. Another inevitable result of these processes is a deep change in the mountain surface's hydrothermal regime, a depletion of renewable water resources and an increased danger of natural disasters. Contamination of mountain ecosystems is turning into an increasingly dangerous problem in the Central Asia subregion.

With regard to water resources, agricultural run-off is the main source of water pollution in the Central Asia subregion. Pesticides, nitrogen and phosphate compounds are prevalent in drainage water, which threatens ecologically sensitive areas and potable water supplies. It has been established that drainage water from irrigated fields washes into the collector drain an average of 25% of the nitrogen, 5% of the phosphates and 4% of the pesticides used in the field. Their

concentration in the run-off is 5-10 times higher than the maximum allowable concentration by law.

Water resource problems have been aggravated by large-scale water sector projects in the Aral, Caspian and Ili-Balkhash basins, not taking into account the existing and future hydrologic changes within the zone of formation of water resources. For instance, inadequate attention has been paid to the interaction of surface and ground water in the zone of formation of water resources (i.e. in the mountains), and in the zone of their intense utilization. Other problems relate to those of water distribution between countries and the cross border transfer of pollutants in water.

Air pollution in industrial centers and urbanized areas, which is transboundary in nature, is a priority ecological problem in the Central Asia subregion. The main sources of pollutants are from the metallurgical, chemical, hydro-power engineering, and construction industries. In 1999, the volume of pollutant emissions from carbonic gas: methane, carbon dioxide, sulfur dioxide and nitrogen were as followings per year: in Kazakhstan - 1097 thousand tons, Tajikistan- 2.6 thousand tons, Kyrgyzstan - 386.3 thousand tons, Turkmenistan - 20.4 thousand tons, Uzbekistan- 1366,4 thousand tons

Large-scale inefficient industry is a significant problem in much of the subregion. Industrial hot spots of polluting industries present serious threats to human health and the environment. Factories and agricultural systems in the subregion are based on technologies and techniques that generally still rely on massive resource throughput, and operate at low efficiency causing high levels of pollution. Policies aimed at increased output and the development of large-scale industry, together with the constraint of sectoral diversity, have hampered the development of a small or medium sized industrial base, and presented the countries of the subregion with some unique transitional problems.

The Central Asia subregion is faced with major industrial pollutants, such as: heavy metals contained in effluents from mining and metal-working industries, and toxic levels of organic substances such as nitrogen and cyanides.

The Central Asia subregion has a number of problems in the area of waste management. There is a lack of waste-processing plants; the existing domestic waste disposal sites seldom meet sanitary requirements; there are no special disposal sites for toxic industrial waste; no precise waste-disposal records are kept;

Figure 2.2: Water Resources



Source: Progress towards the MDG Report-Tajikistan 2003

Figure 2.3 : Industrial Pollution



Source: Kimo Karini

low-waste technologies to utilize and recycle waste are rarely used; and no efforts are made to eliminate the potential danger connected with storage sites of radioactive and metallurgical waste.

### *2.1.3 Institutional and Policy Issues*

All of the countries of the subregion are signatories to the Rio Declaration (UN Conference for Environment and Development, 1992), and have approved the decisions of the Lucerne (1993), Sofia (1995), Aarhus (1998) European Ministerial Conferences for Environmental Protection and Johannesburg's Plan of Implementation of WSSD and MDG-2002 (apart from Uzbekistan). (Appendix 2 gives a complete table of international conventions which the CARs have signed.)

In accordance with the international agreements to which they have agreed, the CARs have launched subregional and national sustainable development strategies and programs. Kazakhstan (1998) and Kyrgyzstan (1995) have both created "National Action Plans on Environmental Protection for Sustainable Development." Four of the five CARs have developed a "National Strategy and Action Plan to Combat Desertification" - Kazakhstan (1999), Tajikistan (2000), Turkmenistan (1996), and Tajikistan (2000). (Appendix 6 lists the agreements and institutions for sustainable development in Central Asia)

In addition to writing National and Regional Environmental Action Plans, four out of the five CARs have created National Councils for Sustainable Development - Kyrgyzstan (1995/1998-Sustainable Human Development Strategy), Uzbekistan (1997), Kazakhstan (1997), and Tajikistan (1998). Turkmenistan hosts the Secretariat of the Interstate Commission on Sustainable

Development (ICSD) and Scientific Information Center (SIC) of the ICSD. (Appendix 6 lists the agreements and institutions for sustainable development in Central Asia.)

In 1993 the Central Asia leaders concluded the "Agreement for Joint Actions Aimed at Solution of the Aral Sea Problem and Environment Rehabilitation and Social-Economic Development of the Aral Sea Region", which provided a basis for addressing this environmental catastrophe. The Nukus Declaration (1995) acknowledged the formulation of the Aral Sea Basin Sustainable Development Convention as a high priority.

Cooperation among the Central Asian Republics is progressing. The Issyk-Kul (1995) and Nukus Declarations pave the way for regional actions directed at sustainable development. In February 1997 the Presidents of the CARs signed the Almaty Declaration which declared 1998 the "Year of Environmental Protection" under the aegis of the UN in the region. The document reaffirmed the Presidents' political will to design a common regional strategy for sustainable development. In March 1998 the "Agreement for Cooperation in the Field of Environment and Rational Use of Nature" was signed by the governments of four Central Asian Republics.

In April 1998, the Central Asia Environment Ministerial Conference was held in Almaty. The conference dealt with regional cooperation and preparation for the European Environmental Ministerial Conference (Aarhus, Denmark, June 1998). During this meeting in Almaty, the Ministers reaffirmed their commitment to environmental cooperation in accordance with previous agreements, and their intention to design a regional program for the environment.

The CAR Environmental Ministers have set up a Regional Environment Center (REC)

with a network of national branches throughout the region (apart from Turkmenistan). In 1999, a decision was taken to locate the headquarters of the REC in Almaty. In June 2000, the Founders signed the Protocol for the REC Board, and the Executive Director was selected. In July 2000, the parliament of Kazakhstan ratified an Agreement with the European Union and UNDP on the REC Working Conditions. In August 2000, the REC was legally registered as an international organization. In November 2000, the government of Kazakhstan provided a building for the REC's ownership. From September 2000 to March 2001, the REC Board approved the work plan, a conceptual framework for a grants program, and the REC guidelines.

At the UN ESCAP meeting on regional ecological cooperation in Tehran, in February 2000, the five Ministers of Environment reaffirmed their commitment to the need for a Regional Environment Action Plan (REAP). In March 2000, in Chimbulak, Kazakhstan, regional experts from the five CARs discussed and approved a number of regional environmental problems and priorities for the Central Asia subregion (listed in Annex 7). The REAP Concept Paper was presented for agreement at the June 2000 Meeting of the Interstate Commission for Sustainable Development (ICSD) in Borovoe, Kazakhstan.

In August 2000, UNEP organized a training workshop on the preparation of the National and Regional Environmental Action plans. During the meeting, the CAR's Focal Points and national experts agreed on the guidelines for the preparation of the Environmental Action Plans for Central Asia. Further, the Ministerial Conference on Environment and Development in Asia and the Pacific was held from August 31 to September 5, 2000 in Kitakyushu, Japan, and the Interim Meeting on Environment for Europe was held in October 2000 in Almaty, Kazakhstan. These forums provided the Ministers from the Central Asia subregion the

opportunity to review the process of REAP preparation.

By July 2001, the CARs prepared the National Environmental Action Plans covering the five major issues agreed upon in Chimbulak in March 2000: air pollution, water pollution, waste management, land degradation, and mountain ecosystems degradation. Based on these NEAPS's the Collaborative Centers produced a regional overview of each problem. The workshop to discuss and approve the Environmental Action Plan for each issue was held in Dushambe, Tajikistan in July 2001.

In August 2001, the first draft of the Regional Environmental Action Plan was widely distributed in the region for comments. At the meeting in Bangkok, the national focal points, along with the national experts finalized the REAP. The official REAP launching was held at the September inaugural meeting in Almaty, Kazakhstan.

## 2.2 Establishin Subregional Strategies: Goals, Targets and Milestones

### Background

One of the key achievements in the CARs since becoming independent states has been the creation of a hopeful legislative and institutional framework in the sphere of sustainable development. Further definition of the jurisdictions, responsibilities, and authorities of the various sustainable development institutions still needs to be established. In addition, institutional capacity-building is required to assist the CARs in developing and implementing integrated sustainable development programs, particularly at the subregional level.

Clarification of the subregional and national institutional arrangements is crucial to move from the planning stage to the implementation stage of sustainable development projects. Regional agreements,

even when accompanied by political will from each of the signatory countries, face obstacles in implementation when there are not clear mechanisms in place.

The following section lists the key subregional issues, describes the Subregional Action Plans for Sustainable Development (SRAPs), and suggests institutional arrangements for SRAP implementation.

### **Priority Subregional Issues**

Recent completion of a Regional Environmental Action Plan for Central Asia (approved by the Environmental Ministers of the CARs in September 2001) demonstrates that there is a good understanding among policy-makers and stakeholders as to the identification of significant environmental problems of the subregion.

The priority issues identified by the Central Asian ICSD, UNEP, and ADB in the Regional Environmental Action Plan have been developed into subregional action plans (SRAPs).

The shared environmental concerns of Central Asia, as identified by country experts at a meeting in Chimbulak, Kazakhstan in March 2000, include:

- Waste Management;
- Air Pollution;
- Water Pollution;
- Land Degradation; and
- Mountain Ecosystems Degradation.

Six sub-regional action plans (SRAPs) are proposed below to address the priority environmental concerns, as well as a number of related activities that are essential for sustainable development in Central Asia. The SRAPs cover:

- 1) Regional waste management;
- 2) Air quality management and protection;

- 3) Water resource quality management and protection;
- 4) Sustainable land management;
- 5) Mountain ecosystem management and protection; and
- 6) Strengthening public participation for sustainable development

### **Implementation Arrangements**

The Interstate Commission for Sustainable Development (ICSD) is an appropriate agency for integrating the SRAPs with the Central Asia Regional Environmental Action Plan (REAP). The REAP covers short-term and long-term programs, continuing through the year 2012. Under the auspices of the REAP, implementation mechanisms will be fine-tuned among the Focal Points and Collaborating Centers who participated in the design of REAP.

Responsibility for the implementation of the SRAPs would be divided among various subregional organizations with corresponding mandates. The inclusion of key groups in the implementation of the SRAPS could be coordinated by the National Environmental and National Economic Ministries in the coordination and monitoring of activities within their countries.

Civil Society organizations will be invaluable in the design and collaborative implementation of the SRAPs. In order for the SRAPs to be effective, it will be necessary to empower all stakeholders, in particular members of less represented groups. This would involve ensuring equity in terms of awareness, decision-making and implementation of environment and sustainable development policies.

### **Subregional Action Plans**

These project proposals were identified by regional experts during the preparation of the Central Asia Regional Environmental Action

Plan (REAP). The six action points address the five major environmental problems identified in Central Asia as well as the issue of public awareness and involvement.

### 2.2.1 Regional Waste Management

**Background:** Due to their integrated nature, environmental problems connected with the production, storage, recycling and utilization of waste are some of the core issues of environmental protection in the CARs. On the one hand, these waste issues are present in practically all areas of human activities. On the other, they affect all aspects of the environment; soil, air, and water resources.

**Assessment:** When analyzing waste-related problems in the Central Asia subregion, it is important to take into account the following specific basic factors with regard to their transboundary impacts:

- A significant portion of the region's territory is a high mountain ecosystem especially vulnerable to natural and anthropogenic impact;
- The region's territory is, to a major extent, susceptible to natural disasters, such as earthquakes, landslides, mudslides, spring flooding, lake water overflow, water-logging, rock and snow avalanches, etc.;
- Alongside standard issues of waste production and management, the region faces a problem associated with waste inherited from Soviet-era mining and processing enterprises;
- The region has a large number of storage sites of poly-metallic and radioactive ore processing waste. It is also under permanent threat of ecological disaster if such storage sites, located in highly seismic areas or in areas with active landslide processes are destroyed; and
- The potential for ecological catastrophe

is huge and it would affect the territories of Kyrgyzstan, Uzbekistan, Tajikistan and the Aral Sea basin.

**Key Policy Issues:** to complete the process of the region joining and ratifying the Basal convention.

#### Subregional Goals for 2012:

- To develop a regional waste management program that would define the policy, laws, regulations, statistical reporting requirements, etc. for this field;
- To set up a regional network of Clean Production (Technologies) Centers and to assist them in their activities;
- To complete an inventory of the region's existing waste disposal sites with transboundary impacts;
- To introduce waste-less and low-waste technologies into production;
- To achieve broader use of modern recycling methods for mining and energy sector waste;
- To set up a separate system to collect and process solid domestic waste;
- To ensure the development and introduction of technologies to neutralize and treat toxic wastes;
- To set up centralized non-recyclable waste burial sites;
- To rehabilitate territories where radioactive and other hazardous waste is stored; and
- To keep a regional register of waste movement.

#### Action for Implementation:

- Development of a regional waste management program;
- Insurance of ecological safety for river basins of SyrDarya, AmuDarya, Zeravshan, Chu subjected to transboundary impacts from mine-tailing dumps and rock piles;

- Assess the present state of mine-tailing dumps, rock piles and their impact on the environment;
- Develop and harmonize legislation and regulatory documents regulating waste management; and
- Develop a regional action plan for the ecological security of transboundary river basins.
- Development and capacity-building to utilize solid industrial wastes stored in transboundary river basins; and
- Development of a regional network of Clean Production Centers (CPCs).
- To improve and harmonize legislation and regulations with regard to ambient air protection in accordance with international standards and requirements;
- To upgrade the system to monitor the transboundary movement of pollutants and to improve the emission monitoring system;
- To perform joint research and development in the area of protecting ambient air, to set up an on-line information exchange system and automated data banks;
- To set up a network of regional offices dealing with the ozone layer;
- To locate sources of persistent organic pollutants (POPs) in the CARs (within the framework of the Stockholm Convention on POPs);
- To carry out an assessment of the transboundary movement of pollutants, and the economic damage inflicted by them in accordance with the framework of the Convention on Long-Distance Transboundary Air Pollution; and
- To introduce alternative energy sources (renewable energy sources).

**Financing:** Funding from local, regional or international sources, general state funding or funding secured by special economic leveraging, as well as grants and loans.

## 2.2.2 Air Quality Management and Protection

**Background:** In 1999 the volume of pollutant discharges from stationary sources in the region was estimated at 4, 274, 9 thousand tons; from moving sources the figure was 2, 785, 8 thousand tons.  
Subregional Goals for 2012:

Figure 2.4: Waste Management



Source: Kimo Karini



### **Action for Implementation:**

- Harmonization of legislation and normative acts dealing with the protection of ambient air in the CARs;
- Creation of a regional Register of Emissions and Pollutant Movement (REPM). An inventory of the sources of emissions of persistent organic pollutants (POPs) in the CARs;
- Monitoring of pollutant emissions at large industrial plants with regard to the transboundary aspects (using the Tajik aluminum plant and the Bekabad industrial estate as examples);
- Detection of the effects produced by the transboundary movement of pollutants with regard to Issyk-Kul's unique ecological system;
- Setting up conditions for the promotion and introduction of alternative and renewable energy sources; and
- Setting up a regional network of interacting offices dealing with the ozone layer.

**Financing:** Funding from local, regional or international sources, general state funding or funding secured by special economic leveraging, as well as grants and loans.

### **2.2.3 Water Resource Quality Management and Protection**

Background: The main transboundary water resources in the Central Asia subregion (CAR) are the rivers SyrDarya, AmuDarya, Chu, Atlas, Murgab, Tedjen, Atrek, and Zeravshan. The main reason for the region's ecological crisis lies in the deficit of water resources and in the deteriorating quality of transboundary river water under the impact of irrigation drainage water. One of the main reasons for this state of affairs is that the ecosystems of the AmuDarya and SyrDarya

and through these rivers, the ecosystem of the Aral Sea, do not enjoy the status of full-fledged participants in the CAR water resource management balance. Ecosystem rehabilitation expertise shows that an environmental entity's needs for ecologically safe run-off must be defined first. This is in opposition to the existing practice in the CARs of defining the minimal required discharge rates and sanitary water discharges downstream of the major hydro engineering facilities and reservoirs. The current system in the CARs does not acknowledge the ecosystem's need for water to maintain itself.

### **Subregional Goals for 2012:**

Water resource management at the regional level:

- To develop a mechanism for implementing the existing agreements between the CARs in the area of protection and conservation of transboundary waterways (2002-2005);
- To restore national systems to monitor surface water quality in transboundary rivers (2002-2005);
- To develop and use a single set of water quality regulation taking into account the international requirements (2002-2007); and
- To set up conditions for information exchange on the ecological state of transboundary water sources.

### **Decreasing water resource shortages:**

- To install water-measuring devices and water-meters at water-using facilities (2002-2007);
- To improve and upgrade the existing water distribution system (2002-2007);
- To develop methods of purifying collector drainage water taking into account its subsequent return to water-using facilities and repeated use (2002-2012);

- To upgrade the irrigation system at the national level (2002-2012); and
- To develop and introduce water-saving and water-purification technologies in all branches of the economy (2002-2012).

### **Improvement of water quality:**

- To harmonize provisions regulating the water-protection zones of transboundary waterways and to comply with their regime (2002-2005);
- To conduct an ecological audit of certain pollution sources that have an impact on transboundary waterways (2002-2005);
- To develop and coordinate ecologically safe flow norms between the CARs (2002-2007);
- To define areas of transboundary groundwater formation and to assign them a status of territories under special protection (2002-2007);
- To rehabilitate and monitor the territories of mine-tailing dumps and rock piles that have an impact on transboundary water resources (2002-2007);
- To improve the payment system for use of water resources, for water pollution and damage inflicted on transboundary water resources (2002-2012);
- To implement projects associated with sustainable ecologically clean production at the national level (2002-2012); and
- To rehabilitate existing and to build new drainage systems to lower the water table and prevent secondary salinization of land (2002-2012).

### **Action for Implementation:**

- Improvement of legislation, standards, and regulations in the area of water resource protection at the national level and their coordination at the regional level;

- Draft legislative acts on the protection and rational use of water resources, including measures for stricter liability for violators;
- Draft a set of documents and norms for assessing social and economic damage associated with pollution of land and water resources; and
- Draft norms with regard to scientific substantiation of ecologically safe flow of Transboundary Rivers.
- Organization of water-protection zones for major transboundary waterways in the CARs;
- Definition of a special protection zone and the establishment of methods to remove pollution sources from the zone;
- Ecological audit of pollution sources with regard to transboundary waterways;
- Reconstruction of purification facilities in the cities of Naryn, Kyzylorda and Kairakum;
- Organization of a regional system to monitor water quality in transboundary rivers (Syr Darya, Amu Darya, Naryn, Kara Darya, Chu, Talas, Murgab, Tedjen, etc.); and
- Development and introduction of a purification method for collector drainage water.

**Financing:** Funding from local, regional or international sources, general state funding or funding secured by special economic leveraging, as well as grants and loans.

## **2.2.4 Sustainable Land Management**

Background: A significant portion of the land resources in Central Asia is affected by the process of desertification, such as degradation of vegetative cover, sand drifting, water and wind erosion, salinization of arable

lands, human-induced desertification, soil contamination and water pollution with industrial and domestic wastes, etc. In combination, these factors produce a change in the function of soil (i.e. a quantitative and qualitative change in its characteristics) and a decrease of its natural and economic significance.

### Subregional Goals for 2012:

- To improve and harmonize legislation on environmental protection to help create institutional conditions to combat desertification successfully;
- To restore a monitoring system to assess desertification processes and their impact on the environment; to introduce remote sensing for monitoring purposes;
- To support a stable coordination mechanism to fight desertification;
- To promote alternative economic activities (including eco-tourism) so as to decrease pressure on land and vegetation resources; to decrease poverty (a desertification factor); to organize regional marketing of agricultural produce;
- To rehabilitate eroded lands, to perform agro-technical, administrative-managerial, reclamative afforestation

and hydro-technical measures to combat erosion;

- To rehabilitate severely degraded pastures and to introduce methods of pasture conservation;
- To preserve agro- and bio-diversity by introducing norms for loads depending on the carrying capacity of ecosystems;
- To carry out reclamative afforestation with regard to the dry bed of the Aral Sea;
- To fight degradation of arable lands;
- To re-cultivate human-damaged lands; and
- To restore mountain, desert and riparian forests in order to strengthen mountain slopes, stabilize water flow, and produce timber.

### Action for Implementation:

- Restoration and support of a regional network of stations to monitor desertification processes;
- Develop a concept of desertification monitoring;
- Develop a Geographic Information System as a tool to fight desertification;
- Develop and introduce remote-sensing methods of desertification assessment and monitoring;
- Draft norms and methods to fight desertification; and
- Establish indicators of desertification and sustainable development.
- Maintain 2 desertification monitoring stations in each CAR country as an in-situ base for handling methodological issues, demonstration projects, and specialist training;
- Reclamative afforestation of the dry bed of the Aral Sea and areas suffering the impact of airborne salt and dust to the south and south-east of the Aral Sea;
- Creation of a regional mechanism to fight desertification;

Figure 2.5: Combating Desertification in Aral Sea Basin



Source: Kimo Karini

- Development of alternative economic methods and measures to fight poverty as a desertification factor;
- Amelioration of degraded pastures and arable lands;
- Restoration of the irrigation network;
- Introduction of economic methods of irrigation;
- Support of diversifying agriculture and livestock breeding; and
- Promotion of traditional and new methods of income generation, such as: agriculture, handicrafts, and eco-tourism.

**Financing:** Funding from local, regional or international sources, general state funding or funding secured by special economic leveraging, as well as grants and loans.

## *2.2.5 Mountain Ecosystems Management and Protection*

**Background:** The overall result of uncontrolled anthropogenic loads on mountain ecosystems in Central Asia is as follows: a general change of natural dominant plant species, a depletion of the vegetative cover's phytogenetic fund, land degradation accompanied by an increase in overgrazed areas, and the replacement of useful plant species by weeds. All these factors lead to a progressive depletion of biodiversity, and consequently, to desertification and disturbance of these ecosystems' stability. Another inevitable result of these processes is a deep change in the mountain surface's hydrothermal regime, a depletion of renewable water resources and an increased danger of natural disasters. Contamination of mountain ecosystems is turning into an increasingly dangerous problem in the CARs. Its impact is well reflected in the state of river ecology: the concentration of pollutants, including heavy metals, pesticides, and arsenic

and chlorine compounds dangerous to public health is on the rise in most rivers of the region.

### **Subregional Goals for 2012:**

- To develop new and improve existing protected natural territories of different status in areas where major transboundary waterways (SyrDarya, AmuDarya, Zeravshan) originate;
- To develop and achieve wide-scale application of alternative energy sources in mountain settlements;
- To ensure safety of the economy, land and population from effects of dangerous geo-dynamic processes;
- To develop or improve legislation, regulatory, and economic instruments with regard to use of natural resources and protection of CAR mountain territories;
- To restore and improve a monitoring system to monitor degradation processes in mountain ecosystems in the mountain ranges of Pamir-Alay and Northern Tien-Shan;
- To restore degraded mountain ecosystems in areas of intensive nature use;
- To set up conditions ensuring the stable use of the tourist and recreation potential of mountain territories and to organize eco- and agro-tourism; and
- To determine the ecological and economic efficiency of developing the natural resource potential of CAR mountain territories.

### **Action for Implementation:**

- Development of a regional system for policy-making and management of CAR mountain ecosystems subjected to degradation processes;
- Insurance of safety for CAR mountain ecosystems from risks of dangerous geodynamic processes (seismic

- processes, mudslides, landslides, avalanches, etc.);
- Improvement of social and economic conditions for the inhabitants of mountain territories (alternative energy sources, recreational activities, infrastructure, biodiversity);
- Organization of stations for glaciophysical monitoring in the high-altitude mountain regions of Tien-Shan and Pamir; and
- Promotion of eco- and agro-tourism in CAR mountain areas.

**Financing:** Funding from local, regional or international sources, general state funding or funding secured by special economic leveraging, as well as grants and loans.

## 2.2.6 *Strengthening Public Participation for Sustainable Development*

**Background:** Under the Aarhus Convention, ratified by 4 CARs (Kazakhstan, Turkmenistan, Kyrgyzstan and Tajikistan), the public has the right to take part in decision-making with regard to environmental issues. Information should be distributed to the public at an early stage of drafting and discussion of environmental plans and efforts (NEAP, REAP, etc.), and CAR NGO or CSO representatives should be involved in drafting environmental policies.

### **Subregional Goals for 2012:**

- To improve the practice of public participation in decision-making in the area of environmental protection;
- To increase public interest in having access to information about the environment by participating in pilot projects;
- To minimize the discrepancy between obligations taken on and actually

implemented by public and state agencies; and

- To provide consulting assistance with regard to implementing the basic provisions of the Aarhus Convention on ensuring access to ecological information and public involvement in decision-making on environmental protection issues.

### **Action for Implementation:**

- Support CAR NGOs with regard to preparing and implementing the REAP (set up a regional forum of CAR NGOs);
- Set up and maintain an on-line ecological information network for discussions and the exchange of experience;
- Publish a journal entitled “Ecology and Sustainable Development in Central Asia”;
- Set up independent laboratories throughout the CARs to monitor the state of the environment;
- Support public examination of regional projects and programs, organize public inspections, perform environmental impact assessment, including monitoring, in order to obtain reliable information on topical ecological issues;
- Perform regional monitoring of compliance with commitments under the Aarhus Convention;
- Implement educational programs (ecological education and instruction through actual work to protect the environment);
- Involve the local public in broad discussions when a project is at the drafting stage, and in decision-making before a project is launched; involve the public in discussing draft laws;
- Involve NGOs in implementing pilot projects (such as municipal waste projects);

- Ensure independent analysis of information/data on projects; and
- Create conditions conducive to the exchange of experience between NGOs with regard to existing projects already underway.

**Financing:** Funding from local, regional or international sources, general state funding or funding secured by special economic leveraging, as well as grants and loans.

## 2.3 Strengthening Subregional Cooperation and Mechanisms for Implementation and Monitoring of Action Plans

### 2.3.1 Existing Subregional Cooperation

The new institutional and financial opportunities that have emerged since UNCED on the international level have deeply involved the Central Asia subregion, and several subregional technical institutions have been established. In all countries of the subregion, many institutional and financial requirements and opportunities have emerged, mostly in the field of environmental conservation and some in the area of social and economic development.

The experience of the Central Asian Republics in dealing with the Aral Sea problem and its wide-ranging impact has confirmed the opportunities and the advantages of cooperation in the prevention and management of transboundary concerns in the subregion. It has also shown that carrying out the agreements and plans requires concrete and sustained actions and commitment by many agencies and the communities involved.

Existing programs and mechanisms for subregional cooperation are summarized in Annex 7.

### 2.3.2 Strengthening Cooperation

A crucial factor in strengthening regional cooperation and ensuring the effectiveness of sustainable development initiatives in the CARs is the establishment of clear mechanisms for the coordination of the implementation of projects. This would best be achieved by having one organization be responsible for the coordination of regional activities. This coordination is necessary to reduce the risk of duplication of efforts among various agencies implementing projects which tackle similar issues.

This coordinating organization must not duplicate the activities of an existing organization. An organization already exists in the CARs which can fulfill this role. During the process of developing the CAR Regional Environmental Action Plan (REAP), the Interstate Commission for Sustainable Development (ICSD) was charged with the task of regional coordination. By working with the ICSD on the SRAPs, it will not be necessary to create yet another regional agency with overlapping authority.

The Interstate Commission for Sustainable Development (ICSD) and its bodies (Secretariat, Advisory Council, and Scientific Information Center (SIC)) is an existing institution well suited to coordinating the implementation of sustainable development programs. However, this organization could be strengthened by boosting the management capacities of its personnel.

During the REAP development process, it was proposed that the ICSD should provide annual reports on the work that has been completed in the implementation of the action

plan. The reports will assess the current impact of the projects, and aid in decision-making about necessary course-corrections. Data for this report would be provided by the research branch of the ICSD, the Scientific Information Center (SIC). The SIC would also benefit from capacity-building activities for monitoring indicators of sustainable development.

The ICSD would be regularly advised by stakeholders, including NGOs. The Regional Environmental Center (REC) is poised to take on the role of collecting and disseminating information to and from the regional NGO community. The REC would also benefit from capacity-building in this regard.

During the REAP development process, a Steering Committee was put together, comprised of representatives of government and multilateral agencies. It has been proposed that this Steering Committee would continue its role as a Secretariat for the ICSD, handling the day-to-day operations.

Implementation of sustainable development action plans would take place at local, national, and regional levels. Multilateral agencies as well as national government agencies and NGOs would be sub-contracted to implement the projects as appropriate.

Figure 2.6: Gender Equality and Empowering Women



Source: *Progress towards the MDG Report-Tajikistan 2003*



# Chapter 3

## Implementation Progress





# Chapter 3

## Implementation Progress

### 3.1 Progress Made on Millennium Development Goals in CARs

#### 3.1.1 *Kazakhstan*

Kazakhstan is the first country in the CAR to issue a report on Millennium Development Goals prepared jointly by the Government of the Republic and UN Sister Agencies. The report highlights the progress of Kazakhstan towards the global development goals outlined in the Millennium Declaration. It is especially interesting and important because the target year for MDGs achievement is set for 2015, which lies halfway to the realization of Kazakhstan 2030 program.

Report contains remarkable information and brief overview of development issues, prospects of achieving the MDGs and tendencies formed during the past decade. The probability of achieving MDGs, given in the report, is based on current information and is subject to change. In most cases, with additional attention to the outlined problems and effective measures taken towards solving them, the situation might improve drastically. Report is meant to serve as a reference providing an overall picture, so that a wide range of audiences can learn about MDGs and where Kazakhstan stands in terms of achieving them. Each of the seven goals is discussed in a separate chapter. Each chapter deals with the goal and concerned targets as well as current situation in Kazakhstan.

The Report also highlights the economic growth of 2000/2001 and its positive impact on the social situation in the country; example, the share of poor people in Kazakhstan has diminished, and so did the unemployment rate. The situation can be further improved through Government's sufficient attention to the social development and more active participation on the part of civil society. (See Annex 5 / Summary of Country Achievements/ MDG)

#### *Other Events*

Kazakhstan since independency became the active participant of most environmental protection conventions. Aarhus Convention is an example that Kazakhstan has fully obligated it self to implement; particularly, the participation of NGOs and CSO's members in environmentally vital decision making. Kazakhstan has also leading position in inviting all countries in the region for joint realization and implementation of Aarhus Convention. The Authorities in the country has plans to hold the conference on Regional Waste Management in 2005 with active cooperation of relevant United Nations sister agencies.

New laws and legislatives practices have been introduced as: Environment Protection; Ecological Examination; Public Associations; and Mass Media, Rules of public participation, access to the information and others.

For the time being the organization setup of the most public ecological NGO's are incorporated under an organization with the name EcoForm - NGO Kazakhstan. Their sphere of activities involve:

- Joint decision-making on environmental challenges and nominating NGO representatives at different government and donor organizations as UN, IFAS, etc.
- Participation in joint ecological actions, projects and carrying out seminars, conferences, forums both at national and regional level.

### 3.1.2 *Kyrgyz Republic*

In 2003 the Kyrgyz Republic has introduced the report on country's MDGs. The report was finalized as a result of a very extensive collaboration of the UN System with the Kyrgyz government, civil society and external development partners and is to measure the progress made since all the development players in Kyrgyzstan, along with the government, started to exert their efforts to achieve significant improvements in people's lives. This is the first step, however the MDGs can be reached only when they are guaranteed by on-going effort and substantial support - advocacy, expertise and resources. The MDGs are fully in compliance with the objectives set up by the people of Kyrgyzstan and which are reflected in the Constitution of the country, Comprehensive Development Framework of the Kyrgyz Republic (CDF) and National Strategy for Poverty Reduction for 2003-2005 (NSPR). These fundamental documents formulate the vision of goals and objectives for the development of Kyrgyzstan in the first decade of this century and establish the principles and mechanisms of their implementation.

The CDF and NSPR emphasize three major components of the overall goal of

Kyrgyzstan's development, which, in their essence, coincide with the MDGs:

- Enhancement of effective and transparent governance;
- Building a fair society, ensuring protection for every citizen and human development;
- Ensuring sustainable economic growth.

Implementation of MDGs and CDF goals requires an effective monitoring system, which will allow us to compare the attained results with the established goals, thus revealing areas in which progress is at a desirable level, is slowing down, or is non-existent. For the MDG monitoring to ensure maximum coverage of problems, the UN initiated preparation of reports on the progress in attaining MDGs at a global level and for each UN member country separately. The present report is the first of such for Kyrgyzstan. (See (Annex 5).

### 3.1.3 *Tajikistan*

Tajikistan's first MDG report is lunched in 2003; one page summary of 7 goals is shown in Annex 5 with clear indication of progress achieved on each MDGs targets. The Dushambe Fresh Water Forum was considered as a follow-up event on the WSSD and the Kiev's ministerial conference. The Government is currently finalizing materials of the Forum and proposes to send the short brochure on the Forum's outcomes at the beginning of December.

According to UN sources, the process of follow-up actions has not yet optimised: even there are an indication of Tajikistan has to omit the dialogue, which was started by the process of preparations for the WSSD. In government's view this process can facilitated through the other programmes and projects. (See Annex5 / Summary of Country Achievements/ MDG)

### 3.1.4 Turkmenistan

Turkmenistan in honoring the millennium Development Goals has introduced a detail country development strategy (Strategy for economical, political and cultural development of Turkmenistan up to 2020) that basically addressing all challenges of Turkmenistan for the period up to 2015 to achieve 7 MDG Goals):

- Goal 1 - Eradication of Extreme Poverty and Hunger
- Goal 2 - Achieve Universal Primary Education y
- Goal 3 - Promote gender equality and empower women
- Goal 4 - Reduce Child mortality
- Goal 5 - Improve Maternal Health
- Goal 6 - Combat HIV/Aids, Malaria and other diseases
- Goal 7 - Ensure environmental sustainability

(See Annex 5)

### 3.1.5 Uzbekistan

Uzbekistan has not actively involved in all WSSD events and has held a special position on issues related to the country's different development programs and its mechanisms for implementation.

The Present "State of the Environment" Report gives the key environmental problems in Uzbekistan as:

1. An insufficient supply of safe drinking water;
2. Scarcity and pollution of water resources;
3. Salinization and degradation of land;
4. Air pollution in the largest cities and industrial centers;
5. Accumulation of solid wastes;
6. Contamination of food products;
7. Desertification and loss of biodiversity;
8. Trans-boundary pollution

The continuation of the current production systems will not meet Uzbekistan's future development needs as the systems are environmentally unsustainable, and have already reached close to their maximum potential with the full use of limited resources such as water. Recognizing the importance of a more sustainable approach, the Republic of Uzbekistan has established a number of strategic aims towards achieving more sustainable development:

- To ensure a healthy and fruitful life for every resident of Uzbekistan;
- To achieve a steady and stable socio-economic growth and the spiritual development of the nation;
- To complete structural and institutional reforms;
- To establish a democratic state and a socially-oriented market economy;
- To improve the environmental situation and overcome the repercussions of the Aral Sea disaster;
- To achieve and maintain a wise and effective use of land, water and other natural resources;
- To combat desertification and improve the environment.

(See Annex 5)

Figure 3.1: Nature Preservation



Source: UNDP/Kazakhstan

**Publications related to Environmental Aspects in the CARs**

The most Significant assessment publication that is relevant to our priority paper is (prepared last summer 2003) an Assessment Report on Strengthening Political and Institutional Support to the Implementation of the Regional Environmental Action Plan (REAP) for Central Asia. This Assessment paper has been finalized by regional consultant, Dr. Alexandre Timoshenko and was co-financed by following stockholders: the Asian Development Bank (ADB), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) through its Regional Research Center for Asia and Pacific (RRC-AP).

The above mentioned assessment report led to recommendations that be summarized as follows:

- The primary task related to the REAP implementation is its formal and high level adoption and endorsement through the available IFAS machinery. Such formal adoption will constitute an important means of the political

support to the REAP. In this context, it is recommended to consider the possibilities and advantages of the interaction of the national and regional implementation mechanisms, as well as of a “package” adoption of both the REAP and the ASBP-2;

- The mechanisms of political and institutional support to the REAP should be built by way of evolutionary improvement of the existing institutional structures with a parallel strengthening of certain existing and creation of new bodies;
- The general political guidance of the REAP implementation will be exercised through the available IFAS machinery similar to that which is suggested to use for the adoption and endorsement of the REAP. The daily political guidance will be affected by the strengthened Interstate Commission for Sustainable Development (ICSD). For these purposes an Expert Council, a Coordination Group on cooperation with international organizations and external partners and a Public Council will be created within the framework of the ICSD;

Figure3.2: Health, Reduction of Child Mortality



Source: Uzbekistan, Country Common Assessment Report- 2003

- The operational management of the REAP implementation will be entrusted to the REAP Steering Committee that would interact with the ICSD and its subsidiary bodies;
- The administrative and technical support and the control of the REAP implementation will be exercised, under the guidance of the ICSD and the Steering Committee, by the REAP Scientific and Information Center;
- An improved system of the institutional support of the REAP implementation demands the establishment of a financial mechanism and a machinery of the civil society and external partners involvement;
- The suggested system of the political and institutional support to the REAP implementation might and has to be supplemented with the legally-binding international agreements.

**Events related to regional and international conferences;**

- Water, Security and Environment in Central Asia 2003
- United nations Water Mission to Central Asia (July 2003)
- NEAP, REAP and ICSD regular and annual events

**3.2 UNEP ASIA-PACIFIC CIVIL SOCIETY MEETING IN THAILAND**

The objective of this session was to identify the priorities and positions of civil society in the Asia Pacific region and to discuss possible elements that could be incorporated into the civil society statement to the 8th Special Session of the GC/GMEF to be held in Jeju Island, South Korea in March 2004.

The Central Asian Civil Society members are represented by members of Kazakhstan,

Uzbekistan and Tajikistan. An unfortunate Visa obtaining technicality prevented the Kyrgyzstan and Turkmenistan members from being present in the meeting.

This unique opportunity gathering offered a real broad based participation as called for in Principle 10 of the Rio Declaration on Environment and Development and reaffirmed at the World Summit on Sustainable Development (WSSD); further the gathering has clearly addressed the challenges and opened brave new doors for civil society networking, beside the civil society is being offered the chance to input into the GMEF agenda instead of merely reacting to its pronouncements. A wide range of perspectives emerged as 56 representatives from 23 countries in the region of 46 sovereign States and 5 sub regions grappled the challenges posed by the thematic clusters and debated the best way to present the views of civil society from the Asia Pacific region to the Ministers who will be addressing this very same theme.

Discussions covered wide range areas and to summarize it, 3 categories headlines as it highlighted below, which could well form the basis of the civil society statement; (a) overarching Principles (b) specific themes from Sub- Regional Papers and (c) civil society position(See meeting publications for details of above discussed categories)

Different alternatives on dimensions of sustainable development were noted from civil society delegates; perhaps, the most convincing one was the experience from Bhutan that basically introduced new spiritual index (Gross Human Happiness Index) as a possible alternative to the current market-based Gross Domestic Product. The index calls for harmony between land-air -sea, earth rights and economic, social and environmental justice that could provide distinct affirmation of traditional Asian values to this on-going debate.

There were calls to address the democratic deficits at the World Bank, IMF and WTO. In addition, the smaller and poorer countries in the region were concerned about the overlapping PRSP, MDG and general reporting processes. Attention was also directed to the fact that poverty alleviation was a cross-cutting issue and that MDG 8 was crucial to the realization of the other 7 Goals and that greater attention needs to be paid to the debt, ODA, commodity issues and other targets that are part of that Goal if the region is to dream of achieving the other 7 Goals. At the regional level, the tendency towards numerous Action Plans and other Programs was noted. But the existence of so many of these without adequate emphasis on monitoring and enforcement was cause for concern. They are no substitute for real tangible action on the ground and the various regional groupings were urged to be more open and transparent in their processes and allocate more budgetary resources towards implementation programs and in particular to deal with trans-boundary issues in a cooperative manner. At the national level, the principle of subsidiarity was raised and discussed and many participants felt that concerted efforts need to be made to strengthen local /municipal systems through greater oversight and tighter governance mechanisms as well as the provision of adequate financing and funding to this level of government.

In tackling the trans-border mega infrastructure development projects and trans-boundary water resource management issues, civil society was unanimous in calling for strengthening cooperation and consultation among States and in establishing formal dispute settlement mechanisms in order to reduce conflict and find equitable solutions

UNEP has published “Practical Guidebook on Civil Society Engagement in UNEP’s Work) guide lines on working with UNEP. It is a great beginning towards a viable and

productive relationship between UNEP and civil society. The publication will ignite a healthy partnership network among all sides towards achieving the strategically demanded goals for environment and sustainable development.

Clear Definition of Civil Society is required; this is a highly debatable matter spanning disciplines such as philosophy, law and sociology. For purposes of clarity and coherence, a more comprehensive UN system-wide may well be preferred.

Role of the private sector; in Central Asian involving private sector is an urgent matter, however many NGOs in the region have encountered problems when CS and the private sector are lumped together and expected to emerge with ‘common’ positions.

The Partnerships dilemma; there are a variety of partnerships alluded in different organizations publications the Manual. Some of the partnership guidelines undermine the role of governments.

Civil Society position: the Asia Pacific meeting CSO delegates had followings declaration:

- Rights-based, people-centered, values-oriented approach to dealing with integrated water resource management issues
- Need to work in harmony with nature
- Need to recognize and respect the rights of indigenous peoples Need to maintain cultural diversity and pluralism in the region
- Need for more coherent, coordinated and cooperative approach to trans-boundary issues
- Ensuring greater resources for generating greater public awareness on water, sanitation and associated health and their linkages with other global goals and targets

- Calling for overhaul of international financial and trade regimes
- Insisting upon more concerted involvement of women and youth in the implementation of sustainable development programs
- More emphasis on enforcement and implementation at regional and national levels
- Providing access to relevant, timely information on issues at regional and national levels
- Opening the space for civil society dialogue on policy formulation and decision making at regional and national level and mainstreaming civil society participation at all levels
- More open, transparent and accountable structures at global, regional, national levels
- More attention to Goal 8 issues to redress imbalances, injustices and inequities in the system
- Allocation of adequate resources to civil society for capacity building, monitoring and implementation
- Calling for legally binding framework on corporate accountability and responsibility to strengthen the hand of governments in their dealing with big business.
- The central Asian SCO members are also demanded the governments of the region for adapting a holistic, Integrated, Comprehensive approach to Water, Sanitation and Human Settlements.



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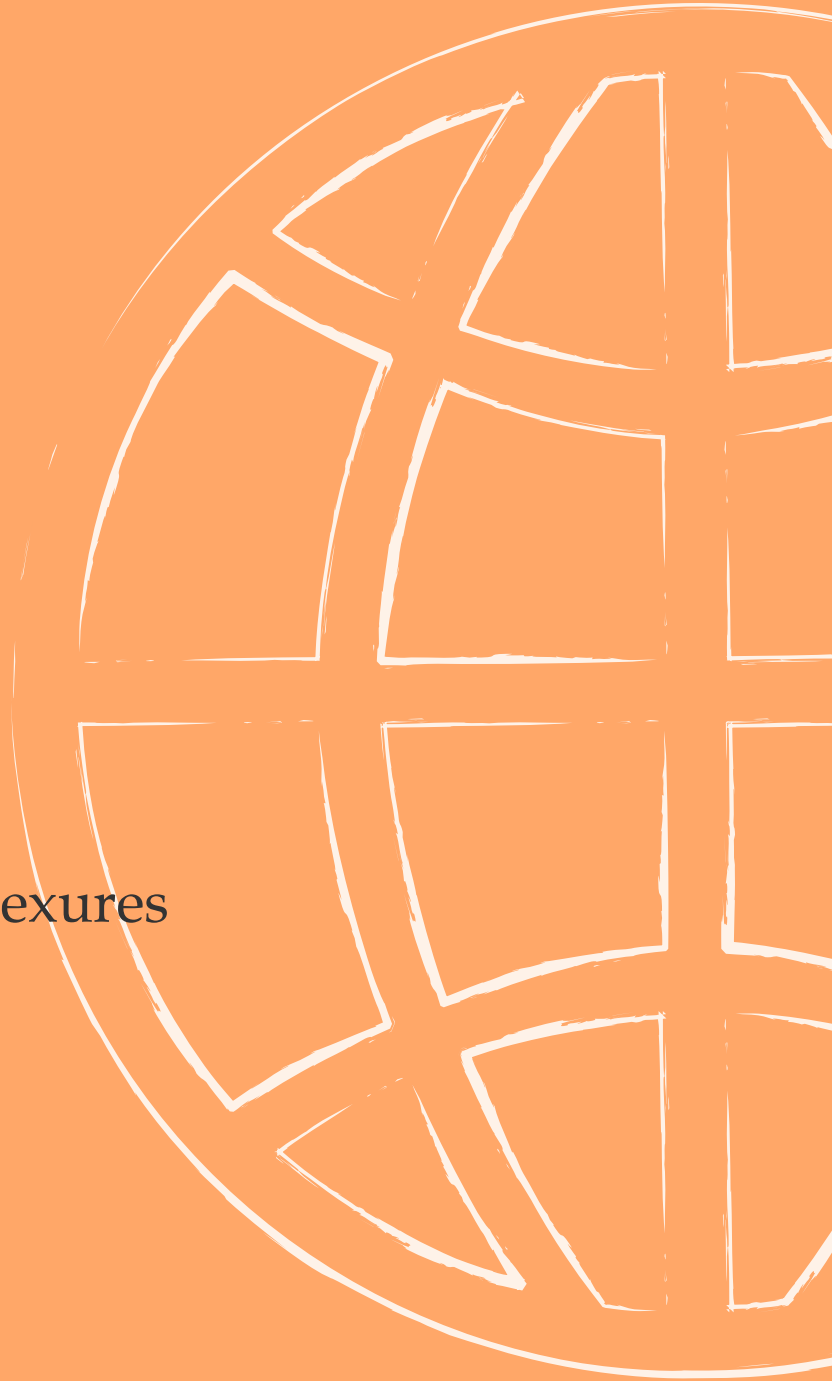
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# Annexures





## Annex 1. List of Acronyms

ADB	Asian Development Bank
ASBP	Aral Sea Basin Programme
CARs	Central Asian Republics
CIS	Scientific Information Center
CFC	chloro-flouro hydrocarbon
COSs	Civil Society Organizations
CPCs	Clean Production Centers
CSD	Commission on Sustainable Development
ESCAP	Economic and Social Council for Asia and the Pacific
EU	European Union
GDP	Gross Domestic Product
GEF	Global Environment Fund
GEM	Gender Empowerment Measure
GM UNCCD	Global Mechanism of the UN Convention to Combat Desertification
GNP	Gross National Product
ha	hectare
HDI	Human Development Index
HDR	Human Development Report
ICAS	International Committee for the Aral Sea
ICSD	Interstate Commission for Sustainable Development
ICWC	Interstate Commission for Water Coordination
IDG	International Development Goals
IFAS	International Fund for the Aral Sea
IGO	Independent Government Organizations
IMF	International Monetary Fund
IPRSP	Interim Poverty Reduction Strategy Paper
KTMC	Kyrgyz Tajik Mountainous Center
MCB	Minimum Consumption Budget
MDG	Millennium Development Goals
MEAs	multilateral environmental agreements
NAPEESD	National Action Plan for Environmental Protection of the Republic of Uzbekistan
NEAP	National Environmental Action Plan
NGO	nongovernmental organization
NHDR	National Human Development Report
ODS	ozone-depleting substances
OECD	Organization of Economic Cooperation and Development
POPs	persistent organic pollutants
REAP	Regional Environmental Action Plan
REC	Regional Environmental Center
REPM	Register of Emissions and Pollutant Movement
SIC	Scientific Information Center
SME	small and medium enterprise
SOE	State of the Environment

SRAP	subregional action plan
SWAP	sector-wide approach
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organization
WSSD	World Summit in Sustainable Development

## Annex 2. Selected Conventions Signed or Ratified by the CARs

CONVENTION	DATE OF SIGNING AND RATIFICATION				
	Kazakhstan	Kyrgyz Republic	Tajikistan	Turkmenistan	Uzbekistan
1 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	Ratified: April 1999				Accession: July 1997
2 Convention Concerning the Protection of the World Cultural and Natural Heritage	Ratified: April 1994	Ratified: June 1995			Accession: December 1995
3 Basel Convention on the Control of Transboundary Movements of Hazardous wastes and Their Disposal	Ratified: September 1994	Ratified: January 1996		Ratified: August 1996	Ratified: May 1996
4 Convention on Biological Diversity	Ratified: May 1995	Ratified: 2001	Ratified: May 1997	Accession: June 1996	Accession: October 1997
5 United Nations Framework Convention on Climate Change	Ratified: April 1993	Accession: June 1999	Ratified: June 1998	Accession: June 1996	Accession: May 1993
6 Convention on the World Meteorological Organization	Ratified: July 1997	Ratified: April 2002	Ratified: December 1998	Accession: January 1993	Ratified: August 1995
7 Convention to Combat the Desertification		Ratified: April 2000	Ratified: May 2002	Ratified: June 1996	Ratified: May 1997
8 Convention on Wetlands of International Importance especially as Waterfowl Habitat			Ratified: August 1997	Accession	
9 Vienna Convention for Protection of the Ozone Layer, Vienna, 1985. Montreal Protocol on substances that deplete the Ozone Layer				Accession: November 1993 1998	
Aarhus Convention	2003	2003	2003		
Millennium Development Goals	2002	2002			
Johannesburg's Plan of Implementation					



### Annex 3. International Development Goals: Central Asia

1- Poverty Indicators (Reducing extreme poverty by half by 2015) (Percentage of population living below the poverty line)						
	2000	1999	1998	1997	1996	1995
Kazakhstan	31.8	34.5%	39	38.3	34.6%	
Kyrgyz Republic	52.0%	55.3%	54.9%	42.9%	43.5%	
Tajikistan	83.02%	82.82%				
Turkmenistan	None					
Uzbekistan	No data available					

Source: Indicators of SD of the Central Asia, SIC/ISDC, Ashkabad-Bishkek/ 2004

2- Infant and Child Mortality Indicators (Reduce infant and child mortality by two-thirds)				
Country	Infant mortality rate up to 1 year		Under-5 mortality rate	
	per 1,000		per 1,000 live births	
	1990	1999	1990	1999
Kazakhstan		20.5		
Kyrgyz Republic	22.7	35.5		
Tajikistan	15.5	22.7		
Turkmenistan	45.2	6.4	-	7.1
Uzbekistan	20.2	-		

Source: Indicators of SD of the Central Asia, SIC/ISDC, Ashkabad-Bishkek/ 2004

3- Life Expectancy, years		
Country	1992	1999
Kazakhstan	67.4	65.5
Kyrgyz Republic	72.2	71.1
Tajikistan	68.3	68.4
Turkmenistan	66.2	66.8
Uzbekistan	69.4	70.3

Source: Indicators of SD of the Central Asia, SIC/ISDC, Ashkabad-Bishkek/ 2004

4- Environment Indicators (Implementation by all countries of a national sustainable development strategy by 2005 and reversal of the loss of environmental resources by 2015)						
	Access to drinking water source % of population	Endangered species as % of total number of species in country (animals and plants)	Nationally protected areas % of total land area	Pesticide use, Kilogram/ hectares	Plowed fields per capita (in hectares)	
Years	1998	1999	1999	2000	1992	1999
Kazakhstan	75.2	46.37	0.59	-	-	1.45
Kyrgyz Republic	86.5	15.5	3.8	0.8	0.31	0.27
Tajikistan	43.3	3.5	3.4		0.16	0.14
Turkmenistan	56.78	2.7	4.10	0.81	0.32	0.32
Uzbekistan	74.4	-	4.60		0.198	0.166

Source: Indicators of SD of the Central Asia, SIC/ISDC, Ashkabad-Bishkek/ 2004

## Annex 4. Millennium Development Goals: Central Asia

In Johannesburg, the emphasis on implementation led much of the negotiation to focus on "targets and timetables," commitments to achieve specific results by stated dates. More than 30 such targets and timetables are contained in the Plan of Implementation. Some of these reaffirm commitments that were previously agreed to in the U.N. General Assembly's "Millennium Declaration" in 2000. These include the following:

- To halve by 2015, "the proportion of the world's people whose income is less than one dollar a day."
- To halve by 2015 the "proportion of people who suffer from hunger."
- To halve by 2015 "the proportion of people who are unable to reach or to afford safe drinking water."

The Johannesburg Plan of Implementation also contains the following new targets and timetables:

- To halve by 2015 "the proportion of people who do not have access to basic sanitation."
- To develop "integrated water resources management and water efficiency plans by 2005."
- To restore depleted fish stocks "on an urgent basis and where possible not later than 2015."

## Annex 5. Summary of Country Achievements

### Kazakhstan

#### 1. Institutional Framework

The Ministry of Environmental Protection is the central executive body for the environment. Akimats and Territorial Administration for Environmental Protection under the Ministry of Natural Resources and Environmental Protection (Oblast and Astana and Almaty-cities Administrations) are the executive bodies at the local level.

In addition, there is the Agency of the Republic of Kazakhstan for Land Resources Management, which is the specially authorized state body for the management of land resources, and the body carrying out state control of land resource conservation. The following divisions have been included into the structure of the Ministry of Environmental Protection (Former name of this Ministry is Ministry of Natural Resources and Environmental Protection) by the Republic of Kazakhstan Governmental Resolution Number 1693 of November 12, 1999:

- The Committee for Environmental Protection;
- The Committee for Forestry, Fishing and Hunting;
- The Committee for Water Resources;
- The Committee for Geology and Mineral Resources Conservation;
- The Department for the Main State Inspection for Environmental Protection;
- The Department for Analysis and Planning; and
- The Department for Management and Finance.

Many state enterprises have independent economic rights: “Kazhydromet”, “Kazaviamet”, the Information and Analytical Center for Geology, Ecology and Natural Resources of the Republic of Kazakhstan; the Republican Center for the Geological Information “Kazgeoinform”, the Northern Caspian and Balkhash Territorial Bodies for Bioresources Conservation; “Special Gravimetric Enterprise”; and State Environmental Protection Funds.

The Committee for Geology and the Conservation of Mineral Resources has the Territorial Administrations for Mineral Resources Conservation and Use, and the Committee for Environmental Protection - the Oblast and Astana and Almaty City Administrations for Environmental Protection.

For the purpose of achieving long-term strategic priorities, a project of the Government of the Republic of Kazakhstan “The Program for Implementing the Strategic Plan for the Years 1998-2000, ‘Ecology and Natural Resources’” is being implemented in the Republic of Kazakhstan. The Program was approved through a Presidential Decree of the Republic of Kazakhstan on the 28th of January 1998 No.3834 “On the Measures on Implementation of the Strategy of Kazakhstan's Development until the year 2030”. One of its primary objectives is the creation of a strong environmental management system at an early stage. The project envisions a joint activity of the Ministry of Environment and Natural Resources and other organizations for the purpose of effective coordination of ministries, departments, and international organizations for the purpose of development and technical assistance.

## 2. Socio-economic Development

The Government's extensive reforms and measures to foster transition have facilitated substantial progress since independence. After a very serious and rapid economic collapse, there followed rigorous economic and financial management. Economic activity began to recover in real terms in 1996 and achieved marginal gross national product (GNP) growth in 1997. In 1998 the GNP declined by 2.5 percent, owing partially to large external shocks, including falling world commodity prices for Kazakhstan's major natural resource exports. As of late 1999, as a result of the Government's tight fiscal and monetary policy, moderate inflation and relatively balanced budgets have been maintained and offer further prospects for growth.

However, during both the economic decline and early stages of recovery, budgets were tightened, significant new investment was unevenly distributed, and the role of the State shrank. This contributed directly to the decline in employment and income, and to new health problems. The life expectancy for males sharply decreased, and social services were reduced. Even with the emergence of the private sector, pension reform, and other recently introduced social measures, human security has been substantially eroded. This is reflected in the human development index, which has recovered only a part of its steep decline. The erosion of other indicators is also reflected in the annual human development reports. Moreover, macro-indicators mask the reality: new gaps have emerged and the proportion of poor people has significantly grown, especially in rural areas and the large regions affected by nuclear testing, water mismanagement, and desertification. In 1998, 43.4 percent of the population had an income below the subsistence level.

The rapid rate and wide extent of impoverishment in Kazakhstan has had a number of specific effects:

- The formerly low-income segments of the population (pensioners, the disabled, large families, unmarried mothers, people without a wage-earner in the household, etc.) have all become extremely poor and are now on the verge of destitution. Most of the population (65%) are living near or below the minimum subsistence level;
- Rural areas are serious concentration points for poverty. At present 84% of the rural population have incomes below the minimum subsistence level defined by the state statistical committee;
- Unemployment has increased, and 70% of the registered unemployed are men. The hidden unemployment rate is 10%;
- Workers at industrial enterprises are suffering. Many of them are on forced leave or part-time schedules, due to the absence of material resources and power, customer insolvency, and lack of sales markets;
- State employees are in very serious need. Teachers, doctors and state white-collar personnel are the lowest paid; their salaries are a mere 40% of the republican average. The poverty of all state employees is aggravated by constant delays in salary and pension payments. In March 1996, salary arrears equaled 2.7 times the state's entire monthly payroll fund, and unpaid pensions amounted to one and a half times the size of social benefits; and
- New kinds of poor people have appeared. Refugees number approximately 150,000; the number of homeless people and drifters cannot even be estimated.

## 3. Environmental Protection

The leading regulations of the state environmental policy have been reflected in the current legal system in the environmental

sphere. Through the Presidential Resolution of 1996 the concept of environmental security that has determined the strategic directions of the state environmental policy, and fixed the system of logistical, legal, economic, and social environmental arrangements, was approved. In 1997 a law “On Environmental Protection” was adopted, thanks to which a wide circle of public environmental relations has been regulated.

In 1998 the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan developed draft regulations “On Licensing Activities on the Use of Natural Resources”, and “On Standardization and Certification of Environmental Conservation”, that presently are being considered by the government.

The laws and codes adopted in the republic (the laws “On Air Protection”, “On Conservation, Renewal, and Use of the Animal World”, the Forestry Code, the Water Code, the Presidential Decrees “On Land”, “On Mineral Wealth and Use of Mineral Wealth”, the Law “On Oil”) have regulated the following:

- Jurisdiction of the government bodies in management, use, and conservation of natural entities, and division of functions between the government, ministries, regional and local government bodies;
- The rights for natural resource use, types of use, terms, nature use licensing, duration of use, natural resource monitoring procedure, its cadastre, structure, and the system of payments;
- Measures of legal responsibility for the breach of these laws; and
- International cooperation in conservation and use of natural resources.

The work on modification of the current legislation and development of the legal and regulatory documents on nature use and environmental protection has begun. The Ministry of Natural Resources and Environmental Protection has adopted the program for law, drafting works for 1999-2002. This Program includes modification of 13 laws currently in force and development of 14 new laws and more than 40 acts.

#### *4. Strengthening the role of major groups*

In Kazakhstan there are more than 3000 non-governmental public organizations. These are children’s, women’s, environmental, and educational organizations, media, and others. More than 300 NGOs are dealing with environmental and health issues. Their activities are regulated by the Law “On Public Associations” of 1996, and by the Law “On Environmental Protection” of 1997 where there is a special section that has given a wide circle of rights to public environmental organizations.

In Almaty in late 1997, the first forum of non-governmental environmental organizations united NGOs of Kazakhstan (170 public representatives) for solving priority environmental problems, coordinating actions, and for participating in the implementation of the National Strategy “Ecology and Natural Resources (Denmark, Aarhus-1998). Kazakhstan signed the Convention on Ensuring Access to Information, public participation in the process of decision-making, and access to justice on environmental issues. The public hopes that the participation of Kazakhstan in implementing regulations of the Convention shall be an overall a progressive process, and will promote progress on the way to solving environmental issues, and issues of sustainable development.

## 5. List of publications in relation to WSSD 2000-2003

Government of Kazakhstan's Publication in relation to Millennium Development Goals

Date	Title of the Documents
20/09/2003	10 YEARS OF DONOR ACTIVITIES IN THE ARAL SEA REGION Assessment Report
08/07/2003	Human Development Report 2003: Global Compact to Reach the Millennium Development Goals
01/07/2003	Quality of Life for All in Kazakhstan
23/06/2003	Kazakhstan government structure – June 2003
01/04/2003	Perceptions of Corruption in Kazakhstan
21/03/2003	Donor Assistance to Kazakhstan: An Overview 2002
01/02/2003	Participatory Rural Sector Planning and Development
01/01/2003	Addressing Environmental Risks in Central Asia
01/01/2003	Atlas 2003: Development Objectives in Kazakhstan
15/01/2003	Seven Goals, 11 Targets and 12 Years ahead: Will Kazakhstan Make It?
15/01/2003	MDGs in Kazakhstan: Goals, Targets, Facts and Figures (MDGR summary)
01/01/2003	Environment, Water and Security in Central Asia (Central Asian Goals on Sustainable Development)
01/01/2003	Human Development Report 2003, Millennium Development Goals: A compact among nations to end human poverty
26/12/2002	United Nations Millennium Development Goals in Kazakhstan
01/12/2002	Millennium Development Goals in Kazakhstan-Summary one pager
06/09/2002	Road Map Towards the Implementation of the United Nations Millennium Declaration
17/07/2002	The UN and the MDGs: A Core Strategy
01/06/2002	The Millennium Development Goals and the United Nations Girls' Education Initiative
01/10/2000	Millennium Development Goals

## 6. Millennium Development Goals in Kazakhstan: 7 Goals, 10 Targets

Key indicators - 2001	GOAL1	GOAL2	GOAL3
Source: Agency on Statistics	<b>Eradicate extreme poverty and hunger</b>	<b>Achieve universal primary education</b>	<b>Promote gender equality and empower women</b>
Population size (beginning of the year):  Urban population: 56.4%  Rural population: 43.6%  Children: 29.3%  Life expectancy at birth: 65.6 years  Combined primary, secondary and tertiary gross enrolment ratio: 71.3%  GDP: 22.39 billion USD  State expenditure on social security and social assistance (% of GDP): 5.7  State expenditure on education (% of GDP): 3.2  State expenditure on health (% of GDP): 1.9  Human development index (HDI): 0.773 (Source: UNDP)  Human Development rank 79 (Source: UNDP):	<b>Target 1</b>  Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day  Indicator  Proportion of population below Subsistence minimum:  28.4% (2001) 34.6% (1996)  Baseline - year 1990: Data unavailable  Likelihood of reaching Target 1 by 2015: <b><u>PROBABLY</u></b>	<b>Target 3</b>  Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling  Indicators:  Net enrolment ratio in primary education (1998):  girls -99.1% boys - 98.8% total -99.5%  Baseline -year 1990: girls -98.5% boys -99.1% total - 98.8%  Literacy rate of 15-24-year-olds (1998):  Women -99.9% Men - 99.9%  Baseline -year 1990: Women- 99.5% Men -99.5%.  Likelihood of reaching Target 3 by 2015:  <b><u>ACHIEVED</u></b>	<b>Target 4</b>  Eliminate gender disparity in primary and education, preferably by 2005 and to all levels of education no later than 2015  Indicators:  Female share in total school population (2000)  Secondary schools -49% Universities - 54% Post-graduate schools 51%  Baseline - year 1990: Data unavailable  Likelihood of reaching by 2015: <b><u>ACHIEVED</u></b>  Proportion of seats held by women in national parliament:  11.2% (1999) 14.9% (1995)  Baseline - year 1990: Data unavailable



	<p>Target 2</p> <p>Halve, between 1990 and 2015, the proportion of people who suffer from hunger</p> <p>Indicator</p> <p>Proportion of population whose income is below food basket cost:</p> <p>11. 3% (2001) 12. 7% (1997j)</p> <p>Baseline - year 1990: Data unavailable</p> <p>Likelihood of reaching Target 2 by 2015: PROBABLY</p>		
<b>GOAL 4</b>	<b>GOALS</b>	<b>GOAL6</b>	<b>GOAL7</b>
<p><b>Reduce child mortality</b></p> <p><b>Target 5</b></p> <p>Reduce by two thirds, between 1990 and 2015, the under-five mortality rate</p> <p>Indicators:</p> <p>Under five mortality rate per 1,000 live births:22.8(2001)</p> <p>Baseline year 1990: 34</p> <p>Infant mortality rate per 1,000 live births: 19.4(2001)</p>	<p><b>Improve maternal health</b></p> <p><b>Target 6</b></p> <p>Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio</p> <p>Indicators:</p> <p>1. Maternal mortality rate per 100,000 live births:61.6(2000)</p> <p>Baseline - year 1990: 55.0</p>	<p><b>Combat HIV/AIDS, malaria and other diseases</b></p> <p><b>Target 7</b></p> <p>1. Have halted by 2015 and begun to reverse the spread of HIV/AIDS</p> <p>Indicators:</p> <p>Registered HIV cases:</p> <p>3,093 (October 2002)</p> <p>Baseline - year 1990: Data unavailable</p>	<p><b>Ensure environmental sustainability</b></p> <p><b>Target 9</b></p> <p>Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources</p> <p>Indicators:</p> <p>1. Proportion of land area covered by forest 4%</p>

<p>Baseline - year 1990: 26,4</p> <p>Likelihood of reaching Target 5 by 2015: <u>UNLIKELY</u></p>	<p>2. Proportion of births attended by skilled health personnel: 97. 8% (1999)</p> <p>Baseline -year 1990: 99.0</p> <p>Likelihood of reaching Target 6 by 2015: <u>UNLIKELY</u></p>	<p>2. Share of 15-29 year olds among registered HIV cases 69% (2001)</p> <p>Baseline -year 1990: Data unavailable</p> <p>3. Level of HIV-prevalence among injecting drug users: 3-4% (2002)</p> <p>Baseline - year 1990: Data unavailable Likelihood of reaching Target 7 by 2015: <u>UNLIKELY</u></p>	<p>2. Ratio of area protected to maintain biological diversity to surface area: 3%</p> <p>3. Carbon dioxide emissions (per capita): 12. 2 tons (1996.)</p> <p>4. Accumulated waste (1999) Solid industrial -20 billion tons Solid municipal -14 million cubic meters Low-level radioactive 230 million tons Medium - level radioactive -2mln tons</p> <p>Baseline year 1990: Data unavailable</p> <p>Likelihood of reaching Target 9 by 2015: <u>UNLIKELY</u></p>
		<p><b>Target 8</b></p> <p>Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases</p> <p>Indicator:</p> <p>TB incidence per 100,000 population: 155.7(2001)</p> <p>Baseline -year 1990: 65.8</p> <p>Likelihood of reaching Target 8 by 2015: <u>UNLIKELY</u></p>	<p><b>Target 10</b></p> <p>Halve, by 2015, the proportion of people without sustainable access to safe drinking water</p> <p>Indicator:</p> <p>Proportion of population without sustainable access to improved water source, urban and rural:</p> <p>15% and 27% (2000)</p> <p>Likelihood of reaching Target 10 by 2015: <u>POTENTIALLY</u></p>

## Kyrgyz Republic

### 1. Institutional Framework

The decree of the government "On State Control in the Sphere of Nature Protection and Natural Resources Use" (May 2000), the updated decision of the government (August, 2002) and the decree of the President of the country (January, 2002) are determined and delegated the required taskforce breakdown to special state entities and bodies with the goal of adequate and healthy state control over preservation of the environment. To them concern:

1. State Committee on Environmental Protection (Ministry of Environmental Protection);
2. Ministry of Internal Affairs;
3. State Sanitary and Epidemiological Control (Ministry of Health service);
4. State Inspection of Land Use;
5. State Forestry Inspection;
6. State Inspection on Control for Safety Works in Industry and Mining;
7. The state agency on geology and mineral resources
8. The state Inspection on real estate registration; and
9. The state Inspection under the control over safety of work and manufactures and mountain supervision

### 2. Socio-economic Development

Kyrgyzstan has an impressive record of state-building and economic reform and has proceeded far in democratization and the building of a market economy based on private property and the rule of law. Kyrgyzstan is a multi-party state, which holds open elections to legislatures at both the local and national levels. In the past three years, there has been continued growth of the executive branch of government that continues to dominate policy and political dialogue, as manifested in the extensive duplication of functions in the office

of the President and the office of the Prime Minister and the rapid turnover of cabinet members. Further legislation on the devolution of functions and the decentralization of financial authority is under preparation. While the two-chamber parliament has become more assertive, its effectiveness has been undermined by a lack of credibility, substantive capacity and objectivity. The parliament remains insufficiently developed to provide an effective counterpoint to the executive branch. Persistent economic problems have resulted in the rapid growth of poverty. It now amounts to some two thirds of all households. The real unemployment figure is about 20 percent, out of which 62 percent are women; these figures are particularly high in the south and in the mountains.

More than half of the country's population is poor and nearly a quarter of the population lives in extreme poverty. In addition the consumption of the poorest sections of the population, as a percentage of the level of consumption consistent with the poverty line for the country was under 20%. All of these numbers increased substantially from their levels in 1996, but remained virtually unchanged between 1998 and 1999. Poverty in rural areas is higher than in urban areas. In 1998 around 80% of the workers employed in agriculture were among the poor. People employed in such sectors as service, public utilities, construction, transport and communications, were less likely to fall into this category of the poor. In order to address the crucial situation with poverty in Kyrgyzstan, the national authorities have developed the Interim National Strategy for Poverty Reduction 2001-2003.

### 3. Environmental Protection

Since 1991 Kyrgyzstan started reform of legislation to provide an executive, market-oriented juridical basis for ecological improvement.

The law "On Nature Protection" adopted by the Supreme Soviet (April, 17, 1991) established a juridical basis for nature protection, and guaranteed rational use of natural resources. The legislative supreme the Kyrgyz Republic considered two draft laws in 1998: "On Ecological Expertise" and "On Environmental Protection". In 1999 laws; specially protected territories and Biospheric territories, and Fauna are accepted. In 2001 further law on protection and use of Flora are introduced and adopted. In 2002 a law on Mountain territories of the Kirghiz republic was adapted.

#### *4. Strengthening the role of major groups*

Although, as in other countries in the Commonwealth of Independent States, women have had a high level of social and educational achievement and remain equal before the law, they have been more severely affected by the transition than men. There are only two female ministers. Women are not represented among oblast (province) governors, and there is only one female Rayon Akim (district governor). Only 4 percent of the total representation in both houses of parliament is women, down from 32 percent during the Soviet period.

The situation of women in the labor market has appreciably worsened. Every second unemployed person is a woman, and 18% of these are mothers of multiple children. It is more difficult, and increasingly so, for women to find work than for men. The high proportion of women formerly employed in both productive and non-productive spheres has contributed to their becoming the most vulnerable group.

While women in Kyrgyzstan tend to receive lower wages, have less access to employment, and undergo fewer years of schooling, as shown by the corresponding male female gender gaps, women exceed men in terms of

life expectancy. In other areas, such as that of university enrollment, women far exceed their male counterparts (by 62%), and by over 113% in the natural and applied sciences, thus showing women's stronger participation in knowledge-based fields. On the other hand, there were 46 percent more unemployed women than men.

For the last few years, public ecological organizations and missions of international ecological societies have been established and opened in the republic. In 1997 over 70 associations, ecoclubs, societies, and charity funds were functioning in the republic. The most important of them are: "Diamond" association, "Club of Nature Lovers", "Doctors for the Prevention of Nuclear War," the "Mairam" society, the Ecological Movement of Kyrgyzstan "Aleine", the ecological movement "Tabiyat", and the charity fund "Man and Nature".

## 5. MDG in Kyrgyz Republic, summary of 8 Goals

GOALS	TARGETS	
Formulation for Kyrgyzstan	International formulation	Formulation for Kyrgyzstan
Goal 1. Radical reduction of extreme poverty	<p>Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day (PPP)</p> <p>Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger</p>	<p>Target 1. Halve, between 2001 and 2015, the extreme poverty level</p> <p>Target 2. Halve, between 2001 and 2015, the proportion of people who suffer from under nourishment</p>
Goal 2. Achieve universal basic secondary education	Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary Schooling	Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of basic secondary schooling
Goal 3. Promote gender equality and empower women	Target 4. Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015	Target 4. Eliminate gender disparity in employment and managerial opportunities
Goal 4. Reduce child mortality	Target 5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Target 5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate
Goal 5. Improve maternal health	Target 6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality rate	Target 6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality rate
Goal 6. Combat HIV/ AIDS, malaria and other diseases	<p>Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS</p> <p>Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases</p>	<p>Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS</p> <p>Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases</p>
Goal 7. Ensure environmental sustainability	<p>Target 9. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources Target</p> <p>Target 10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water</p>	<p>Target 9. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources</p> <p>Target 10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water</p>

GOALS	TARGETS	
	Target 11 By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	Target 11. Ensure significant improvement of dwelling conditions of the population
Goal 8. Develop a global partnership for development	<p>Target 12. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system. Includes a commitment to good governance, development, and poverty reduction - both nationally and internationally</p> <p>Target 13. Address the special needs of the least developed countries. Includes: tariff and quota free access for least developed countries' exports; enhanced programme of debt relief for HIPC and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction</p> <p>Target 14. Address the special needs of landlocked countries and small island development states</p> <p>Target 15. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term</p> <p>Target 16. In co-operation with developing countries, develop and implement strategies for decent and productive work for youth</p> <p>Target 17. In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries</p> <p>Target 18. In co-operation with the private sector, make available the benefits of new technologies, especially information and communications</p>	<p>Target 12. Strengthen international cooperation for the country's capacity development</p> <p>Target 13. Develop and implement strategies for decent and productive work for youth</p> <p>Target 14. In co-operation with the private sector, make available the benefits of new technologies, especially information and communications</p>

Source: Kyrgyz Republic MDG Report, 2003

## Tajikistan

### 1. Institutional Framework

The Ministry of Nature Protection of the Republic of Tajikistan was established in 1988 by the Decree of the Tajik Government. Initially, it was the State Committee on Nature Protection. Later, in 1992, it was changed to the Ministry of Environmental Protection, and lastly the Ministry of Nature Protection. The following are the major tasks of the ministry:

- provide control of nature protection activities;
- develop and implement scientific and technical policy on nature protection;
- provide state-based control of land use and land preservation, inland waters, atmosphere, flora, fauna, forest resources, fish and mineral resources, and
- prepare national long-term programs on environmental preservation and rational use of natural resources.

In addition to the Ministry of Nature Protection, a number of ministries and departments carry out departmental control of nature protection, including the Ministry of Water Supply, the Ministry of Health Care, the Ministry of Agriculture, Ministry of Land Improvement and Water Conservation, Ministry of the industry and the State Committee on Land-use, the State Forest Authority, and the State Mining Inspection. There are branch subdivisions of these ministries and services in all the regions of Tajikistan that control and observe the norms and rules of nature protection legislation.

In the organizational structure of the Ministry of wildlife management following entities exists:

- Central administrative board on a hydro-meteorological service;
- Special Department on control,

protection and to rational use of water resources;

- Special Department on protection of Wildlife (Animal, fauna and flora);
- Special Department on control and protection of atmospheric air;
- Special Department on control and Management of Waste Products;
- Special Department on ecological control and examination;
- Special Department on control and protection of ground resources; and
- Special department to predict and provide analytical control.

Research laboratories for nature protection are the principal scientific-research units within the structure of the Ministry of Nature Protection. They were founded in response to growing demands of nature protection agencies. Their branches are set up to collect information and assess the environmental situation in the republic. The Research Laboratories for nature protection carry out their activities on the basis of charter, and arrange their activities with the Ministry of Nature Protection.

Considering the urgency of global ecological problems and their close linkage with local conditions and the state of the environment, Tajikistan has joined and ratified a number of international agreements:

- UN Framework Convention on Climate Change;
- UN Convention on Biological Diversity;
- UN Convention on Combating Desertification;
- Ramsar Convention on Wetland;
- Convention on Biodiversity, Protection of Migrating Wild animals and Birds
- Aarhus Convention
- Vienna Convention on Ozone Layer Depletion; and
- Montreal Protocol on Substances that Deplete the Ozone Layer

## 2. Socio-Economic Development

Access to basic social services such as health, water, sanitation and education, has been limited as a result of the lack of essential supplies, proper maintenance and low salaries of teachers and medical personnel, often paid after delays of months. Education continues to decline, as many children do not attend schools due to lack of textbooks, clothing, shoes, poor or no heating of schools in winter, and unmotivated teachers. Only 35 percent of the population, mainly in urban areas, has access to piped water; water distribution systems are either non-existent or extremely weak in most rural areas. Medical care similarly suffers from inadequate facilities, supplies and funding.

After a sharp decline following independence, the economy improved in 1998 with the implementation of the stabilization program and gradual economic growth. Real gross domestic product (GDP) rose 3.7 percent in 1999 and the inflation rate was 30.1 percent. These results are still vulnerable, however, to fluctuating world prices for primary exports of cotton and aluminum. With the support of the World Bank and the International Monetary Fund (IMF), a number of structural reforms have been implemented, and progress has been made in the transition to a market-based economy. The low level of foreign and domestic investment, however, is leading to low productivity and weak infrastructure.

According to the interim poverty reduction strategy paper (IPRSP), over 80 percent of the population is living below the poverty line. In fact, data for 1989 indicates that Tajikistan was already the poorest republic in the former Soviet Union. The country's poverty levels are the result of a limited economic resource base, the collapse of the former Soviet Union which used to provide about 40 percent of its resources, and the aftermath of the civil war. In monetary terms, real wages have fallen

dramatically to less than 5 percent of their pre-independence levels, with state employees receiving an average of only \$9.00 or the equivalent per month, and much less for social sector employees. With a human development index (HDI) of 0.663 in 1997, Tajikistan ranked 110 out of a total of 174 countries, a modest rise from the level of 115 in 1994, according to the Human Development Report 2000.

## 3. Environmental Protection

With the purpose of improving and developing national policy in the field of nature protection and raising public awareness and education, the State Ecological Program and State Program on Environmental Education were developed and in the Republic of Tajikistan.

The following legislation has been adopted in Tajikistan to protect and manage the environment:

- Law on Nature Protection;
- Law on Air Protection;
- Law on Preservation and Use of Fauna;
- Law on Nature Reserves;
- Law on State Sanitary Control;
- Land Code;
- Water Code;
- Forest Code;
- Administrative Code;
- Criminal Code.
- Code on Methods for Environmental Examine
- Code on Protection of Natural Territories
- Code on Waste Control and Management (Public and Industrial Waste)















To prevent negative consequences of anthropogenic activities, environmental impact assessments are being conducted. In addition, the ecological licensing for industrial activities enhances the implementation of effective environmental protection measures.



#### *4. Role of Major Groups*

As in many other societies, women in Tajikistan are the silent victims of war and economic transition. In the last several years, hundreds of thousands of Tajik women have had to leave their homes and over 20,000 have become widows. They are fending for themselves and their families in a time of growing poverty and unemployment. Prior to independence, most women worked in the education and health sectors, which have suffered significantly from the economic impact of the civil conflict? Women, therefore, turned to the informal economic sector, which offered income-generating opportunities through activities such as handicrafts, small businesses, small-scale agricultural production and livestock breeding.

## Millennium Development Goals in Tajikistan, Summary of 7 Goals

Summary of progress towards the Millennium Development Goals						
Goals/Targets	Will the Goal/Target be Met?			State of Supportive Environment		
	Probably	Potentially	Unlikely	Strong	Fair	Weak but Improving
MDG 1.1 EXTREME POVERTY Halve, by 2015, the proportion of people living in poverty						
1.2 HUNGER Halve, by 2015, the proportion of people who suffer from hunger						
MDG 2 UNIVERSAL PRIMARY EDUCATION Ensure that, by 2015, children everywhere boys and girls alike will be able to complete a full course of primary schooling						
MDG 3 GENDER EQUALITY Eliminate gender disparity in primary and secondary education by 2005 AND at all levels of education no later than 2015						
MDG 4 CHILD MORTALITY Reduce by two thirds between 1990 and 2015, the under- five mortality rate						
MDG 5 MATERNAL HEALTH Reduce the maternal mortality ratio by three quarters by 2015						
MDG 6.1 HIV/AIDS Have halted by 2015, and begun to reverse the spread of HIV/AIDS						

Summary of progress towards the Millennium Development Goals						
Goals/Targets	Will the Goal/Target be Met?			State of Supportive Environment		
	Probably	Potentially	Unlikely	Strong	Fair	Weak but Improving
MDG 6.2 MALARIA Have halted and begun to reverse, by 2015, the incidence of malaria and other diseases and reduce morbidity rates			○			◐
MDG 7.1 ENVIRONMENTAL SUSTAINABILITY Integrate the principles of sustainable development into country policies and reverse the loss of environmental resources		◐				◐
MDG 7.2 BASIC AMENITIES Halve, by 2015, the proportion of people without sustainable access to safe drinking water: and achieved a significant improvement in the lives of slum dwellers			◐			◐

Source: *Tajikistan's MDG Report, 2003*

## Turkmenistan

### 1. Institutional Framework

The President, Medjlis, the Supreme Court, the Supreme Economic Court, and the Cabinet of Ministers exercise the highest state power in Turkmenistan.

Protection of the natural environment, the rational use of nature and the assurance of the environmental security are the priority issues in the State Policy of Turkmenistan

The President and the Cabinet of Ministers approve the state environmental programs of Turkmenistan and undertake practical realization of the state environmental policy.

The highest executive body in environmental protection is the Ministry of Nature Protection of Turkmenistan. Decisions of this Ministry and its regional bodies are binding for implementation by ministries, departments, associations, enterprises, and organizations notwithstanding their departmental subordination and forms of property.

The major economic levers in environmental protection are taxes and other fees for the use of natural resources, emissions and disposals of pollutants into the natural environment, and disposal of wastes: penalties for violation of nature conservation legislation, and reimbursements for damage incurred to the natural environment.

Turkmenistan is a signatory of most key United Nations conventions, including the conventions on biodiversity, the control of ozone-depleting substances, hazardous wastes, climate change, desertification, sustainable development and access to information. As such, it is committed to the implementation of the conventions within its own boundaries.

### 2. Socio-economic Development

In 1999 the population of Turkmenistan reached 5.2 million. Official statistics of human development, such as educational levels, nutrition and infant mortality, are all relatively good and demonstrate positive trends. Gender-related development indices, such as the gender-related development index (GDI) and the gender empowerment measure (GEM) demonstrate relatively few gender disparities.

State subsidies offset the negative social effects of economic transition. Services are subsidized and most utilities are free of charge. However, the full degree of vulnerability of different groups and the extent of human development remains difficult to assess. Soil salinization and poor water quality are negatively affecting productivity and health in many velayats (provinces).

The issue of poverty in Turkmenistan, as in the other post-socialist countries, was a pressing matter in the past. Western specialists estimated that indices of inequality in the republics of the former Soviet Union were similar to those for countries of the Organization for Economic Cooperation and Development (OECD), and that the population that fell under the category of poor was less than 7%.

However, the situation changed sharply with the beginning of the transition to a market economy. A strategy for poverty prevention has been drawn up. Surveys have been conducted and a Minimum Consumption Budget (MCB) has been defined, based on a minimum physiological subsistence level, which is 75% of the MCB, but which does not take into account the “cushion” of household assets which a person might possess.

In Turkmenistan, the main factors of potential poverty during the period of transition are family size and the number of

dependents; wage differentials; age; unemployment and the increase in the cost of living, all of which need to be taken into consideration in the implementation of a poverty prevention strategy in order to achieve sustainable human development.

The macro-economic policy of the country is very important as a means of preventing poverty for certain segments of the population.

### *3. Environmental Protection*

Pollution and degradation resulting from industrial and economic schemes introduced during the Soviet period have already had severe effects on biodiversity, human health, and agricultural and industrial productivity in Turkmenistan. Failure to actively promote the sustainable use of natural resources, including conservation, will lead to even more serious economic and social consequences. The deterioration of water quality resulting from industrial, chemical, military and untreated organic wastes is increasingly well documented. Trans-boundary pollution and overuse of water has dramatically affected water quality, the health and economic effects of which cannot yet be quantified owing to the absence of comprehensive data.

One of the key problems in the regulation of nature use is conducting a government environmental impact analysis. The government environmental impact analysis in Turkmenistan is regulated by the Act of Turkmenistan "On the State Environmental Impact Analysis" adopted on 15 June 1995.

The environmental impact analysis is mandatory in the course of investment, economic and other activities implemented on the territory of Turkmenistan, and involving the transformation of the natural environment.

The state environmental impact analysis is based on the following principles:

- Maintenance of environmental quality as an inseparable condition of the environmental well-being of the citizens and environmental security of the appraised entities;
- Balanced environmental, economic and social interests;
- Territorial, sectional and environmental feasibility of implementation of the appraised entity;
- Comprehensive survey of public opinion as the conclusions of the environmental impact analysis are prepared;
- Securing the objectivity, complexity and scientific justification of the environmental impact analysis;
- Lawfulness, democracy and public knowledge about the analysis; and
- Enforcement of the norms and rules of international agreements on environmental impact analyses.

Every year, specialized expert subdivisions of the Ministry of Nature Protection of Turkmenistan consider about 200 projects for construction, rehabilitation and updating of the economic entities. Of all projects considered, about 15 percent are rejected for inadequate project provisions for the protection and rational use of natural resources.

### *4. Role of Major Groups*

The former high levels of opportunity which women enjoyed during the Soviet period, and the high status they were granted due to their high educational status and their substantial role in socioeconomic spheres, have continued during the transition period. A wide range of rights have been maintained unlike in other countries of the former Soviet Union. The high rates of women's employment (41% of blue and white collar workers (compared to 39.5% in 1970); 43% of industrial workers; and 46% in sales and

public catering) is impressive. Women also accounted for 36% of those employed at management levels and in administration, and 18% of positions in parliament.

However, the transition to a market economy has resulted in a reduction of staff in many non-industrial sectors, and women have often been vulnerable to industrial layoffs. Women's share in the total number of workers and employees fell from 41% in 1990 to 4% in 1994.

The scope for direct work with non-governmental community institutions remains limited under the current circumstances, which also continues to make effective targeting of poverty alleviation and empowerment projects difficult.

At present, there are five main public nature conservation organizations registered in Turkmenistan. The oldest of these is the Turkmen Society of Nature Protection which has existed for 30 years, and has its regional organizations in practically all Velayats of the country. Since 1978, the Turkmen Society of Nature Protection has been an active member of the International Nature Protection Union.

Also one of the oldest public organizations is the Turkmen Society of Hunters and Fishermen. It is distinguished by its energetic activity and scale of work. It has a developed network of its organizations both at the velayat and etrap levels. In Turkmenistan there are two large NGO's: Catena Ecological Club and the Dashoguz Ecological Club.

## Uzbekistan

### *1. Institutional Arrangements*

The main executive body on nature protection of Uzbekistan is Goskompriroda (State Committee for Nature Protection), subordinated directly to the Olij Majlis. Its scope includes the oversight of ecological

activities of the ministries, agencies, enterprises and organizations; observance of ecological laws and standards; conducting ecological impact assessments; establishing of environmental quality standards; and issuance and annulment of permits on emissions and discharge of pollutants and waste. Goskompriroda has at its disposal regional structures, such as the regional Committees for Nature Protection.

The State Committee on Forestry, the State Committee on Hydrometeorology, the State Committee on Geology, the Ministries of Agriculture and Water Management, the Ministry of Public Health, and the Ministry of Internal Affairs are responsible for carrying out specialized nature protection measures. A network of specially protected nature territories, (including nine reserves, two national parks, two nature monuments, an eco-center and a preserve), has been created in the republic. The total area of the protected territories is over 2 million ha (about 4.5% of the territory of the Republic). The unique natural complexes of juniper forests, water meadow tugai, and deserts and also many species of plants and animals, registered in the international and national Red Books, are put under protection.

Uzbekistan is a co-founder of the International Fund for the Aral Sea (IFAS) and Interstate Water Management Coordination Commission. The country joined the Framework Convention on Climate Change, the Vienna Convention on Ozone Layer Protection, the Montreal Protocol on Ozone Depleting Substances, the Convention on Desertification and the Convention on Biodiversity.

### *2. Socio-economic Development*

Uzbekistan's social and economic transformation has been moderate since independence in 1991, in line with the gradual reform implementation strategy of the

government. Within this context, the key political issue is the concern over potential destabilization arising as a result of religious fundamentalist movements. The economic and social focus is on the need for jobs creation and income generation through the continued growth of private-sector investment and commercial capacity, as well as through greater human-resource and institutional capacity-building. Environmental problems, such as the Aral Sea tragedy, continuous desertification, and the lack of substantive reforms and investment in the irrigated agricultural sector, foreshadow continued declining productivity and extensive land degradation.

Uzbekistan had a ranking of 0.720 on the human development index (HDI) and a global ranking of 92 according to the global Human Development Report (HDR), 1999. Economic growth was restored in 1996 and has since continued with an annual average gross domestic product (GDP) growth of 4 percent in 1998-1999. The World Bank 1999 Annual Report quotes Uzbekistan gross national product (GNP) per capita income at \$870 in 1998. Official labor statistics show a rise in registered unemployment (0.6 percent of total labor force in the first half of 1999). Independent statistical surveys argue that the magnitude of the problem is understated and cite higher unemployment figures. Similarly, poverty statistics remain scattered. The capacity of the Government to elaborate comprehensive poverty-conscious statistical information will be further reinforced in the preparation of the national human development report (NHDR).

### *3. Environmental Protection*

The major environmental strategies of Uzbekistan can be summarized as follows:

- International Conventions on Climate Change and Combating Desertification. A GEF project to carry

out a country study on climate change in Uzbekistan is ongoing with UNDP assistance, and preparations to produce a national desertification action plan are underway with UNEP/UNDP support. These programs should ensure concrete progress for addressing critical environmental problems in the republic. The leading state organization is the Organization on Meteorology, supported by GEF/UNDP;

- National Biodiversity Conservation Strategy and Action Plan. In 1995 Uzbekistan became a party of the International Convention on Biodiversity. The republic initiated a project to develop a national biodiversity strategy and action plan, which received support from UNDP and the Global Environmental Facility (GEF). The purpose of the national biodiversity strategy is to provide an overall unified policy and planning framework for the management of biodiversity resources in the country. Approved by the Government of the Republic of Uzbekistan in 1998, the project is being implemented by the State Committee for Nature Protection;
- Transboundary Biodiversity Project (Western Tien Shan Mountains). This project is directed towards the development of a biodiversity strategy and conservation action plan. Supported by GEF;
- The National Action Plan on Environmental Hygiene of the Republic Uzbekistan. The national action plan is developed to achieve long-term political purposes in the field of environment and health protection. The executors are the State Committee of the Republic of Uzbekistan for Nature Protection and the Ministry of Public Health Services with technical assistance of the World Organization of Public Health Services;

- Aral Sea Program. The program is intended to address the long term water and land use management problems of the region, while in the short/medium term providing support to address the immediate needs of populations within the worst affected areas. In addition to the long-term implications for more rational natural resource management in the region, the program also includes three specific projects with importance to biodiversity in Uzbekistan; and
  - National Action Plan for Environmental Protection in Republic of Uzbekistan (NAPEESD) was prepared with the assistance of the World Bank. The biodiversity strategy will be incorporated into NAPEESD as one of its major components. The NAPEESD will ensure a unified approach to environmental planning and ensure components will be interrelated and supportive. It has three main tasks: improvement of ecological conditions for public health; assistance for the effective and sustainable use of natural resources; and the protection of the most vulnerable and valuable ecosystems.
- over 2,300 NGOs and public organizations have been created since 1991. Different forms of democratic participation, however, will be fully explored by the public at large. A crucial step was taken when the Government passed the NGO law in 1999 in an effort to boost grass-roots initiatives and thereby supplement the role of the State. A network of over 10,000 neighborhood associations – makhallas - is central to the government vision of decentralization of power and community development.

#### *4. Role of Major Groups*

While Uzbekistan has made progress towards incorporating human rights into many aspects of law, women still face instances of inequity, with regard to income, employment opportunities and political participation. According to the 1999 NHDR, women occupy less than 18 percent of all managerial positions and 10 percent of seats in Parliament. In the economic sphere, the 1999 report on the status of women in Uzbekistan states that the ratio of employed able-bodied women is falling, reaching a level of 32.6 percent employed in 1997.

With regard to civil society and its participation, the 1999 NHDR indicated that



## 5. Country's Indicator Framework

### Economy and Poverty 1991-2000

Indicator	Rate
• GDP Growth	4.0
• Industry	1.6
• Agriculture	2.9
• Services	4.2
• GDP per capita annual growth rate (1975-2001)	-1.9
• GDP per capita annual growth rate (1990-2001)	-1.6
• GDP per capita highest value during 1975-2001 (PPP in USD)	2,950.0
• FDI per capita (USD)	4.7
• FDI/GDP	1.2
• Employment/population ratio change	-0.2
• Employment growth	1.3
• Growth rate of GNP per capita	
• Poverty and social	
• Population living below USD 1 a day (1990-2001)	19.1
• Poverty gap ratio (1990-2001)	8.1
• Share of poorest 20% in national income consumption (1990-2001)	9.2
• Children under weight for age under age 5 (1995-2001)	19.0
• Undernourished people (1998-2000)	19.0
• Population growth	1.5
• Public expenditures health, as % of GDP (2000)	3.4
• Public expenditures education as % of GDP (2000)	7.7

Source: *Uzbekistan, Common Country Assessment, 2003*

## Annex 6. Institutions for Sustainable Development in Central Asia

Country	Vision Document	Main Sustainable Development Institutions	Apex National Council
Kazakhstan	Natural Resource Aspects of Sustainable Development in Kazakhstan	Ministry of Environment	Interstate Commission on Sustainable Development (ICSD)
Kyrgyz Republic	National Strategy for Sustainable Human Development in the Kyrgyz Republic	Ministry of Environment: Sustainable Development Council	National Council on Sustainable Human Development
Tajikistan	Interim Poverty Reduction Strategy Paper	Ministry of Environment	Interstate Commission on Sustainable Development (ICSD)
Turkmenistan		Scientific Information Center (SIC, under the auspices of ICSD) Ministry of Environment	
Uzbekistan	National Environmental Action Plan (NEAP) Social Aspects of Sustainable Development in Uzbekistan	Ministry of Environment	Interstate Commission on Sustainable Development (ICSD)
REGIONAL	Regional Environmental Action Plan		Interstate Commission on Sustainable Development (ICSD)
REGIONAL	Ecological Forum of NGO's	The Regional Environmental Center for Central Asia	

Source: UNDP 2003

## Annex 7. Sub-regional Cooperation Mechanisms

### *A. Cooperation Initiatives for the Aral Sea*

Combating the Aral Sea disaster in Central Asia is seen as a symbolic display of subregional cooperation, and was initiated prior to independence. Since independence, an Interstate Commission for Water Coordination (ICWC) to determine annual water allocations has been created, although this did not receive international funding until 1993. With active donor participation, especially the World Bank, an Interstate Council on the Aral Sea (ICAS) was established and subsequently assumed the activities of ICWC. However, failure to secure the massive capital injections anticipated for the recovery program (both nationally and internationally), contributed to the shift of the now Aral Sea Basin project to the regional office of the United Nations Development Programme. In 1997, ICAS was itself absorbed into a new International Fund for the Aral Sea (IFAS) which remains in operation and is governed through an Executive Board composed of the deputy prime ministers and environment ministers of the five Aral Sea Basin states. IFAS is presently assisted by GEF to address the root causes of the overuse and pollution of international waters in the Aral Sea basin by contributing to the formulation and implementation of the first stage of a regional Strategic Action Program.

### *B. The Tien-Shan Biodiversity Project*

The Tien-Shan Biodiversity Project was developed by GEF to support the protection of vulnerable and unique biological communities within the West Tien Shan Range and to assist in strengthening and coordinating national policies, regulations and

institutional arrangements for biodiversity protection. The project is supported by a number of donors and is currently observed as the best example of transboundary biodiversity protection in the subregion, in that it is actively embracing the goal of creating habitat corridors between four roughly adjacent zapovedniki (reserves): Aksu-Dzhabagly (Kazakhstan), Besh-Aral and Sary-Chelek (Kyrgyzstan), and Chatkal (Uzbekistan).

### *C. Desertification*

The CARs have recognized the need for a coordinated subregional effort to combat desertification. A project on desertification has recently been agreed to by all the CARs with the technical assistance of the Asian Development Bank and the Global Mechanism of the United Nations Convention to Combat Desertification (GM UNCCD). A memorandum of understanding has been prepared, and preliminary activities are underway. The aims of the project are to:

- Provide a regional (and individual country) diagnostic overview and strategic framework for combating land degradation in Central Asia;
- Prepare country situation papers to provide baseline information about existing conditions; and
- To explore the possibility of holding a regional forum on desertification to promote regional partnerships.

### *D. Mountain Ecosystems*

Acting within the framework of the regional project for protection of mountain ecosystems, and with ADB assistance, the CARs have prepared a regional plan to

preserve mountain ecosystems. This plan envisages a regional mechanism to coordinate national and regional efforts to preserve CAR mountain ecosystems.

Accepted at the Bishkek Global Mountain Summit, the Bishkek Mountain Charter (the Asian Mountain Charter) were a basis in establishing and commissioning of Kyrgyz-Tajik Mountain Center (KTMC) with support from all stockholders: ICSD, IFAS, SIC, UNEP and others.

Objectives and activities of KTMC are as it described below:

- Two locations for KTMC were established: in Bishkek and Dushambe
- The basic directions of KTMC activities carried out within the framework of performance of priorities for mountain ecology and the regional environmental protection action plan.
- Development of the international scientific cooperation between scientists and experts of Kyrgyzstan, Tajikistan, UNEP, and other International Mountain organizations.
- Condition assessment of the nature resource of the potential mountain ecology disturbances
- Delegating information for Civil Society and NGO's to increase the awareness of the public in relation to Mountains healthy existence and survival.
- Prepare seminars, basic ecological learning's and economic reviews of ecological modules for future students and future generations.
- Inventory of glaciers, glacial lakes and water resources in mountain regions of the Central Asia.
- Development of indicators according to a condition of the environment in the countries of region.

### *E. NGO Networks*

Environmental NGOs have been numerous in Central Asia since 1989, although despite gaining experience in the last decade, they have lost much public resonance and have failed to expand their membership base. Nevertheless, the continuation of subregional communication, conferences and meetings, particularly among the scientific community, has led to the proliferation of strong personal ties. Several subregional NGO coalitions have been established and are vocal.

### *F. Global Environment Facility (GEF)*

As indicated earlier, GEF is already playing a major role in the Central Asia subregion by providing significant support to environmental protection initiatives:

- The Caspian Environment Programme;
- Aral Sea Project;
- The Tien-Shan Biodiversity Project;
- Water management and environment;
- In-situ protection of the mountain agro biodiversity in Central Asia (GEF); and
- Promoting Compliance with the trade and Licensing Provision of the Montreal Protocol in Countries with Economic Transition.

### *G. The Interstate Commission for Sustainable Development (ICSD)*

The Interstate Commission for Sustainable Development (ICSD) is entrusted with the task of general coordination of programs on sustainable development. Its main purpose is to coordinate and manage regional cooperation in the field of the environment and sustainable development of the CARs, including the following:

- to develop and coordinate regional strategy, plans and programs for sustainable development;
- to manage regional programs, action plans and projects in the field of environmental protection and sustainable development;
- to organize preparation and expert examination of regional projects;
- to coordinate the CAR's efforts aimed at compliance with environmental conventions, taking into account the transboundary aspects;
- to assist in unifying laws and methods in the area of environmental protection; and
- to provide assistance for the intergovernmental exchange of information, and to facilitate setting up a regional databank in the area of environmental protection and sustainable development including the task of drafting a regional Agenda 21 and Convention for Sustainable Development.

### *H. Additional International Programs and Projects in Central Asia*

Bilateral and multilateral projects and programs are also contributing to the subregion's sustainable development objectives. A significant number of projects are either planned or underway targeting the region's land and marine resources. List of Projects

- Metropolitan Environment Program (World Bank);
- Regional Study on Global Environmental Issues (ADB);
- Promotion of Market-based Instruments (ADB);
- Regional Center for Biodiversity Conservation (EU).

## Annex 8. National Priorities

### Kazakhstan

1. Deficiency of water resources;
2. Degradation of pasture and arable land;
3. Air pollution in urban areas;
4. Environment pollution in the areas of oil production;
5. Environment pollution by solid industrial and municipal wastes;
6. Shortage of especially protected natural territories; and
7. Pollution of water bodies by sewage water.

### Kyrgyz Republic

1. Inefficient water resources management;
2. Land degradation;
3. Overuse of forest resources;
4. Threat of irreversible lost of biodiversity;
5. Ineffective mining; and
6. Domestic wastes management.

### Tajikistan

1. Desertification and degradation of nature ecosystems, mainly due to excessive use of water in extensive, out-of-date and old irrigation systems and bad condition of drainage systems;
2. Soil wind and water erosion;
3. Depletion of soil fertility and poor yields due to monoculture cultivation (rice, cotton);

4. Pollution of surface and ground water;
5. Rise of ground water table and increase of soil and water salinization;
6. Air pollution by industry and transport;
7. Human health problems due to environment degradation, rise of child and maternal mortality; and
8. Waste management (deactivation, utilization, disposal etc).

### Turkmenistan

1. Land degradation (salinization, pollution);
2. Pollution of drinking and irrigation water;
3. Problems with hydrocarbon resources;
4. Air pollution; and
5. Biodiversity preservation.

### Uzbekistan

1. Insufficient supply of pure water for population;
2. Lack of fresh water;
3. Pollution of surface and underground water;
4. Salinization and degradation of land;
5. Accumulation of wastes;
6. Human health problems;
7. Preservation of bio diversity;
8. Rise of ground water table in settlements; and
9. Protection of cultural heritage.

## Annex 9. Successful Stories

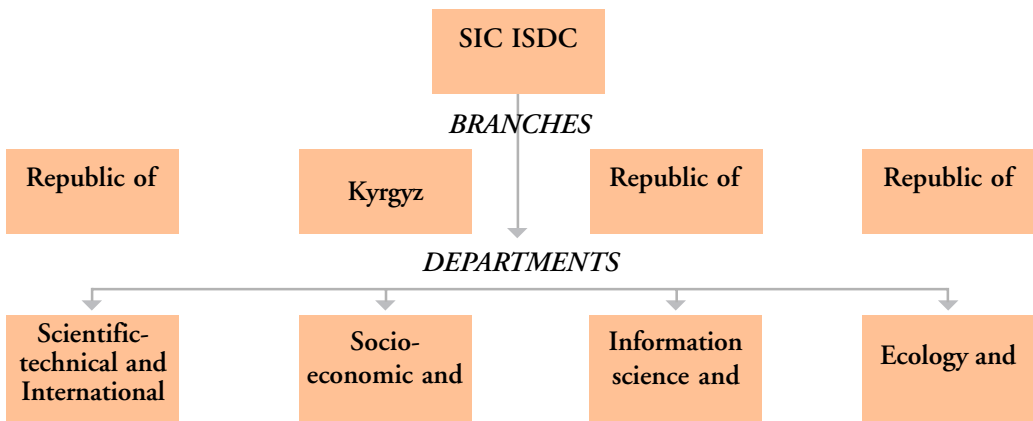
### 1- Regional

The most adequate successful story in the region is creation of Scientific Information Center, SIC: to delegate and core base all the Environmental data and expert-commissions to support of REAP and the sustainable development in Central Asia.

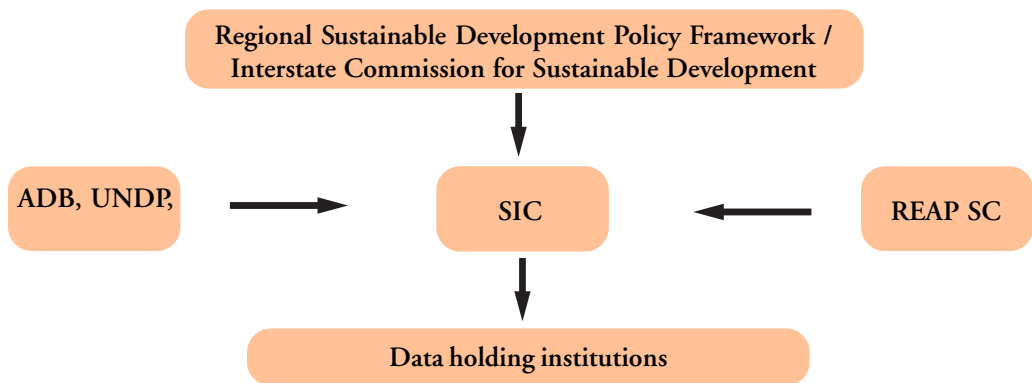
The organisational set-up of this SIC Centre that based in Ashgabat / Turkmenistan is shown below;

It is anticipated that the center will be a central organ for co-coordinating and pursuing the excellences to achieve all aspects and requirements of sustainable development in the region

The following schematic diagram shows an indicative diagram of cooperation mechanism:



Structure of the Central Asian SIC



Activities Mechanism of SIC

## 2- Other successful projects

The Conservation and Sustainable Use of Biodiversity of the Kazakhstan's part of Altai-Sayan Mountain Project is considered as one of the successful projects at transboundary level to introduce a wise and sustainable use of the ecological resources.

All other projects implemented in the region that mainly addresses; communication, health, education and social development are all considered as well a successful attempt to improve the immediate livelihood of all societies in the region.



## Annex 10. List of Contributors and Reviewers

Central Asia in hold by UNEP ASIA-PACIFIC CIVIL SOCIETY MEETING in Bangkok on November 2003

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