

RESUME

The Republic of Kazakhstan is the largest country of Central Asian region and its total area amounts to 2,7 million square kilometers. Almost the whole territory belongs to dry zone. Zonal peculiarities of the republic are determined by the variety of plain subareas (10) and mountain zones (9), by the existence of peculiar types of desertification processes. An unusual process of mass land ploughing that took place in 1954-1960 brought to emergence of a specific kazakhstani-steppe type of desertification – loss of humus and erosion of steppe soils intensifying drought phenomena and hot winds. At present according to different sources from 7 to 10 mln. ha of arable lands were transferred into fallow lands due to low productivity. Peculiarities of environmental situation and desertification in Kazakhstan appearing in the following forms of anthropogenic desertification as radiation and chemical pollution on the area comprising 6% of the whole territory of Kazakhstan are also stipulated by the impact of space and military grounds.

The reasons of the present desertification process in Kazakhstan are determined by natural conditions and peculiarities of land, water and forest resources. The landscapes of the republic are characterized by low resistibility to the anthropogenic impact. A wide range of climate factors in the long-term period is an additional impulse to desertification process. Anthropogenic impacts of moderate degree do not generate desertification; degradation of the environment takes place when it is unable to rehabilitate itself. Active impact of man activity upon the environment leads to disturbance of environmental balance, land damage, exhaustion and reduction of its productivity and other negative consequences that let us consider the anthropogenic factor to be the main cause of desertification.

Two thirds of the territory of Kazakhstan is affected by different degrees of desertification. The total area of the degraded lands amounts to 179,9 mln. hectares or 66% of the republican territory (42% of the territory in the subregion). Among the main causes of desertification the following are marked out: agricultural activity (17 mln.ha, loss of humus assessed as 1,2 billion tons), overgrazing (10 mln.ha), irrational irrigation (1 mln.ha), forest fires - 0.3 mln.ha (1997-2001), oil pollution (approx. 0,2 mln.ha), and other causes.

The state and usage of lands of the Aral sea region, the area of environmental disaster with the territory of 639550 square kilometers and the number of the population amounting to 1,2 millions, arouse a particular anxiety. The sea area reduced nearly two times more thus revealing about 2,6 million hectares of the bottom, losing about 60% of its volume. According to space photography, the salt and dusty winds blowing in the Aral sea region extend to hundreds of kilometers and the area of their precipitate amounts to 25 mln.ha.

According to the preliminary assessment the damage of degradation in Kazakhstan makes up \$ 963,2 million per year. Loss from erosion of arable lands amounts to - \$ 779 million. Second salinization, swamping and other causes accounts for loss in income of more than \$ 375 million. Annual loss of humus accounts for 2.5 billion dollars.

By the beginning of the year 2000 about 10.3 mln.ha of low-productive lands have been withdrawn from crop rotation and lie fallow. The restoration of fallow lands without melioration will take no less than 20-30 years.

The irrigated lands of 2.3 mln.ha or 50% of lands of the southern Kazakhstan also need to be reclaimed due to salinization (25%), loss of fertility and pollution by toxic wastes. Irrigation erosion is recorded on the territory of 1.8 mln.ha. The situation within the 10 years of independence did not improve.

2.5 mln.ha of agricultural lands within the region of the Semipalatinsk testing area underwent radioactive contamination. The area of petroleum production of the Caspian Sea region is also damaged - 4.0 mln.ha.

The acute crisis of rural power supply promotes felling of forests, saxauls and protection belts.

Beginning from 1991, after gaining the state's independence and carrying out lands reformations in the republic the area of agricultural lands reduced from 220.7 mln.ha to 106.7 mln.ha. About 83.0 mln.ha have been transferred into stock lands, 10.2 mln.ha – into forestlands, 16 mln.ha – into lands for pasture use.

With the reformations of sovkhoses and kolkhozes, privatization process by 2000 there were established more than 97 thousand of agricultural farms. Environmental assessment of land state became complicated. Desertification and its tendencies within the different forms of managing will require holding a new kind of inventory and management. Annual desertification monitoring based on the uniform assessment criterion is complicated due to the lack of personal environmental responsibility and extensive way of nature use.

According to the data of the RK Agency on land management the area of trampled pastures increased from 14.8 mln.ha in 1990 to 26.0 mln.ha in 1999, 25 mln.ha are affected by erosion. During the last 10 years there is a tendency of continual land degradation because of non-regulated grazing, reduction of watering places and supervision of land legislation.

Different desertification processes in Kazakhstan stipulate different ways of solving degradation problems. But as a conceptual basis of desertification combat a uniform strategy for all the world regions was adopted, that is correspondence to the UNCCD, correspondence to the objectives of sustainable development – Agenda 21, and ensuring of environmental and food safety, maintenance of the main principles of environment and public health.

To implement the commitments within the UN Convention to Combat Desertification ratified by the Republic of Kazakhstan (RK Law №149-1 dated 7.07.1997), the National action programme to combat desertification is developed (NAPCD) for 2002-2011. This document complies with the goals and tasks of the Strategy «Kazakhstan-2030», legislation of the RK and is the guideline for combating the main causes of desertification of environmentally resource character and eliminating its consequences. It also distinguishes development trends of other aspects in state and public life, determining perspectives of the country's sustainable development.

At present the NAPCD and Action Plan are approved by the Ministry of Natural Resources and Environmental Protection of the RK (31.01.02) and sent for consideration into the interested ministries. The Action Plan for implementing the NAPCD includes 11 sections namely measures aimed at mitigating desertification effects, conserving and rehabilitating pasture grasses and forests. As for the social and economic aspects of nature conservation and desertification combat the activities are aimed at combating poverty, increasing incomes and employment rate of the population; agricultural sustainable development in terms of market economy; social and economic aspects in combating desertification; integration of programmes into complex development plans (Kazakhstani Agenda 21). Section of institutional frameworks, scientific and informational support includes: creation of interdepartmental commission and center to combat desertification; scientific support. Section of preventive and rehabilitation activities involves the projects of creating desertification monitoring systems, integrated into GIS, inventory and environmental zoning, as well as re-cultivation of lands affected by desertification.

Strategic trends to combat desertification and drought are integrated parts of the extended National sustainable development policy of the Republic of Kazakhstan stated in the Strategy 2030.

At present measures to combat desertification are constituents of a number of laws, republican and regional documents developed and partially approved in the last years. Among them the Law on Land, Environmental Law, Law on Specially protected territories, Tax code of the RK and Conception of regional use and protection of land till 2010.

It should be noted that unlike the other environmental treaties Convention to Combat desertification is called to solve not only environmental problems but also social and economic ones including poverty combat, conservation of health and migration of the population. Therefore the main social, economic and political aspects of conserving natural resources and

combating desertification are highlighted in the programme. The programme's objective is combating desertification as one of the prerequisites for sustainable development of the country, increasing living standards by preventing land degradation, raising its productivity, ensuring food safety and political stability with a compulsory condition of conserving biological diversity and its renewable ability.

A number of measures are carried out within the NAPCD implementation:

- The uniform system of environmental bodies under the aegis of MNREP is formed.
- The Government of RK and UNDP developed "The frameworks of cooperation of sustainable development for 2000-2004" and worked out the Document of Programme Support (DPP) which reflects the succession of Cooperation frameworks with the closing of the programme "Introduction of strategic plan for 1998-2000 – Ecology and Natural Resources". The new programme "Institutional Strengthening for Sustainable Development" for 2001-2004 (MNREP –UNDP PIS/SD) is adopted. One of the goals of which being «Analysis, assessment and support of the procedures on implementation of international environmental conventions». DPP, aiming at supporting the Government of Kazakhstan in getting over the barriers while implementing international conventions, identified the indicators for progress assessment in any field.
- Improvement of environmental legislation is being carried out. In 2001 5 laws and 51 decrees of the Government related to environment were adopted. 3 more environmental conventions were ratified.
- Management structure for nature use is being improved with the tendency of isolating the state control over the nature protection from the functions of using natural resources in economic purposes.
- A number of programmes and projects are prepared which envision profound inventory and rehabilitation of arable lands, damaged pasture and forest systems of the republic. However due to the difficult financial situation in the country these programmes were not adopted. At the same time some of the components were included into the state development plans and carried out at the local levels and also reflected in certain investment projects.
- Database on the regional projects of Central Asia is created.
- A special standard of state report #IEA (Investments for environmental activities) was introduced in order to regulate reception of the information on projects status.
- Environmental zoning has been carried out in the Caspian and Aral Sea regions;
- Cooperation with Ministries and Agencies, local authorities aimed at identification and inclusion of environmental convention priorities into industrial and territorial development plans set a basis for interagency interaction and enhanced efficiency of used financial, institutional and human resources.
- In accordance with the Law of the Republic of Kazakhstan about Environmental Protection sources of financing struggle against desertification, biodiversity conservation and other environmental activities have been identified.
- Preparation of the Section "Land Degradation" for the draft Central Asian Regional Environmental Action Plan (CAREAP).
- RK Agency of Land Resources Management annually develops and submits to the Government the State Report "About the Status and Use of Lands in the Republic of Kazakhstan" which includes the description of available land characteristics and analysis of its qualitative status and use.
- Preparation of the Concept for forestry, fishery, hunting and specially protected areas development. The Document is currently considered in the Government.
- The Government has passed a resolution concerning the change of belt pine forests' status to "specially important forest tracts".
- The payment for timber and wood laying-in has been considerably (6-8 times as much) increased.

- The Governmental Resolution dated 10 November 2000 approved the Concept for development and distribution of specially protected territories of the Republic of Kazakhstan till 2030.
- In addition to existing State reserved area in the Northern region of the Caspian sea in 2001 there were identified four more areas totaling in 4,4 mln. ha: Kenderly-Kayasanskaya, Arysskaya and Karaktaussskaya, Zhusandalinskaya. These areas are located in regions, which are mostly exposed to drought and pasture ecosystem degradation.
- The activities have been started on feasibility study for Ermentausky Reserve and Charynsky and “Kolsayskiye Lakes” National Parks.
- Re-approved the list of Republican natural sites and preserves, which includes 57 zoological, botanic and complex reserves and 26 natural sites.
- In 2000 Katon-Karagaisky National Park (mountain-forest ecosystems) was established with total area of 653.5 thousand ha.
- Preparation of the FS for Zhungar National Park, which is currently considered in the Government (steppe and mountain-forest ecosystems).
- Approval of the Programme for planting of greenery in Astana city for 2002-2010.
- Protective afforestation of pasture lands – 0.5 thousand hectares.
- Reafforestation of forest lands, including agricultural lands – 17.9 thousand hectares.
- Continued process for forests protective zone in Astana city, total area of planted trees – 8200 hectares, including 3200 hectares for the last two years.
- Implemented UNDP/UNSO project “Management of pasture ecosystems” in Aral region of Kyzyl-Orda oblast.
- With the support of GEF/World Bank and Global Mechanism the project “Management of Dry Lands” has been launched in Shetsky region of Karaganda oblast.
- Establishment of pilot areas on the Bogen village lands, received data on seasonal trends in pastures with the area of 15000 hectares, created GIS database on pasture ecosystem management. The school territory has been freed from a sand dune, which was fixed with mechanical protective belts on the area of 3 hectares. In the area of mechanical protection saxaul has been sowed.
- For the purposes of environmental programmes and projects monitoring in Kazakhstan there have been developed “Rules for monitoring environmental programmes, projects and activities”.
- Collection and preliminary systematization of the graphical material for GIS layers for Reference Informational System (RIS). Drafted first variant of Informational System for Almaty oblast with the use of GIS technologies.
- Beginning of activities for the network of interconnected environmental informational systems.
- Development and approval of the State Programme “Drinking Water” focusing on population water supply and pasture irrigation.
- Development of “Concept for Environmental Propaganda and Education in the Republic of Kazakhstan”.
- In October 2000 Kazakhstan ratified the Aarhus Convention.
- In September 2000 the second Ecoforum of RK NGOs was held timed to the Conference of Finance, Economy and Environmental Ministers that was held in Almaty in October 2000.
- Adopted the Programme of Ecoforum of RK NGOs direction “Combating desertification and biodiversity conservation” (CDBC). This direction of the Ecoforum unites all the interested public organizations (non-profit organizations) of the country, both registered and registering initiative groups.
- Approved Governmental Resolution “About the process of RK’s Sustainable Development database establishment on the UN web-site” (No. 1295 dated 8 October 2001). Formation of electronic database.

- Established and developed electronic information network which includes mass media, 100 NGOs, Parliament, RK Ministries and Agencies, Oblast Environmental Departments – having totally over 200 users.
- Workshops, round tables, press conferences with NGO participation are held on a regular basis, which are devoted to most important environmental problems – climate change, sustainable development, Caspian Environmental Programme, access to environmental information, results the Programme document “Framework of cooperation between RK Government and UNDP on sustainable development for 2000-2004” presentation.
- Electronic newspaper “Kazakhstan’s Eco-Pravda” is issued distributing the information between CA and CIS NGOs.
- Currently in Kazakhstan there are about environmental 300 NGOs. Some of them are RIOD network members.
- Publication of the first manual in Kazakh and Russian for the herders of the Aral region containing practical assessment of desert pastures and their use. (Within the UNDP/UNSO project “Pastures. Management of pasture systems”).
- Established contacts with universities in Germany and Israel concerning trainings for Kazakhstan’s experts in the area of combating desertification.
- The Programme of development and rendering humanitarian assistance to the Aral Sea region (KAZ/98/008), financed jointly by UNDP, Capacity-21 Trust Fund, UNSO and International Fund for Aral Sea Salvation (IFASS), united the previous initiatives. In addition to activities on environmental issues in the area of irrigation, land development, desertification, forestry and fishery management the Aral Programme will also address the problem of drinking water supply, employment, health, rise of sanitary conditions and living standard. The project will be integrated into the CA Regional Programme.
- The Government has ratified the Agreement about the loan for the project realization “Regulation of the Syr-Darya river channel and conservation of the northern region of the Aral Sea (stage 1)” between WB and Kazakhstan. The project was launched in 2001.
- Currently the following joint projects are being developed: “Modeling desertification processes” (NATO, Uzbekistan, Turkmenistan, Kazakhstan), “Combating desertification in the Aral sea region” (Germany, Kazakhstan), the project for combating desertification and poverty in Balkhash region is underway (Germany), “Experience exchange in the area of combating desertification on the local level” (Kazakhstan, Global Mechanism), “Regional technical assistance to the NAPCD implementation” (ADB, Kazakhstan). Besides, there is a number of environmental projects in Kazakhstan entering different stages of implementation.
- Beginning from 2000 Kazakhstan has been taking an active part in the preparation of the Sub-regional action plan to combat desertification in the Aral Sea basin (several consultative meetings, received support of international donors).
- The existing Intergovernmental Commission on Sustainable Development and CA Regional Environmental Center in Almaty established in accordance with the decision of CA countries are good examples of regional cooperation.