

Republic of Kazakhstan

Ministry of Environmental protection

Caspian Environment Programme

**National Action Programme
on Enhancement of the Environment
of the Caspian Sea**

for 2003-2012

The Caspian region of the country with valuable biological resources, considerable-mineral-and raw potential and with peculiarities of geographical location is of exclusively strategic importance not only in the economy but in international policy of the country as well. In the sphere of economy the region has great perspectives for development.

The Kazakhstan part of the Caspian Sea comprises Northern-and-Eastern water area of the Caspian Sea with the total length of the costal line stretching for about 2320 km. and it is approximately one third of the total length of the costal sea line. The costal zone of the Northern and Eastern part of the Caspian Sea stretches through the territory of the Atyrau and Mangystau oblasts.

Originality of the Caspian Sea is defined by its biochemical parameters. The Caspian Sea is an exclusive and internal-drainage water body and it is the sea of geographical drastic changes of temperature and salinity, its ecological system includes remainders of the fauna and flora of major regional seas. High-endemic fauna and flora inhabit the Caspian Sea.

Shallow shelf zone of the Northern and Northern-Eastern part of the sea is a finny natural habitat of reproduction of fish and birds, the basis of which is a feed base consisting of hundreds of species of benthos organisms and tens species of plankton and sea bed algae. That is why nearly all species of fish inhabiting the Caspian Sea including sturgeon ones inhabit the sea in the delta of the Volga river and the Ural river.

More than half of all fish production of the country (excluding sturgeon caviar) is procured from in the Ural-Caspian basin and in the delta of the Volga river.

The isles of the Northern and Eastern part of the Caspian Sea Major are places of habitat of the Caspian seal. Millions of water birds inhabit wetlands and find temporary shelter here during migration and one third of them stay here for winter.

Currently there are some difficulties in the Kazakhstan part of the Caspian Sea due to negative impact on environment including consequences of the sea level fluctuation, unsolved problems of environmental pollution of environment in the past years and current pollution, current degradation of ecosystems and extreme reduction of biological diversity and other factors.

The environmental situation in the region has become complicated first of all due to consequences of negative impact of man-caused activity.

The objectives of the National Action Programme of RK on Enhancement of the Environment of the Caspian Sea for 2003-2012 (further The National Action Programme) have been defined with taking into account the objectives and priorities of Strategic Plan of development of the Republic of Kazakhstan for the period till 2030. The objective of the «Strategy – 2030» is **reduction of aggravation of the environment**, and the priorities – **establishment of the effective system of management of nature use and protection of the environment, establishment of the basis for balanced nature resources use and environmental awareness.**

NCAP is developed in accordance with international environmental conventions ratified by Kazakhstan.

The Programme corresponds to the priorities of CEP, which are agreed with all the littoral states according to GEF project. CEP implies provision of sustainable living of the population and management of environmental situation at the Caspian Sea.

Due to this **the main objective of the National Action Programme is stabilization of environmental situation and enhancement of the environment of the Caspian Sea** for provision of sustainable living of the population in the costal zone.

Provision of sustainable living of the population may be implemented if the ecosystem of the Caspian Sea including the ecosystem of the costal zone is conserved. Under such kind of environmental situation it is necessary to reach considerable stabilization and enhancement of the environment for conservation of the ecosystem of the Caspian Sea.

In order to implement the main objective of the National Action Programme it is necessary to fulfill a number of targets and to achieve the results on such actual directions of environmental policy as **provision of complex and sustainable use of transboundary costal zone, reduction of the level of pollution, establishment of the basis for conservation and balanced use of biological and landscape diversity.**

Objectives and priorities of the Programme for the next 10 years (2003-2012):

1. Complex planning and management of the costal zone.

The objective – **Provision of complex and sustainable use of transboundary costal zone of the Caspian Sea.**

Target 1. **To provide elimination and reduction of historical industrial pollution and rehabilitation of degraded costal territories** (stage by stage).

1.1 Conservation and elimination of the flooded oil wells and elimination of self-flowing hydrological wells.

1.2 Cleaning the land from oil, elimination of oil stores soil recultivation at oil fields.

1.3 Utilization of associated gasses to stop flaring at oil and gas fields.

1.4 Localization of hazardous impact of the fields of evaporation of waste waters “Tukhlaya Balka” in Atyrau city on the environment.

1.5 Recultivation of “beach zones” and conservation of hazardous toxic substances of the tailing “Koshkar-ata” in Aktau city.

1.6 Elimination of the sunken ships (vessels) in the bay Bautino and ownerless boring towers on the costal line.

Target 2. **Perfection of planning and management system of the costal zone and investments attraction for improving of the ecosystem of the Caspian Sea.**

2.1 Preparation of the draft Law of RK “on protection of the ecosystem of Kazakhstan part of the Caspian Sea and its costal zone”

2.2 Improving of economic mechanism of nature use and adoption of new normative payments for environmental pollution adequate to compensate the costs for elimination of the damage.

2.3. Preparation of documents on special planning, land use planning and attraction of investments for development of the costal zone.

2.4 Improving the net of hydro-meteorological survey in the Caspian region to provide forecast of storms and negative and positive setup and monitoring of environmental pollution.

2.5 Creation of mechanism of information exchange with littoral states to warn and protect costal infrastructures and industrial constructions in case of hydro – meteorological actions and pollution of the environment.

2.6 Seismic danger assessment related to increase of extraction of hydrocarbon resources and conducting seismic monitoring in the Caspian region.

2.7 Impact assessment of deposits of hazardous wastes on the environment, implementation of activities on processing and use of industrial and domestic wastes.

2.8 Monitoring of industrial and domestic wastes.

Target 3. **To reduce the process of desertification and land degradation of the costal zone as a result of man caused activities.**

3.1 Improving of legislative base on combating desertification and organizing the system of monitoring of desertification process.

3.2 Development and implementation of pilot projects on prevention of man caused degradation. Rational use of pastures and creation of sewing pastures.

3.3 Implementation of projects (programs) on combating desertification.

Target 4 To reduce negative impact of agricultural activity in the costal zone on the ecosystem of the Caspian Sea.

4.1 Provision of protection of the Caspian Sea from agro chemicals through limitation of their use on the banks of the rivers Kigach, Ural and Emba in the costal zone of the sea.

4.2 Prohibition of use of some agro chemicals in the costal territories and implement activities to eliminate them.

4.3 Development of programmes on rehabilitation and melioration of lands to irrigate the costal zone.

Target 5 To improve the life quality of the population of the region

1. Solution of the problem on settlement localities provision with good quality drinking water water.

2. Solution of the problems of city waste waters in the costal zone of the Caspian oblasts.

3. Implementation of a number of activities on greening the settlement localities of the region.

4. Improving health care of the population.

II. Control and regulation the level of pollution.

Objective - Reduction of pollution risks and creation of the basis for improving the quality of the ecosystem of the Caspian Sea.

Target 1. To create the basis for minimization of negative impact of industrial activity on the environment and provision of environmental safety in the region.

1. Updating the regulatory and legal basis for nature use.

2. Non use and change of outdated industrial and oil and gas equipment, application of new technologies for minimization of pollution of marine water.

3. Updating the National Plan on prevention of oil spills and response to them. Agreeing of set of measures for cooperation with littoral states in case of major oil spills in the Caspian Sea and provision of mutual assistance to eliminate the consequences of oil spills.

Target 2. To provide compliance with principles and requirements of regulatory and legal documents on Environmental Protection of the Caspian Sea.

2.1 Implementation of the requirements of the Framework Convention on Protection of Marine Environment of the Caspian Sea.

2.1.1 Implementation of the requirements of the Agreement on Minimization of Amount of Wastes from the current oil and gas constructions and non use of outdated (non competitive) industrials installations and equipment stage by stage.

2.1.2 Implementation of the protocol on discharges into then sea and the protocol on land sources of pollution located near the Caspian basin.

2.1.3 Implementation of the protocols on compliance with norms and standards of the quality of the environment at oil and gas extraction in the region

Target 3. To establish the monitoring system on environmental pollution level.

3.1 Implementation of the Programme on quick assessment of the level of the water pollution in the Kazakhstan part of the Caspian Sea.

3.2 Updating the database of monitoring of the pollution of the ecosystem of the Caspian Sea and its costal zone.

3.3 Monitoring of compliance with requirements with the regulatory and legal documents and agreements and protocols.

1. Reduction of the store of commercial bioresources.

A. Short introduction of the problem. This problem is one of the major problems in the region due to aggravation and reduction of the habitat, nature pollution and destruction of then

costal areas, extreme use of biological resources and as well as desertification and degradation of the costal landscape and poaching.

TDA defines loss of biodiversity as a whole. Facilitation of anthropogenic process contributes to this. Process of desertification is expected to comprise: land and plant degradation, death of birds and animals, especially rare species, loss of rare landscapes and reduction of areas of transboundary species. Negative changes of composition of flora are evident when the soil-and-ground regime will be broken (salination, pollution and erosion), productivity, capacity of restoration.

It is necessary to clarify experts' assessment of the land ecosystem within of the costal line of 100 km, because there is no quality data of changes of the species.

B. Confirmation data.

In the Ural-Caspian basin the maximum catch of fish of the amount of 93,6 thous. tonn was registered in 1932 (S. Kazhenbayev, 1968) in the 70-80s of the last century the catch amounted to 50-70 thous. tons and in 2000 – 21,7 thous. tons.

In the 30-60 the catch of the Caspian salmon, lamprey and white fish come to about 80 tons per year. However beginning from the second half of the 50s there were no salmons in commercial catch at all.

At the end of the 90s the catch of sturgeon sharply reduced to 8 thous. tons, to 0,23 thous. tons in 2000.

The square of the main places of spawning in the flood-lands of the Ural River in the 1930-1935 made up to 35,0 thous. Ha, by the middle of 1970 it has reduced up to 16 thous. ha, in 1994 the natural spawning fund of sturgeon in the Ural river come only to 0,923.

Sharp reduction of biological resources including sturgeon in the nearest future might result in full reduction of catch of sturgeon and caviar in the Caspian Sea. The damage from loss of this kind of product may be about 1 mln. dollars and the share of this country is about 14,0 mln. USD.

That is why conservation of gene pool of sturgeon and biological species diversity of the Caspian Sea is an extremely important task.

Reduction of the amount of other commercial of species is taking place as well. From the beginning of the 20th century the amount of the population of the seal in the Caspian reduced from 1 mln. heads and by the end of the 90s to 350-400 thous. heads.

Pollution of the sea by heavy metals (chrome, mercury, lead, zinc, nickel, cuprum) of high concentration the Atyrau district and Astakhan and by pesticides (DDT, DDE and chlorine organic pesticides oil products and phenols makes hazardous impact on organisms.

Through the system of trophic connections these substances penetrate in the organisms of marine and land animals. Toxic compounds of high concentration are found in muscular tissue, liver and caviar of fish and in organisms of seals and birds as well. Hazardous substances cause destruction of tissues and organs of animals, different symptoms in organisms of animals. Accumulation of pesticides and other hazardous substances in organisms of seals resulted in barrenness of she seals and it caused reduction of their fertility.

The other destabilizing factor, which caused reduction of biodiversity store, is irrational use or over use (over fixed quotas) of biological resources. In the near past during the period of planned economy fulfillment and over fulfillment of the plans on extraction of biological resources was legally encouraged. The problem of reduction of biodiversity store was not defined.

Currently the planned amount of extraction of commercial bioresources is reduced, however poaching has been increased and it makes great damage especially for the store of the sturgeon in the period of their spawning. The amount of this damage is hardly to be defined. According to some data it is considered that the amount of fish caught by poachers in the Kazakhstan part of the Caspian Sea is three times more than the limit for the extraction of sturgeon. At the same time according to the data of Russian specialists it is considered that annual amount of illegal fishing in the sea is about ten times more than the official amount of

extraction. However, without any doubt extraction of caviar by poachers makes irrevocable damage for the sturgeon store and due to this specie is on the verge of extinction.

Among the land trade animals there is reduction of species, for example saiga. For the last 20 years the amount of it reduced to ten times. Reduction of the amount of heads is taking place among other animals as well.

Rare and endangered species of mammals (kozhanok Bobrinskogo, perevyazka, dzheiran, ustyurtskiy mountain sheep and koulán) inhabiting the coast of the Kazakhstan part of the Sea are registered in the Red Book of the Republic of Kazakhstan and needed to be protected. Currently there are less than 20 thous. of dzheirans, ustyurtskiy mountain sheep is less than 5,5 thous. and as for the rest species in the region there are less of them than that.

As a result of irrational nature use (over pasturing and degradation of pastures, cutting of trees and bushes for heating) and economical activity destabilization of many ecosystems have taken place including traditional places of nesting and migration ways of many species of birds – yellow Egypt heron, red crow goose, white head goose.

Development of oil and gas makes especially strong impact on the biota. Near the boarder of oil deposits of the Northern –and- Eastern part of the Caspian sea the number of birds is ten times less than in natural landscapes and in the ground barns of oil hundreds of birds are perishing.

Operation “Trap” is conducted by protection services every year to protect land commercial animals and prevention of poaching.

In spite of the undertaken measures the institutions for protection animals and plants have not succeeded in extirpating poaching. The services have constant difficulties related to transport and combustive-lubricating materials. The salary of inspectors and hunters is very low. Nature protection services do not make inventory of the state of animals and plants and the monitoring for the state of biological resources as well. The amount of financial resources located to nature protection institutions is not sufficient. Due to this reason they cannot establish full control of the vast specially protected areas.

Imperfection of regulatory -and- legal basis of nature resources use and mechanisms of regional cooperation on regulating legal basis makes negative impact on biodiversity conservation.

According to the Law of the Republic of Kazakhstan “on Especially Protected Nature Areas” (EPNA) dated of 15 June 1997 N 162-1 issues related to use and observing the regime of protection of EPNA and rehabilitation activities have to be in the charge of especially authorized central executive body in the sphere of environmental protection.

However in August 2002, when the Ministry of Natural Resources and Environmental Protection had been restructured, these functions were delivered to the state body, which doesn't have special authorities on environmental protection.

II. Potential threats for biodiversity. The main threats (risks) for biological diversity of the Caspian Sea and its costal zone are degradation of marine and costal habitat as a result of natural and anthropogenic factors.

Natural factors are climatic changes in the water collecting basis which cause the raising of the sea level and flooding of vast costal territories, further reduction of spawning, shoaling of the rivers Ural, Kigacha and Emba, destruction of the migration way of animals, desertification in the costal zone, increasing the number of predatory animals and others.

Anthropogenic factors are regulation of the river flow, over catching of commercial bioresources, fishing of sturgeon in the sea and poaching, increasing of concentration of polluted waters and eutrophication of the sea and as well as reduction of the feeding store and major destruction of bioresources.

The status of “State Reserve Zone in the Northern Part of the Caspian Sea” and the regime of protection is defined by the law of the republic of Kazakhstan “On Especially

protected natural areas” (15.07.97), article 48. Main designation of the zone is protection of sturgeon and places of their fattening and spawning. Within the reserve zone it is prohibited to conduct any economic activity except fishing and limited navigation. However in 1993 according to the resolution of the government it was allowed to conduct oil development activities and boring in the Northern-and- eastern part of the Caspian Sea observing special environmental requirements.

Currently it is difficult to define the possibility and the scale of the future environmental risks from development of hydrocarbon resources of the shelf of the Caspian Sea. However it is not difficult to imagine that while developing and transporting hydrocarbon resources on the shelf when there is high inner bed pressure there is a possibility of emergency oil spills and hydrocarbon discharges. That means that there always will be the threat of new pollution of the water area and the coastal zone. The closed and internal-drainage reservoir being shoaling will accumulate new pollution.

Also construction activities of the shelf will cause destruction of migratory ways of water bioresources including fish, seals and water birds. Such kind of situation will considerably increase man-caused load on habitat of bioresources of the sea and will cause catastrophic changes of the sea ecosystem.

Great threat for biological diversity comes from alien species. They can not only occupy environmental space of the original species, but can cause diseases and have predatory features threatening commercial species.

III. Introduced species and introduction of alien species.

Introduction of alien species and organisms is rather dangerous not only for conservation of the endemic complexes but for commercial use of these resources as well. During the last years the species are introduced through man’s interference and by chance.

Some animal species and plants have acclimatized in the Caspian Sea and widely settled and developed displacing the original species. The Far east salmon, herbivorous fish including grey mullet and other species invaded the sea during some years.

The introduced species: phytoplankton – 6 species, zooplankton – 7 species, hydroids – 2, zoobenthos – 12, fish – 17, land mammals – 3 species (TDA, 2002).

Casual movement of *Mnemiopsis Leidy* with ballast waters may lead to unpredictable results. (TDA, 2002). Maximum biomass of *Mnemiopsis Leidy* in summer 2001 on the North Caspian in the Iran waters come to 2,1 kg per m², in the waters of Turkmenistan and Azerbaijan 1 kg per m². On the territory of the Kazakhstan part of the Sea *Mnemiopsis Leidy* has not been found.

Mnemiopsis Leidy was identified in the Caspian Sea during the last two years. Though there is no direct confirmation of decrease of the amount of zooplankton and sprat caused by *Mnemiopsis Leidy*, however there is a great threat of it as *Mnemiopsis Leidy* has devastated the feed store of the Black and the Azov Seas.

3.6 Social-and-economic Impact and State.

Environmental situation in the Caspian region influence social and economic impact on the population.

Notwithstanding the active development of the industry in the Caspian oblasts, a number of unsolved social problems remain each year. They are related to unemployment and poverty and aggravation of human health. Data on the gross output of the region per person in these oblasts are three times higher than average level in the country. At the same time the level of poverty in then region (data of 2000) is considerably higher than the average data in the country.

Further increase of the amount of oil-and-gas extraction will contribute to employment, increase of income per capita, development of the infrastructure and other social spheres of

activity and as a whole will have positive impact on improvement of social and economical conditions in the region.

However, on the other hand negative factors of a large scale oil operations in the sea can cause industrial accidents, higher pollution of air and water, loss of commercial marine and land bioresources and further aggravation of health of the population of the costal zone. Aggravation of the health of population of the costal zone and loss of commercial bioresources may cause mass migration of the population.

To avoid the negative impact of the Tengiz oil-and-gas field, the people of the village Karaton were moved to the village Zhana Karaton and partially in Atyrau. It is supposed to resettle the people from the village Sarykamis as well in the coming years as well.

Health of the population of the region has sharply aggravated for the last ten years, the dynamic of medical-and-demographical situation is extremely unfavorable. Characteristics of morbidity and mortality are increasing. Cancer diseases and diseases of blood, respiratory diseases, different infectious diseases 2-4 times exceed the national level.

The region is characterized by high level of tuberculosis in the country and among the Caspian states and high characteristics of infant mortality. There are cases of birth with abnormal deviation. The characteristics of mothers mortality are considerably higher the characteristics in the country and the countries of the region.

Morbidity of intestinal system is increasing in the Caspian oblasts. Morbidity of virus hepatitis increased 1.5 times in 2000 in comparison with 1999 as consequences of deficit of drinking water and its poor quality.

The high level of morbidity of other socially considerable diseases: cardiovascular system, cancer diseases, diseases of genital system is remaining as before. The average life expectancy of the population is less than in other littoral states and it decreased from 70,5 to 58,7 years for men and to 69,3 for women.

Indices of human development (IHD) in the Caspian oblasts notwithstanding unsolved social problems is to some extent higher than in other regions of the country. According to the characteristics of IHD of the National report on human development in Kazakhstan for 2000 the regions of Kazakhstan occupy 38-102 place in the world.

IHD in the Atyrau and Mangystau oblasts (IHD within the limits 0.79 to 0.80) in comparison with Poland, Croatia, Seychelles, which occupied in 1998 45-53 place. This is the highest level of IHD in the country after Almaty (IHD is 0,828).

This characteristic was considerably influenced by two basic factors – level of literacy of grown-up population and high characteristic of IGO per capita due to rapid development of the industry in the region.

3.7 Causes-and-consequences Analysis of Environmental Problems of the Region.

In the process of TDA development the causes of transboundary and national problems of the Caspian region were defined. By ranging of these causes with wide involvement of the representatives of the ministries and units, local authorities, specialists and scientists and the public a number of primary causes were defined.

3.7.1 Primary causes of destruction and degradation of transboundary costal zone:

Natural nature-and –climatic causes:

1. Complex nature-and-climatic conditions (deserts, semi deserts, sharp continental climate)
2. Wind and water erosion, salinization of the soil.
3. Cyclic fluctuation of the sea level and periodic negative and positive set-up.
4. Lack of perfected system of forecasting, prevention and informing on negative and positive set-up and fluctuation of the sea level.

Anthropogenic causes:

1. Historical pollution and their secondary impact.
2. Outdated technologies applied for extracting, transportation and processing of natural resources.
3. Irrational land use (seasonal pasturing of cattle, over pasturing, loss of traditional distant-pastures).
4. Non-regulated construction of automobile and other roads.
5. Lack of branch and national programmes on rehabilitation of polluted territories, processing and elimination industrial wastes.
6. Lack of financial resources allocated to enhancement of environment.
7. Imperfection of the current legal and regulatory documents on protection of the costal zone of the sea.
8. Lack of control of environmental situation in the costal zone.
9. Imperfection of the activity of the current nature protection management institutions.
10. Lack of perfect system of integrated planning and management of the costal zone.
11. Insufficient fulfillment of the requirements and commitments under international environmental conventions ratified by Kazakhstan.
12. Lack of the system of effective informing, training and involvement of the public into solution of environmental problems.
13. Lack of organized ecotourism, sports-and-amateur hunting and fishing.

Primary causes of pollution of water resources and the Caspian Sea

1. Accumulation of historical pollution near the water objects.
2. Secondary pollution from the impact of nature-and-climatic factors (while flooding, negative and positive set-up, raising of the level of the ground waters, impact of wind and others).
3. Pollution of the sea from the river flows.
4. Closed sea (lack of possibility of self cleaning) and accumulation of pollution.
5. Pollution of the sea due to oil operations in the shelf zone.
6. Application of imperfect (outdated) technologies and non-taking of adequate measures on protection and rehabilitation of the environment.
7. Lack of state monitoring of water basin.
8. Lack of perfect system of forecasting, prevention of industrial accidents and informing about them.
9. Lack of investments for enhancement of the environment.
10. Imperfect legislative and normative-and-legal base (imperfection of the current normative-and- legal documents, insufficient norms of LAC, LAD).
11. Braking of environmental legislation and non-sufficient control from environmental institutions.
12. Insufficient fulfillment of the requirements and commitments under international environmental conventions ratified by Kazakhstan.
13. Insufficient awareness of the public.

Primary causes of reduction of biodiversity.

The following primary causes were defined from the great number of causes of reduction of the gene pool of commercial bioresources in the process of TDA development:

1. Degradation of areas of habitat and reduction of the feed store;
2. Silting of the delta of the rivers Ural and Kigach and reduction of natural spawning;
3. Regulation of the river flows for water use and economic activity;
4. Low level of surviving of young sturgeon and destruction of fish at water inlets.
5. Destruction of migratory ways of fish, seals, birds and land animals.
6. Insufficient number of young sturgeon moved to the sea.
7. Lack of commodity production of sturgeon.

8. Lack of monitoring and non-effective management of bioresources.
9. Lack of defined value and significance of the bioresources of the Caspian Sea.
10. Insufficient scientific studies and developments lack of agreed international research and programmes.
11. Over use of commercial bioresources (poaching and illegal fishing).
12. Braking of environmental legislation.
13. Imperfection of the current legislative and regulatory documents on protection of bioresources and the costal zone of the sea.
14. Insufficient special protected areas.
15. Insufficient control from the environmental institutions.
16. Insufficient fulfillment of the requirements and commitments on international environmental conventions, ratified by Kazakhstan.
17. Absence of international treaties on Caspian Environment protection.
18. Introduction of alien species (introduced species-Mnemiopsis).
19. Lack of environmental education and awareness of the public.

Activities under the National Action Programme are developed to eliminate primary defined causes resulted in major environmental problems of the region.

The main directions of the Programme are based on implementation of the complex of nature protection measures and imply elimination of historical pollution, reduction the level of the current pollution, conservation of biodiversity, provision of complex and sustainable use of transboundary costal zone stage by stage.

To solve the defined targets the Programme is supposed to be implemented through some stages. The initial stage of implementation of the Programme will be for next three years (2003-2005) – concrete measures are proposed (the plan of activities is attached). During the next years (2006-2012) a number of perspective projects and measures should be developed directed to cardinal solution of priority problems in accordance with strategic objectives and targets of the Programme.

Particularly, it is supposed to eliminate historical pollution and implement measures on reduction of the current pollution, legislative (regulatory), organizational actions (measures), governmental interferences, political measures and measures on capacity building and establishment of database, data management and other measures.

The objectives and priorities of the National Caspian Action Programme correspond to the priorities of the branch programmes and particularly – the Ministry of Energy and Mineral resources, the Ministry of agriculture, the Ministry of Industry and Trade, the Ministry of Environmental Protection – and to the priorities of the Strategic Development Programmes of the two Caspian oblasts (Atyray and Mangystau) for the period till 2010.

In this connection the Ministry of EP has developed a section “Provision of Environmental safety” (5.2.1.2) with a plan of concrete measures and proposed them to include into the Programme on Development of Kazakhstan Shelf of the Caspian Sea.

6. Required Resources and Sources of Financing.

Implementation of activities under the National Action Programme cannot be realized without considerable financial resources. Therefore for implementation of the activities of the Programme the funds should be allocated from all possible sources of financing including the funds of national and local budgets, which are mainly formed by the funds of nature users, which pay for the pollution of the environment and use of natural resources.

Major amount of financing the activities is supposed to have from investments of industrial companies, the activities of which during the long-term period makes great load and damage to the environment. In this concern to reduce considerably the scale and elimination of

historical pollution it is supposed on the basis of joint forces of all the concerned bodies to establish the fund for elimination the pollution of the past years.

Some of the activities directed to solution of transboundary problems should be supported by international organizations (CEP donors) in the form of grants and loans and donor-countries on technical support of the Governments of these countries in the frames of Official support to development of the Republic of Kazakhstan.

7. Expected Results of Implementation of the Programme.

The expected positive result of implementation of the Programme to great extend depends on implementation of the planned measures in time and in proper way.

For example, elimination of historical pollution and implementation of measures on reduction of the current pollution in due time will result in considerable reduction of the current load on the environment and accordingly in stabilization of environmental situation in the region.

Application of updated competitive technologies in the oil and gas and other industries and transfer to international environmental quality standards will considerably reduce the level of the current pollution.

Step by step implementation of the planned irrigation and drainage sea bed deepening activities in the deltas of the Volga and the Ural rivers will provide the pass for the sturgeon to places of spawning.

As a result of implementation of these measures the basis for the enhancement of the environment and rehabilitation of habitat of water and land bioresources will be created. Due to this the preconditions for conservation of biodiversity in the regions will be created.

Perfection of the normative-and-legal acts and the structure of management of nature protection institutions will contribute to the basis for provision integrated (complex) and sustainable use of transboundary costal zone.

As a result of implementation of the Programme it is supposed to provide sustainable living of the population and to establish control for the sate of the environment and further to manage environmental situation at the Caspian Sea.

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Complex (integrated) Planning and Management of the Coastal Zone

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Conservation of Landscape and Biological Diversity of the Coastal Zone

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