## REPUBLIC OF KAZAKHSTAN

# NATIONAL SUMMARY REPORT

# INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION (IDNDR)

## SECTION A. AREA OF ACTIVITY

# 1. Structure of the National Committee (IDNDR Centre)

In the Republic of Kazakhstan the coordination of the activities connected with the International Decade is the responsibility of the State Emergency Situations Commission of the Republic of Kazakhstan. These activities are carried out by ministries, departments and organizations of State and local organs of power. The State Commission has 57 members and a staff of 25 in the Office of the President and

The following are the main bodies participating in the activities of the International Decade in the Republic of Kazakhstan:

- (a) Ministries and departments (of State):

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- Finance
- Environment and bioresources
- Construction
- Transport
- Geology and mineral resources
- Communications
- Health
- Press and mass media
- Industry
- Science and new technology
- Education
- Civil defence
- Energy and fuel resources
- Water resources
- Hydrometeorology
- Geodesy and cartography
- Material resources
- Internal affairs, and others

Total: 38

(b) Academies and research institutes:

National Academy of Sciences of the Republic of Kazakhstan - Hydrogeology and hydrophysics

- Geography
- Soil science
- Seismology
- Space research, and others

Total: 9

Kazakh Academy of Agricultural Sciences

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# Engineering Academy of the Republic of Kazakhstan

- (c) Private sector: none
- (d) Public services:
  - State Committee for IDNDR
  - Panel of experts on evaluation of seismic risks and earthquake
  - Scientific and technical board of the State Emergency Situations
  - National Council of the Republic of Kazakhstan on Problems of the
- (e) Non-governmental organizations:
  - Association for Disaster Relief
  - Nevada-Senei Fund
  - International Fund to Save the Aral Sea
  - Association for earthquake-resistent construction and protection
- (f) Mass information media:
  - Kazakh State Information Agency (KAZTAG)
  - "Kazakhstan" State Television and Radio Broadcasting Corporation
  - National and regional newspapers of the organs of State power
- (g) Insurance:
  - State Commercial Insurance Corporation of the Republic of Kazakhstan
- (h) Others: regional, municipal and district emergency situations

# 2. Internal structure of the National Committee

In the Republic of Kazakhstan the solution of problems connected with natural disasters is the responsibility of the State system for prevention of and action in emergency situations. This system was established by government decree in 1991. It includes the administrative units of the 19 regions of the Republic, all ministries and departments, State combines, corporations, associations and other organizations, regardless of their form of ownership. The structure and functions of administrative units depend on the responsibilities of the organization

The main organ of the State system for prevention of and action in emergency situations is the State Emergency Situations Commission of the Republic of Kazakhstan. It has the status of a State public organ. Commission consists of the heads (first deputy heads) of the relevant ministries, departments, organizations, etc. It is presided over by a chairman who in terms of functions has the rank of deputy prime-minister.

The State Commission is responsible for the operation and development of the State system for prevention of and action in emergency situations, and it coordinates and supervises the work of ministries, departments and organizations of State and local authorities in prevention, issue of warnings, damage reduction, and relief of the effects of natural and technogenic emergency situations; it also maintains the search and rescue and accident services and participates in the elaboration and implementation of economic and legal measures designed to guarantee the safety of the population and in protection of the environment and economic facilities; it coordinates the work on the creation and implementation of the State programme for prevention of and action in emergency situations, supervises the application of the corresponding legislation and regulations, provides administrative support and ensures that a unified technical and scientific policy is followed with respect to emergency situations, participates in decisions on the provision and use of funds and logistical and material resources and reserves, and organizes the system of training and exchange of information with foreign countries.

Measures for the protection of the population, economic facilities and land in the Republic of Kazakhstan are funded from the State and local budgets and from the resources of ministries, departments and organizations of State. The Cabinet of Ministers has a natural disasters reserve fund to finance the action taken in emergency situations. This fund is used in accordance with the decisions of the State Commission. If the fund has insufficient resources, additional appropriations are made from other State funds by decision of the Government.

The State Commission holds regular monthly and special meetings to consider the country's most pressing emergency situation problems. The decisions of the State Commission are binding on all the State's administrative organizations. In the intervals between meetings of the State Commission current activities in connection with emergency situations are regulated by orders and instructions signed by the chairman or his deputy.

The State Commission receives considerable assistance in its work from a number of public organizations: the State Committee for IDNDR, the Association for Disaster Relief, and the panel of experts on evaluation of seismic risks and earthquake prediction.

## 3. The main types of hazard

Туре	Location	Affected population
Earthquakes (6-9 and higher on the MSK-64 scale)	Mountains and foothills in south and south-east (about 450,000 km², 27 towns and over 400 other built-up areas	About 6 million
Mudslides	Mountains and foothills in south and south-east (about 160,000 km <sup>2</sup> and over 300 mudslide basins in mountains)	Over 4 million
Avalanches	Mountain regions (about	200,000

50,000 km	2	)
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Landslides	Middle and lower altitudes in mountains (about 1,000 km <sup>2</sup> )	100,000
Flooding	Western, central, northern and eastern parts of the country (about 1,500 km²)	8 million
Including floods caused by the disastrous rise in the level of the Caspian Sea	Atyrau and Mangistau regions (about 100 settlements)	1 million
Droughts	Whole country (2.7 million km2)	17 million
Desertifi- cation	Aral Sea region (about 300,000 km <sup>2</sup> )	1.5 million

# 4. Natural disasters in the Republic of Kazakhstan in 1992-1993

Type	Number of incidents	Deaths	Losses thousands of tenge/ thousands of dollars
Earthquakes	3	2	5189 / 1037.8
Hurricanes	10	13	9830 / 1966
Large hailstones	1	Vés	1017 / 203.4
Floods, flash floods	36	11	70809 / 14161.8
Mudslides	3	2	8968 / 1793.6
Fires	39	164	2082 / 416.4
Transport accidents	24	69	143 / 28.6
Industrial accidents	25	30	359 / 71.8

## 5. National social and economic conditions

According to the figures of the State Committee of the Republic of Kazakhstan for Statistics and Analysis:

- The population is 17 million (as of 1 January 1993);
- The gross national product is 21 billion tenge (4 billion dollars);
- The per capita income is 1,235 tenge (245 dollars).

#### 6. Assistance to other countries in natural disaster reduction

The Republic of Kazakhstan has acquired much experience in the evaluation of seismic risks, mudslide and avalanche prediction, earthquake— and mudslide—resistant construction, and the forecasting of dangerous hydrometeorological phenomena.

Our scientific and engineering personnel are able to carry out expert studies and design projects for the protection of land, economic facilities and the population against such natural disasters as earthquakes, mudslides, avalanches and floods.

We are able to conduct training and study courses for foreign experts in seismology, earthquake-resistant construction, and comprehensive protection of land against exogenic hazards.

Close contacts have been established with the People's Republic of China with regard to the problems of earthquake and mudslide protection, and with the Netherlands and Denmark on the problem of the Caspian Sea.

In 1992-1993 the Republic of Kazakhstan provided humanitarian disaster-relief assistance to the Republic of Kirgizstan, the Republic of Tadzhikistan, the Republic of Armenia, the Mongolian People's Republic and the Republic of Afghanistan in a total amount of US\$ 1.7 million.

#### 7. International assistance necessary for natural disaster reduction

The following are the main areas of activity of the Republic of Kazakhstan in the prevention and relief of emergency situations in which international assistance is highly desirable:

- Modern computer equipment for observation and warning systems;
- Automated seismological, meteorological and aerological stations;
- Search and rescue equipment, instruments for locating persons buried under wreckage, portable gas analyzers, portable means of communication, and medical emergency and resuscitation equipment;
- Conduct of expert scientific and technical studies for the technical and economic report on the problem of the Caspian Sea, and elaboration of a comprehensive plan for flood protection of the coastal areas of the Caspian Sea;
- Training of experts at leading centres in problems of natural disasters.

#### SECTION B. STRATEGY AND TACTICS

#### 1. Action taken to achieve the fundamental goals of IDNDR

(a) The overall risk of natural disasters at the national level taken into account in forward planning:

Virtually the whole range of dynamic and geological processes is found in Kazakhstan. Among them, the most dangerous are earthquakes, mudslides and landslides, floods, salination of soil, desertification, and an array of technogenic phenomena.

#### Earthquakes

The risk of earthquakes affects about 450,000 km² of the territory of Kazakhstan occupied by over six million people and up to 40% of the country's economic capacity. The regions subject to earthquakes registering more than nine points on the MSK-64 scale are located in the central part of Northern Tien Shan. Areas subject to quakes registering eight points are found on spurs of the mountain ranges. Quakes registering seven points occur along the foothills, a strip varying in width from 10 to 100 kilometers. The severest earthquakes in the past 100 years were the ones at Vernenskoye (1887, 7.5 points) and Keminskoye (1911, 8.2 points).

## Mudslides, landslides and avalanches

More than  $160,000~\rm km^2$  of territory is subject to mudslides, landslides and avalanches. A number of large towns are located in mudslide zones - Alma-Ata, Tallykoran, Kharkent, Khambyl, Pymkent, etc., where more than four million people live.

In the last 70 years alone more than 700 mudslides have been recorded, many of them of disastrous proportions. The total possible damage caused by mudslides may amount to over US\$ 600 million. Protection against mudslides caused by earthquakes is a considerable problem, for their volume can be several times larger than those caused by rainfall or glacier movement.

Avalanches are a very powerful elemental process. Kazakhstan has about 800 places highly vulnerable to avalanche formation. The volume of a single avalanche can reach a million cubic meters, and the potential damage amount to over US\$ 11 million.

Landslides on mountain slopes are less common. However, as they often occur at lower altitudes in more developed areas, the damage can be considerable (estimated at over US\$ 20 million).

#### Floods

Floods are common in the coastal areas of the Caspian Sea and along lowland rivers in the western, central, northern and eastern parts of Kazakhstan.

Along the Caspian coast the floods are caused both by the rise of over two meters in the sea level in the past 15 years and by storm surges. Owing to the rise in the level of the Caspian, the shore line has retreated by 40-50 meters in places, and about 100 settlements are under

threat of flooding, as are communication lines, oil-drilling installations, farm land, etc. Up to US\$ 30 million is required every year for basic measures to protect the coast against the sea.

Flooding along lowland rivers is caused by high floodwater levels in spring. In 1993 alone 669 settlements suffered from such flooding, and the total damage amounted to about US\$ 60 million.

#### <u>Technogenic</u> disasters

Fires and explosions are a serious problem in Kazakhstan. There were at least 39 incidents in 1992-1993. The damage amounted to about US\$ 100,000.

(b) Plans for natural disaster reduction at the national and/or local level, including prevention and preparedness and issue of warnings.

#### Earthquakes

For the purposes of earthquake protection the Republic of Kazakhstan has taken the following action:

- Preparation and use of seismic zoning and microzoning maps in the design of buildings;
- Research on earthquake-resistant construction of buildings and installations and structural strengthening as a standard practice;
- Permanent observation of seismological activity and evaluation of the possibility of earthquake incidents;
- Education of the population in rules of conduct and procedures to be followed when an earthquake occurs or is imminent, etc.

#### Mudslides, landslides and avalanches

The Government has drafted and approved regional plans for comprehensive protection against mudslides, landslides and avalanches for all the areas subject to these dangerous phenomena; the work envisaged in these plans is being carried out.

#### Floods

A technical and economic report on the Caspian problem was prepared in 1993 as the basis for the protection of the coastal zone against flooding. This report sets out the strategy and tactics for the defence measures and indicative figures for the funding required.

The report has been submitted to the Cabinet of Ministers of the Republic of Kazakhstan for consideration and approval.

With regard to the problem of river flooding, special studies are being made of land subject to flooding in order to identify and correct any inappropriate procedures in its use or in the preparation and implementation of special flood-defence programmes.

(c) Existing access to global, regional, national and local systems for

natural disaster prevention and the issue of general warnings:

Through a number of specialized State organizations the Republic of Kazakhstan has created and is developing local, regional and national systems for the collection, analysis and processing of information and issue of warnings and notifications concerning dangerous geological and hydrometeorological phenomena (earthquakes, mudslides, avalanches, landslides, floods, blizzards, etc.). These systems include more than 1,000 primary observation posts, various means of communication, and regional and national situation analysis and forecasting centres.

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(Many organizations are involved in these activities,) in accordance with the approved plans, including: the Office of the President and Cabinet of Ministers, the State Emergency Situations Commission, Civil Defence Headquarters, various State committees, regional and municipal authorities, the mass communication media, and the population.

In order to obtain seismological information Kazakhstan has a data link with the seismological centres of the Russian Federation, the Republics of Tadzhikistan, Uzbekistan, Kirgizstan and Turkmenistan, and the People's Republic of China.

#### 2. The plan for natural disaster reduction

The existing plan for civil defence and reduction of natural disasters contains provisions, adapted to the type and seriousness of the situation, covering a range of issues connected with the recruitment and provision of manpower and resources for rescue and other emergency operations, notification of the authorities and the population, organization of communications, direction of search and rescue and emergency relief operations, material, food and medical aid, transport, evacuation and welfare of the population.

#### Reaction time

At the national level the time required for the adoption of a decision for implementation by all the relevant authorities is one and a half to two hours. In the event of a major emergency, in particular a severe earthquake, the first echelon of manpower and resources (up to 25 %) arrives during the first 24 hours to carry out rescue and other emergency operations.

#### The agencies, institutes and organizations involved

The State Emergency Situations Commission is the permanently operational body for implementation of State policy concerning the protection of the population and prevention and relief of emergencies caused by natural disasters, and for coordination and supervision of the activities of administrative organs in this matter. Coordination of the monitoring of potentially dangerous sites and the natural environment is the responsibility of the panel of experts for evaluation of seismological risks and earthquake prediction, which includes representatives of the National Academy of Sciences and the ministries

on

and departments responsible for monitoring the state of the natural environment. Local executive organs, ministries and departments of State and major enterprises maintain manpower and resources in a permanent state of readiness, in accordance with the corresponding plans, for action in emergency situations.

#### The executive organs

The regional and municipal authorities and the relevant ministries, departments and corporations are responsible for the manning, equipment and readiness for emergency action of the special and civilian emergency rescue units, and for the proper establishment and readiness of material, food and medical supplies and means of providing for the basic needs of the population.

#### Implementation funds

The measures for natural disaster prevention and reduction, training of emergency rescue units, establishment of logistical and material reserves and other manpower and resources for disaster relief are financed from the budgets of the regional authorities and the relevant ministries and enterprises of State. In exceptional cases when a disaster of regional proportions occurs, the measures are financed from the Government's disaster relief reserve fund.

# 3. Existing and proposed legislation concerning natural disaster reduction

During the period 1989 to 1993 the Government of the Republic of Kazakhstan adopted a number of decisions on various aspects of the problem of emergency situations, including questions connected with the development of the system for prevention and relief of such situations, financing, reserve stocks, rehabilitation work, etc.

Legislative bills are being drafted for regulation of the legal basis for protection of the population and creation of emergency rescue services, and other questions connected with emergency situations.

# 4. Completed and ongoing activities for natural disaster reduction (1985-1993)

(a) Risk zoning: risk assessment

Project title:

"Mapping of underlying risk of mudslides in Kazakhstan"

Status: national

Participating organizations:

- National Academy of Sciences

- Office for construction and operation of mudslide-defence installations

Project cost: US\$ 1.5 million (project completed)

Source of funding: State budget

Address: 480100 Alma-Ata, Rep. of Kazakhstan, ul. Pushkina 99,

Institute of Geography. Tel. 61-80-91.

Project title:

"Preparation of a scientifically justified plan for urgent measures" to ensure the essential operation of economic facilities and protect built-up areas in the circumstances of the increased level of the Caspian Sea"

Status: national

Participating organizations: - National Academy of Sciences - Office of Hydrometeorology

Project cost: US\$ 60,000 (1992-1994)

Source of funding: State budget

Address: 480021 Alma-Ata, Rep. of Kazakhstan, ul. Shevchenko 28, Institute of Hydrogeology and Hydrophysics. Tel. 61-56-12; Telex. 251258, "Nauka" SU.

Project title:

"Technical and economic report on the problem of the Caspian Sea" Status: National

Participating organizations:

- State Water Resources Committee of the Republic of Kazakhstan
- National Academy of Sciences
- Ministry of Construction

- Office of Meteorology

- Project cost: US\$ 130,000 (project completed 1993)

- Source of funding: State budget

Address: 480091 Alma-Ata, Rep. of Kazakhstan, ul. Zheltoksan 118, Goskomvodresursy. Tel. 63-76-01.

Project title:

"Mapping of earthquake risks in Kazakhstan"

Status: national

Participating organizations:

- Institute of Seismology of the National Academy of Sciences Project cost: US\$ 3 million (project completed)

Source of funding: State budget

Address: 480021 Alma-Ata, Rep. of Kazakhstan, ul. Shevchenko 28, Institute of Seismology. Tel. 48-21-34. Telex. 251258 "Nauka" SU.

## (b) Monitoring, forecasting and issue of warnings

Project title:

"Mountains of Kazakhstan"

Status: national

Participating organizations:

- National Academy of Sciences
- Office of Hydrometeorology

Project cost: US\$ 150,000 (1991-1994)

Source of funding: State budget

Address: 480100 Alma-Ata, Rep. of Kazakhstan, Institute of Geography. Tel. 61-80-91.

Project title:

"Earthquake risk" Status: national

Participating organizations:
- National Academy of Sciences

Project cost: US\$ 800,000 (1991-1994)

Source of funding: State budget

Address: 480021 Alma-Ata, Rep. of Kazakhstan, ul. Shevchenko 28, Institute of Seismology. Tel. 48-21-34.

### (c) Short-term defence and readiness measures

Project title:

"Engineering, defence and operational measures at installations and facilities"

Status; regional

Participating organizations:

- "Kazselezashchita" combine
- State Water Resources Committee

- Ministry of Energy

Project cost: US\$ 100 million (annually)

Source of funding: State budget

Address: 480100 Alma-Ata, Rep. of Kazakhstan, ul. 8 Marta 70. Fax. 3272 61-43-98.

Project title:

"Warning, notification, emergency rescue and relief measures"

Status: regional

Participating organizations:

- Civil Defence Headquarters
- "Kazselezashchita" combine
- Office of Hydrometeorology
- Local authorities

Project cost: US\$ 50 million (annually)

Source of funding: national and local budgets

Address: Alma-Ata, Rep. of Kazakhstan, Shtab grazhdanskoi oborony, ul. Baizakova 300. Tel. 44-80-60.

Project title:

"Establishment and development of an automated information management system for emergency situations"

Status: component of national information technology programme Participating organizations:

- Regional authorities
- Ministry of Health
- Ministry of Internal Affairs
- Kazgidromet
- Ministry of Information and Press
- Civil Defence Headquarters and other organizations and institutions Project cost: US\$ 1.26 million (1993-2000)

Source of funding: State and local budgets, ministry and departmental funds

(Address omitted)

(Project title omitted) (Status omitted)

Participating organizations:

- State Emergency Situations Commission
- Institute of Seismology
- National joint-use computing centre of Civil Defence Headquarters
- INDRA Ltd.
- "KasNIIkhimproyekt" and other organizations and institutions Address: 480091 Alma-Ata, Ploshchad Respubliki 4, Office of the President and Cabinet of Ministers, State Emergency Situations Commission. Tel. 62-59-59. Fax. (097) 3272 637 633.

## (d) Long-term preventive measures

Project title:

"Long-term State programme for warnings and action in emergency situations"

Status: State

National and international participating organizations:

- State Emergency Situations Commission (coordination of activities and monitoring of implementation of the long-term programme project

- Ministries and departments of State

- Heads of regional authorities and Alma-Ata and Lenin municipal authorities

Project cost: because of the country's difficult economic situation the costing of the measures of the long-term programme has not been finally completed

Source of funding: State and local budgets, special budgetary funds, funds of ministries, departments, enterprises and organizations of State, insurance funds, loans, voluntary contributions of corporations and individuals, charity funds of social organizations.

Address: 480091 Alma-Ata, Rep. of Kazakhstan, Ploshchad Respubliki 4. Tel. 62-53-63. Fax. 637633.

(e) Land use and risk assessment

Project title:

"Monitoring of compliance with legislation on operation of the land fund"

Status: regional

Participating organizations:

- Local organs of central Government

Project cost: covered by budgets of local organs of central Government Source of funding: State budget

Address: 480091 Alma-Ata, Rep. of Kazakhstan, Cabinet of Ministers. Fax. 63-76-33.

## (f) Public education and information

Project title:

"Measures for the creation of a system for education of the population

and experts in notification of and action in emergency situations" Status; national

Participating organizations:

- Civil Defence Headquarters

- Ministries, departments and organizations of State

Project cost: determined by each organization in the light of needs and capacities

Source of funding: State budget

Executing agencies: ministries, departments and organizations of State

Address: 490070 Alma-Ata, Rep.of Kazakhstan, ul. Baizakova 300.

Tel. 44-80-60.

# 5. Plans for full achievement of the IDNDR goals by 1999

In view of the country's difficult economic situation, the plans for achievement of the IDNDR goals by 1999 are still in the preparatory stage.

### SECTION C. COOPERATION

### 1. Publications on IDNDR issues

- Materials of the international Soviet-Chinese-Japanese symposium on natural disasters, 20pp., "Kazselezashchita", Alma-Ata, 1991.

- Publications of the Kazakh Scientific Research Institute on earthquake-resistant construction, 10pp., KazNIISSA, 1991.

- "Earthquake prediction", 20pp., Kurskeyev A.K., Institute of Seismologyy, Alma-Ata, 1990.

- Series of articles on earthquake topics, 100pp., Institute of Seismology, Alma-Ata, 1990-1993.

- Annual catalogues of earthquakes in Kazakhstan 1990-1993, 6pp. Institute of Seismology, Alma-Ata.

- Materials of the first Kazakh-Chinese symposium on earthquake prediction, 10pp., Institute of Seismology, Alma-Ata, 1992.

- "Mudslides in Kazakhstan", 10pp., Medeuov A.P., Kolotulin I.P. and Keremkulov V.A., Alma-Ata, 1993.

- "Prediction of glacier-induced mudslides (methodology)", 4pp., Khomendyuk Y.V., Plekhanov P.A. and Tokmagambetov G.A., Institute of Geography, 1985.

-Collected publications: mudslides, 80pp., Kazakh Hydrometeorological Institute, 1972-1993.

- "Assessment of landslide risk in mountainous terrain", 15pp., Seversky I.V. and Blagoveshensky V.P., Institute of Geography, 1983.

- "Avalanche regions of Kazakhstan", 12pp., Seversky I.V. and Blagoveshensky V.P., Institute of Geography, 1990.

- Collection of articles on problems of mudslide-defence measures, 30pp., "Kazselezashchita", Alma-Ata, 1990-1993.

- Annual "Review of dangerous hydrometeorological phenomena", Office of Hydrometeorology, Alma-Ata.

- Monthly meteorological bulletins, Office of Hydrometeorology, Alma-Ata.

#### 2. IDNDR meetings and conferences held or planned

- UNDRO study seminar on topics of seismic and geological hazards. their cartography and prevention, October 1990.

- Ministry of Foreign Economic Relations of USSR, Academy of Sciences

of USSR, Moscow, Frunze, Alma-Ata.

- Soviet-Chinese-Japanese symposium on natural disasters, September 1991, Institute of Seismology, Alma-Ata.

- International symposium on earthquake bioprecursors, September 1993, Institute of Seismology, Alma-Ata (CIS countries).

#### 3. Current or planned partnerships and cooperation with other countries in connection with IDNDR

- People's Republic of China: State Seismology Bureau, Academy of Sciences, Department of Water Resources.

- Netherlands: Ministry of Transport and Public Works.

- Federal Republic of Germany: Federal Ministry of Internal Affairs.

- Italy: Council of Ministers of the Italian Republic. CIS countries: Russian Federation, Republic of Belarus, Ukraine, Republic of Moldova, Republic of Armenia, Republic of Georgia, Republic of Azerbaijan, Kirgiz Republic, Republic of Tadzhikistan and Turkmenistan.
  - Denmark: Aalborg University.

#### SECTION D. ASSESSMENT

#### 1. General assessment of disaster reduction programmes

The Republic of Kazakhstan has prepared a comprehensive programme of work on the problem of natural disasters. The programme contains an analysis of the status of this problem and an outline of the basic means of solving it, including: scientific research, monitoring of the situation and forecasting of dangerous conditions, creation and development of an observation network, development and introduction of methods of forecasting dangerous conditions, various organizational measures, establishment of reserve stocks, improvement of means of communication, engineering and technical measures, etc. The long-term programme is currently being considered by the ministries and departments concerned. The main constraint on the programme's implementation is the lack of sufficient funds.

#### 2. Review of IDNDR

During the discussion of the report of the Secretary-General on the International Decade for Natural Disaster Reduction at the forty-eighth session of the General Assembly the Republic of Kazakhstan made a number of proposals which might be taken up in the second half of the Decade:

1. Assign global status to the problem of the Caspian Sea and seek to solve it under the auspices of the United Nations with corresponding

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financial support from the relevant organizations.

- 2. Include Alma-Ata among the cities selected for case studies under the project of the United Nations Centre for Human Settlements (Habitat).
- 3. Elaborate an international programme of the United Nations on earthquake reduction in Central Asia. To coordinate activities under the programme and ensure its implementation, establish in Alma-Ata an international centre of the United Nations on problems of earthquakeresistant construction and seismology.