

REPUBLIC OF BULGARIA
FOCUS CENTRE FOR NATURAL DISASTER PREVENTION MEASURES

NATIONAL REPORT
OF THE REPUBLIC OF BULGARIA
FOR THE INTERNATIONAL DECADE OF DISASTER PREVENTION AND RELIEF
(SUMMARY)

SOFIA

1994

NATIONAL REPORT
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CHAPTER "A" : PROFILE

1. MEMBERS OF THE NATIONAL COMMISSION (the focus centre)

National Commission - Standing Commission for Protection of the Population in Case of Natural Calamities and Accidents at the Council of Ministers.

MEMBERSHIP:

Members
[Num.]

MINISTRIES:

[29]

[15]

Council of Ministers	-3
Ministry of Foreign Affairs	-1
Ministry of Health	-1
Ministry of Agriculture	-1
Ministry of Environment	-1
Ministry of Defence	-1
Ministry of Industry	-1
Ministry of Transport	-1
Ministry of Territorial Development and Construction	-1
Ministry of Labour and Social Maintenance	-1
Ministry of Finance	-1
Committee for Use of Nuclear Energy for Peaceful Purposes	-1
Committee of Energy	-1

HIGH SCHOOLS AND SCIENTIFIC INSTITUTES:

[4]

University of Sofia "St. Clement of Okhrid"	-1
National Institute of Statistics	-1
Institute of Geophysics - Bulgarian Academy of Sciences	-1
National Institute of Meteorology and Hydrology	-1

PRIVATE SECTOR:

[0]

SOCIAL SERVICES:

[6]

Direction of National Police	-1
National Fire Protection Service	-1
Civil Defence Administration	-2
National Electric Company	-1
Committee of Post Offices and Long-Distance Communications	-1

<u>NON-GOVERNMENTAL ORGANISATIONS:</u>	[3]
Bulgarian Red Cross	-1
Union of Builders-Designers in Bulgaria	-1
Union of Scientists in Bulgaria	-1
<u>MEDIA:</u>	[0]
<u>ENSURANCE COMPANIES:</u>	[0]
<u>OTHERS:</u>	[3]
Scientific Co-ordinating Council	-1
Military Medical Academy	-1
Bulgarian National Bank	-1

2. INTERNAL REGULATIONS OF THE COMMISSION:

The Commission is a body within the framework of the Council of Ministers. It is composed of a Chairman, a Deputy-Chairman, a Secretary and representatives of Ministries, Offices, Departments and Organisations which are related to its functions. The Deputy-Prime Minister is at the head of the Commission. The Chief of the Civil Defence Office and his Deputy are appointed as Deputy-Chairman and Secretary respectively.

The members of the Commission are approved by order of the Prime Minister.

The work of the Commission is assisted by a staff lead by the Commission's Secretary.

The Standing Commission for the Protection of the Population from Natural Calamities and Accidents has the following functions:

1. It maintains an awareness of the general conditions and the state of readiness of the country to meet natural calamities and accidents.
2. It assists and supervises Ministries, Departments, Regional and Municipal Administrations, economic and other organisations in order to find out whether they are ready to act in zones affected by natural calamities and accidents.
3. It assigns to Ministries, Departments, Regional and Municipal Administrations, economic and other organisations the task of preparing reports and information concerning the condition of certain projects which constitute potential security hazard for the population, concerning preventive activities, accident planning and the preparation of the commissions, staffs, people and means of action in zones affected by natural calamities and accidents.
4. It organises, directs, co-ordinates and supervises the implementation of rescue operations as well as other urgent activities in case of natural calamities and accidents.

Such commissions are respectively set up in the Ministries, Departments, Local Administration and at all projects of potential risk on the entire territory of the country.

3. MAIN HAZARDS

TYPE	LOCALISATION	POPULATION AFFECTED (casualties)
EARTHQUAKES	<p>The territory of the Republic of Bulgaria is subjected to considerable seismic activity. It is affected by nine external seismic foci of earthquakes and by three internal seismic areas.</p> <ul style="list-style-type: none"> - Northeastern area: it includes the Gorna Oryahovitza and Shabla seismic areas (M 7,1-7,5; D=20 km in depth; Y=10th degree of intensity). - the Sredna gora area: it includes the seismic areas of Sofia, the Maritza and the Tundja rivers (M 7,4 - 7,5; D=20 v 100 km; Y=11th degree of intensity). - the Rila - Rhodopes area: it includes the seismic areas of the Struma river, the Mesta river and the town of Velingrad (M7,4 - 7,5; D=20 v 100 km; Y=10th degree of intensity). - Earthquakes of a magnitude of 4-9 degrees according to the scale of Richter is possible in the indicated seismic areas. The highest readings of 7,6 - 8.0 are expected in the Shabla seismic area. Besides these areas there are other less important areas still in the process of being formed in Bulgaria, in which the maximum seismic activity is expected to come up to 4 degrees according to the scale of Richter. <p>Devastating effects are also possible outside the territory of Bulgaria.</p>	<p>Nearly 6 million people of the Bulgarian population are within the range of the nine external seismic foci and the three internal seismic areas.</p> <ul style="list-style-type: none"> - Partial or complete destruction of 30% of the buildings of Bulgaria is possible. - 30-50% of water and power supply systems of Bulgaria may be expected to be destroyed. - There is a possibility of explosions, fires and the destruction of about 25-35% of the industrial complexes and the water supply equipment of the country. -The list of the most devastating earthquakes in Bulgaria goes as follows: <ul style="list-style-type: none"> - Sofia - 1818 -- 9^o, 1858 -- 9^o, 1917 - 7^o. - Kresna - 1904 - 10^o. - G.Oryahovitza - 1913 -- 9-10^o. - Plovdiv - 1928 -- 9-10^o. - Chirpan - 1928 -- 9-10^o. - Vranča (Romania) - 1977 -- 7- 8^o. - Strajitza- 1986 - 8^o.

TYPE	LOCALISATION	POPULATION AFFECTED (casualties)
	<p><u>Romania</u> - The seismic area of Vrancha lies at an average distance of 180 - 220 km from the Bulgarian border; the depth of its seismic focus is $D = 80-120$ km and the magnitude is $M = 7,0$.</p> <p><u>Serbia</u> and other former republics of Yugoslavia belong to the same seismic area as Bulgaria.</p> <ul style="list-style-type: none"> - The area of Valadovsk lies 30 - 40 km from the border. $D = 20$ km. $M = 6,5 - 7,0$. - The area of Moravsko lies 70 - 120 km from the border. $M = 6 - 6,5$. <p><u>Greece</u> - the Marble Sea area lies 100 - 150 km from the border. $M = 7,5 - 8,0$. $D = 10$.</p> <ul style="list-style-type: none"> - The Ksanti area lies 60-100 km from the border. $M = 7 - 7,5$. - The Thesaloniki area lies 60 - 80 km from the border. $M = 7,0$. $D = 40$ km. 	
FLOODS	<p>Floods occur after abundant rains or quick melting of snow.</p> <p>Floods are characteristic of the following areas:</p> <ul style="list-style-type: none"> - the river valleys of the Yantra, Maritza, Tundja and Mesta. - the river basins of the following dams: Iskar, Batak, Topolnitza, Zhrebchevo, G.Dimitrov, Kardjali, G.Traikov (Tzonevo), and Pyasachnik. <p>- floods in the lower reaches of the Danube (i.e. the northern border of Bulgaria) may occur as a result of:</p> <ul style="list-style-type: none"> (a) An accident at the hydrocomplex "Iron Gates" at the border between Serbia and Romania. (b) Abundant rain, snow melting and ice-break from Central Europe. 	<p>If the floods are caused by dams an area of</p> <ul style="list-style-type: none"> -- 910 sq. km; -- 83 residential places; -- and population of 646,000 may be affected. <p>If the floods are caused by the Danube,</p> <ul style="list-style-type: none"> -- 30 towns and villages and among them the towns of Vidin, Lom, Oryahovo, Belene, Tutrakan and Silistra, -- and 7,800 hectares of cultivated lands would be affected.

TYPE	LOCALISATION	POPULATION AFFECTED (casualties)
LANDSLIDES	<p>There are 702 landslides and abrasive areas registered in Bulgaria and among them:</p> <ul style="list-style-type: none"> - 428 are in an active phase of development; - 274 are conditionally at a standstill; <p>the biggest foci are situated along the Black Sea coast and the banks of the Danube river and near the towns of Veliko Turnovo, Gabrovo, Pernik, etc.</p>	<p>The indicated regions and living areas include a population of more than 500,000 people and about 8000 hectares of cultivated lands.</p>
FIRES	<p>Fires are a characteristic calamity in:</p> <ul style="list-style-type: none"> - forest areas; - industrial enterprises (esp. the ones processing leather, textile, etc. and the ones producing pharmaceuticals or using synthetic raw materials, plastics, rubber, paints, explosives and easily inflammable substances). <p>In the period of 1982-1992 there were 94,595 fires. The biggest number (23,595) was registered in 1992 - 93. An increase in the number of fires has been registered since 1988. Between 1989-91 their annual number was about 10,000 - 13,000. Small-scale fires and forest fires account for the biggest part of fire increase for the last four years (1989-92), amounting to about 50% of the total annual figure.</p>	
SNOWSTORMS, ICE-OVERS AND SNOWDRIFTS	<p>In winter time when the temperature goes below zero degrees Centigrade and in case of strong winds one can observe ice-overs and snowdrifts on the whole territory of the country. They can cause:</p>	<p>In case of snowdrifts in the indicated areas (nearly 50% of the country's territory) more than 6 million people of the population of the country would be affected.</p>

TYPE	LOCALISATION	POPULATION AFFECTED (casualties)
	<ul style="list-style-type: none"> - Power failures owing to breaking or disconnection of the long-distance power supply; disruption of outdoor communication equipment; - Vast areas (possibly the whole country) in the Northeastern part of Bulgaria - the towns of Razgrad, Shumen, Dobrich; in the Southeastern part of Bulgaria - the towns of Burgas, Sliven, Yambol, Haskovo, Stara Zagora may find themselves in a disastrous situation. - Breaches in water supply, transport, food delivery and power supply. 	

4. RECENT NATURAL CALAMITIES

TYPE	LOCALISATION	POPULATION (casualties)	DAMAGES (in leva)
FIRES			
1990			

179	Storehouses, plant and factory premises, agricultural shelters and haylofts. Civil Defence Units took part in putting the fires out.		5, 457, 057
1991			

4, 654	Plant and factory premises and storehouses, agricultural buildings and private houses.	16 killed 1 wounded	17, 319, 654
1992			

17, 972	Factories and plants, forest areas and agricultural buildings, as well as private houses.	40 killed 33 wounded	55, 102, 654
1993 till 31 October			

23, 309	Agricultural and forest fires predominate. The number of fires in private houses is considerable too.	18 killed 63 wounded	57, 501, 380

TYPE	LOCALISATION	POPULATION (casualties)	DAMAGES (in leva)
Total number of fires registered from 03.07.1990 to 31.10.1993	Civil Defence units took part in putting out the fires.	74 killed 97 wounded	135, 380, 591
----- 46, 114			
EARTHQUAKES			
1990		None	None
----- 1			
1991		None	None
----- 9			
1992		None	None
----- 9			
1993 till 31 October	Most of the earthquakes are registered South, South-West or South-East of Sofia (160-190 km outside the territory of Bulgaria) and their magnitude is 2-4th degree.	None	None
----- 10			
SNOWDRIFTS, ICE-OVERS			
1990		None	None
----- 0			
1991		None	None
----- 3			
1992		None	None
----- 4			
1993 till 31 October	Thick snow cover in the areas of Yambol, Trudovo, Burgas, Varna, Dobrich, Montana, Russe. Transport and power supply under pressure.	6 killed 11, 885 animals	56, 983, 355
----- 10			

TYPE	LOCALISATION	POPULATION (casualties)	DAMAGES (in leva)
FLOODS			
1990 ----- 7	As a result of heavy rains the areas of the towns of Momchilgrad, Razgrad, Lovetch and Kazanlak are flooded. Civil Defence units took part in the efforts to minimize the repercussions.	10 killed	101, 517, 172
1991 ----- 14		None	213, 787, 774
1992 ----- 23	As a result of heavy rains private houses and industrial storage houses are flooded and road surface ruined.	1 killed	78, 656, 000
1993 till 31 October ----- 10		None	2, 100, 000
LANDSLIDES			
1990 ----- 0		None	None
1991 ----- 3		None	None
1992 ----- 2		None	None
1993 till 31 October ----- 4		None	500, 000
HAILSTORMS			
1990 ----- 0		None	None

TYPE	LOCALISATION	POPULATION (casualties)	DAMAGES (in leva)
1991 ----- 6	Damages caused on agricultural products in the regions of Silistra, Targovishte and Razgrad.	1 killed	138, 700, 822
1992 ----- 16	Crops affected in the municipalities of Silistra and Tutrakan.	4 killed 3 wounded	5, 720, 000
1993 till 31 October ----- 12		None	4, 570, 000
RAINS, STRONG WINDS AND STORMS			
1990 ----- 0		None	None
1991 ----- 0		None	None
1992	Long-distance power supply lines and long-distance communication equipment are destroyed in the regions of Varna, Shumen, Plovdiv, Stara Zagora, Silistra and Razgrad.	None	None
1993 till 31 October ----- 12	Heavy rains block the road Samokov - Kostenetz. In the area of Borovetz an automobile and a bungalow are damaged. On the road Grohotno - Teshel due to heavy rains and storm winds two bridges are destroyed.	2 killed	6, 570, 000

5. SOCIAL AND ECONOMIC CONDITIONS OF THE COUNTRY (data for 1992)

- population 8, 484, 862
- gross national product 195, 000, 000 leva
- income per capita 20, 631 leva/per person

Note: The figures are the ones used in this country and are not converted into foreign currency. For this reason the values are around 30 times as high.

6. CAPABILITY OF GIVING ASSISTANCE TO OTHER COUNTRIES IN THE FIELD OF DISASTER PREVENTION AND RELIEF.

The Republic of Bulgaria has at its disposal highly qualified experts with acknowledged scientific degrees and titles, who are competent in implementing the preventive measures against the effect of earthquakes, landslides, floods, epidemics and other natural calamities occurring in this country. Due to their practical experience and research effort, the respective legislation has been passed. These people are mainly well-known scientists from the Bulgarian Academy of Sciences, Agricultural Academy of Sciences, the University of Construction and Geodesy, the Technical University and other institutions.

7. INTERNATIONAL AID NEEDED IN THE FIELD OF DISASTER PREVENTION AND RELIEF.

The Republic of Bulgaria does not need, at this stage, international assistance in terms of scientific, technical or any other kind of expertise on disaster prevention and relief.

CHAPTER "B": STRATEGIES AND ACTIVITIES

I. MEASURES ADOPTED FOR THE IMPLEMENTATION OF THE THREE MAIN TASKS OF THE DECADE

(A) Natural calamity hazard assessment made at national level.

On the basis of analysis of the probable situation in the Republic of Bulgaria at national level, the following hazard assessment of natural calamities could be made:

1. In terms of its seismic conditions Bulgaria is classified as a grade two country. Nearly 70% of its territory are regions with intensity of 7th degree and about 15% could expect higher readings. 94 towns and villages with a total population of 6 300 000 people are located in earthquake regions. 28% of the buildings would be entirely destroyed.

2. Floods may occur owing to heavy rains, snow-melting or in case of partial or total destruction of dam's walls.

The most disastrous floods may take place in the river basins of the main dams and affect areas equal to 910 sq. km with 83 towns and villages within its range and with population of nearly 650 000 people. Thirty towns and villages with 510,000 inhabitants and 72,800 hectares of cultivated land are in danger of being fully or partially flooded at the basin of the Danube river on Bulgarian territory.

In case of strong and continuous winds and an earthquake with an epicentre in the Black Sea there is a possibility of partial floods on the sea shore.

3. Owing to the specific features of its climate, the country may be hit by prolonged droughts, hurricanes, storms, hails and others, that may inflict considerable material damage. The quick change of temperatures in winter-time brings abundant snowfalls, accompanied by strong winds. Snow-drifts emerge on the road and railway traffic lines and on the roads in the mountains. Long-distance electricity supply and communication equipment in the open air become ice-bound.

Snow storms and snow-drifts acquire the dimensions of a natural calamity each 2 or 3 years.

4. Other disasters on the territory of the country are caused by landslides. There are 693 registered landslides and abrasive areas, 415 of which are in an active cycle of development while 278 are conditionally stabilised.

5. Fires as a natural calamity are characteristic of the vast forest areas.

6. Dust storms, known as "tornadoes", occur with some regularity but are practically unpredictable for the different regions of the country. They can cause considerable material damage in the affected areas.

7. There is a certain risk of a radiation accident in the Nuclear Power Plant of "Kozlodui" with consecutive radioactive contamination of vast areas of the country in case of an earthquake.

8. The veterinary authorities in the Ministry of Agriculture carry out regular supervision and epizootological tests and analysis in order to prevent diseases among domestic animals. Conditions in the country does not favour animal diseases of plague, tuberculosis, rabies, etc. but these may

be transmitted into the country across the border. In order to prevent the emergence of foci of animal contamination, the veterinary authorities adopt regular measures which include protection of the population.

Natural disaster hazard assessment are essential for the development of Civil Defence planning at all levels.

(B). DISASTER RELIEF PLANNING ON NATIONAL AND LOCAL LEVELS, INCLUDING PREVENTION MEASURES AND LONG-TERM PREPARATION AND CONSCIOUSNESS-RAISING OF THE POPULATION.

In order to minimize the after-effects and to take the necessary preventive measures in case of natural disaster a National Plan of Action and plans at the level of Ministries, Offices and Regional administrative bodies have been worked out.

The plans consist of a general forecast of possible natural calamities, conclusions about the probable situation and the tasks that follow, maintaining the readiness of disaster relief task forces for action, organising, coordinating, monitoring and ensuring support for the preventive and rescue operations.

Plans on the national and local levels are not geared towards a certain period of time. They are regularly reappraised and updated and all organisational and structural staff changes in the authorities in charge of natural disaster prevention and relief measures.

The process has started in this country for the preparation of the respective legislation and regulations concerning the activity of the relevant structures.

A long-term programme provides for the development of the regulations for the organisation and activity of the administrative and local bodies in case of natural disasters. Other legislative acts, such as the creation of a normative base in the field of construction and investment for the purposes of a differentiated administrative control, the organization of preventive planning against natural calamities and industrial accidents.

(C). FAVOURABLE CONDITIONS OF ACCESS TO THE GLOBAL REGIONAL, NATIONAL AND LOCAL ALARM SYSTEMS AND PROMPT DIFFUSION OF ALARM SIGNALS.

The basic systems of recording natural disasters and accidents and of notifying the population in the country are of national and local significance.

The Civil Defence Administration receives information about natural calamities from the Ministries and Central Bodies (the Committee for the Use of Nuclear Energy for Peaceful Purposes, the National Institute of Metallurgy and Chemistry, the Ministry of the Environment) and also from persons on duty at the regional and municipal centres via the Centre for Information and Analysis of the Civil Defense.

The Civil Defence has at its disposal an automated notification system which is part of the state automated system. The system is centralised and can notify the population of the country in case of a critical situation within three minutes.

There is a guaranteed possibility of decentralised notification on lower levels (districts, regions and municipalities).

Diffusion of information about the type of the disaster or accident as well as the instructions for the conduct of the population is provided through the following subsystems of the automated system for notification of the Civil Defence:

- Subsystem "Sirens": it functions through in-built siren-signalling network deployed on the whole territory of the country;
- Subsystem "Radio transmitters": it provides automatic access to the central studio of the Bulgarian National Radio. A decentralised use of national radio transmitters is also provided at regional level;
- Subsystem "Screen": it provides automatic access to the emergency studios of the Bulgarian National Television;
- Subsystem "Radio equipment": provides the opportunity for automatic access to the radio broadcasting units of towns and villages on regional and municipal levels.

When natural calamities or industrial accidents are registered in the country, such as earthquakes, floods, radiation accident etc., the relevant institutions (the Institute of Geodesy, the National Institute of Meteorology and Hydrology, the Committee for the Use of Nuclear Energy for Peaceful Purposes and others) share the necessary information with the relevant International Organisations and Centres using international telephone and telegraph channels.

2. UPDATED NATIONAL PLAN FOR PREVENTIVE MEASURES AGAINST NATURAL DISASTERS

In order to protect the population and the national economy from eventual natural calamities and accidents a National Plan of Action has been worked out which is to be put into practice in cases of disastrous earthquakes, industrial accidents, natural calamities, etc.

It is provided with a graphic part (map) and a textual part, accompanied by an explanatory note.

Annexes (plans) are attached to the National Plan of Action as follows:

- Plan of Action in case of disastrous earthquakes;
- Plan of Action in case of industrial accidents;
- Plan of Action in case of radiation mishap at the Nuclear Power Plant "Kozlodui";
- Plan of Action in case of snow-drifts; ice-overs, floods, fires and other natural calamities.

The National Plan of Action is regularly updated in compliance with the changes that occur.

(A). DURATION

The structure of the National Plan has been elaborated in such a way as to enable the document to be used for a longer period of time.

The Plan is updated in case of changes in or newly arrived data differing from the data on which the previous version was based, in case conditions change in the course of its implementation, or in case of alterations in the basic documents and the relative legislation.

(B). BODIES, INSTITUTIONS AND ORGANISATIONS CONCERNED:

The National Plan is mandatory for:

- Ministries and Offices which are in charge of elaborating Plans of their own, aimed at protecting the population and the national economy in case of natural disasters, industrial accidents and catastrophes;
- Regional and Municipal Administrations, Mayors and Companies which are responsible for the elaboration of plans of their own, aimed at protecting the population and the national economy in case of natural disasters and industrial accidents.

The general supervision, co-ordination and control over the organisation and management of the rescue and repair operations in case of natural calamities and catastrophes is performed by a Standing Commission for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers.

(C). EXECUTIVE BODIES:

Different Ministries, Offices, Territorial and Administrative Bodies, companies and others are involved in the accomplishment of the National Plan for the protection of the population in case of natural calamities and industrial accidents.

The main executive bodies for the protection of the population and the national economy in case of natural calamities are as follows: the Civil Protection Office of the Republic of Bulgaria, the Ministry of Defence, the National Fire Protection Service, the Ministry of Internal Affairs, the Head Department of the Construction Forces in the Army, the Army Units of the Ministry of Transport, the Ministry of Health, the Ministry of Agriculture, the Ministry of Environment, the Ministry of Territorial Development and Construction, the Ministry of Transport, the Ministry of Trade, the Ministry of Foreign Affairs, the Committee for the Use of Nuclear Energy for Peaceful Purposes, the Ministry of Post-Offices and Long-Distance Communications, the Bulgarian National Radio, the Bulgarian National Television, the Bulgarian Academy of Sciences, the Medical Military Academy, the National Committee of the Bulgarian Red Cross, the structures of local administrative authorities and others.

(D). FUNDS AVAILABLE FOR THE IMPLEMENTATION OF THE PLAN

The measures for the implementation of the Plan are financed by:

- the Republican Budget: it finances measures of international, national or interdepartmental nature;
- the local budgets of the regional and municipal administrations: these finance regional measures;
- economic organisations (companies): they finance their own needs.

Funds are planned with a definite purpose in view.

Self-managing subjects, companies and organisations finance themselves all the measures, connected with the Plans of Action in case of natural calamities and accidents.

Finances from the budget fund "Natural Calamities and Industrial Accidents" are provided for minimizing the effects of natural disasters, accidents and catastrophes.

The chief of the Civil Defence Administration of the Republic of Bulgaria is provided with a special reserve of different kinds of equipment, machinery and apparatus in order to meet the requirements of rescue and repair activities.

3. LEGISLATION ADOPTED IN THE FIELD OF NATURAL DISASTER PREVENTIVE MEASURES.

- Law providing for assistance in case of large-scale disasters, 1948.
- Regulations for the arrangement and management of rescue operations and other urgent action in case of natural calamities and large-scale industrial accidents, 1988.
- Ordinance No. 27 of the Council of Ministers, dated July 4, 1984, for the elimination of the effects of natural calamities and big industrial accidents in the country.
- Decree No. 265

4. DISASTER RELIEF ACTIVITIES: SUCCESSFULLY ACCOMPLISHED OR STILL IN THE PROCESS OF IMPLEMENTATION

(A). APPRAISAL OF RISK AREAS: HAZARD ASSESSMENT

TITLE OF THE PROJECT

1. An automated system for forecasting the situation in the country after major earthquakes based on generalised indications for level three reference basis: municipality.

STAGE OF EXECUTION:

The development of the software is underway: about 60% of it has been prepared.

A cadastral base for the buildings in the country is yet to be developed.

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT

The Bulgarian Academy of Sciences - the Institute of Geophysics

VALUE OF THE PROJECT

32, 000 levs

FINANCING:

The Standing Committee for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY:

The Bulgarian Academy of Sciences - Sofia 1113 - The Institute of Geophysics

LOCATION (NO. of Tel. and Fax) OF THE RESPONSIBLE BODY:

The BAS - the Institute of Geophysics - Sofia 1113
 Acad. G.Bonchev bl.3, municipality "Slatina"
 Prof.Liudmil Khristoskov - ???
 Tel. 70 03 28
 Tlx. 22 632

TITLE OF THE PROJECT

2. Determining the resistance of buildings and constructions in response to seismic impacts, taking into account the physical unlinearity of the construction.

STAGE OF EXECUTION

The development of the software is under way. 50% of it has been prepared.

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

The Technical University of Architecture, Construction and Geodesy
 The Scientific and Research Institute of Construction

VALUE OF THE PROJECT:

90, 000 leva.

FINANCING

The Standing Committee for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY:

The Scientific and Research Institute of Construction
 Sofia - Nikola Petkov BuL. 36

LOCATION (No. of Tel. and Fax) OF THE RESPONSIBLE BODY:

The Scientific and Research Institute of Construction
 Sofia - Nikola Petkov bul. 36
 Prof. Mincho Dimitrov
 Tel. 56 69 40
 Fax 55 61 65

TITLE OF THE PROJECT

3. Examination of the stability and shift of landslide slopes, taking into account seismic impacts.

STAGE OF EXECUTION

80 % of the volume of the project has been completed.

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT

The Scientific and Research Institute of Construction

VALUE OF THE PROJECT

45, 000 leva

FINANCING

The Standing Committee for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY:

The Scientific and Research Institute of Construction

Sofia - Nikola Petkov bul. 36

M.Sc. Eng. M. Stakev

tel. 70 02 64; Fax 55 61 65

TITLE OF THE PROJECT

4. Types, dynamics and mechanism of creation and activation of disastrous landslides along the Danube.

STAGE OF EXECUTION

The project has been completed in full.

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT:

The Bulgarian Academy of Sciences - the Laboratory of Geotechnics

VALUE OF THE PROJECT

45, 000 leva

FINANCING:

The Standing Committee for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY:

The Bulgarian Academy of Sciences - the Laboratory of Geotechnics

Acad. G. Bonchev BL. 3 Municipality "Slatina"

Sc.w. M.Sc. G.Frangov

Tel. 70 02 64

Tlx. 22 632

TITLE OF THE PROJECT

5. Examination, engineering analysis and assessment of important potentially hazardous projects and constructions.

STAGE OF EXECUTION

100 % completion at this stage without a comprehensive limit on the volume of the task.

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

The Scientific and Research Institute of Construction

VALUE OF THE PROJECT

120, 000 leva

FINANCING:

The Standing Committee for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY:

The Scientific and Research Institute of Construction

Sofia - Nikola Petkov bul. 36

LOCATION (No. of Tel and Fax) OF THE RESPONSIBLE BODY:

The Scientific and Research Institute of Construction

Sofia - Nikola Petkov bul. 36

S.Sc.W. I Dr. Peter Chernev; Fax: 55 61 65

TITLE OF THE PROJECT

6. Seismic characteristics of the territory of Bulgaria and the adjoining lands

STAGE OF EXECUTION:

Yet to begin.

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT

The Bulgarian Academy of Sciences - the Institute of Geophysics

VALUE OF THE PROJECT:

Yet to be financed.

FINANCING

The Standing Committee for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY:

The Bulgarian Academy of Sciences - Sofia 1113 - the Institute of Geophysics.

LOCATION (No. of Tel and Fax) OF THE RESPONSIBLE BODY:

The BAS - the Institute of Geophysics - Sofia 1113

Acad. G.Bonchev BL. 3, Municipality "Slatina"

TITLE OF THE PROJECT:

7. Experimental definition of behaviour and security of large-panel dwelling edifices, taking into account the pressure of horizontal forces.

STAGE OF EXECUTION:NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

The Scientific and Research Institute of Construction

VALUE OF THE PROJECT

800, 000 leva

FINANCING

The Ministry of Industry and Trade

EXECUTIVE BODY

The Scientific and Research Institute of Construction

Sofia - Nikola Petkov bul. 36

Prof. Mincho Dimitrov ; Tel 56 69 40; Fax 55 61 65

TITLE OF THE PROJECT:

Building of a system and structures for epizootological surveillance of the foot-and-mouth disease in the risk areas of virus infiltration.

STAGE OF EXECUTION

Initial stage

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

Representatives of the Administration of the National Veterinary and Medical Service and of the Central National Institute for Veterinary and Medical Research.

VALUE OF THE PROJECT

800, 000 leva

FINANCING

The National Veterinary and Medical Service - Sofia

EXECUTIVE BODY:

National Veterinary and Medical Service - Sofia

LOCATION (No. of Tel and Fax) OF THE RESPONSIBLE BODY:

National Veterinary and Medical Service - Sofia

Tel. 54 971 / 363 : 52 14 42

(B) SURVEILLANCE, FORECAST AND ALARM

- Earthquakes in Bulgaria are registered at the Institute of Geophysics within the Bulgarian Academy of Sciences by the National Operational Telemetric System for Seismologic Information (NOTSSI). The information is collected at 13 stations for seismic information, deployed on the territory of the country.

Executive and responsible body is the Institute of Geophysics within the Bulgarian Academy of Sciences - Tel. 70 02 93, Tlx.: 23 381: 23 382: 22 632.

- The water level of the Danube is monitored by 5 stations, which deliver the necessary information to the Department of Maintaining the water level of the Danube river in the Russe area.

The Department in charge sends information to the regional centre of the National Institute of Meteorology and Hydrology - Sofia.

Executive and responsible body is the National Institute of Meteorology and Hydrology - Tel. 72 22 71 : Tlx. :22 490: Fax; 88 44 94.

- In case of dam accidents, there is a system of notification, established specially for the population in the potentially endangered areas of the "Iskar" dam.

Up to now the system has been completed to its second stage, i. e. about 40 km.

The system is financed by the Greater Municipality of Sofia.

The project is being constructed by an army unit.

The Greater Municipality of Sofia is the responsible body - Tel. 87 88 75:

Fax : 87 91 76: Tlx 22 670.

(C). SHORT-TERM PREVENTIVE MEASURES AND PREPARATION:TITLE OF THE PROJECT

1. Epizootological analysis of the classical plague on swine in Bulgaria for the period of 1979 - 1994.

STAGE OF EXECUTION

Opening stage

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT

The National Veterinary and Medical Service in Sofia and the Central Scientific and Research Veterinary and Medical Institute

VALUE OF THE PROJECT

600, 000 leva

FINANCING

The National Veterinary and Medical Service in Sofia and the Central Scientific and Research Veterinary and Medical Institute

EXECUTIVE BODY

The Central Scientific and Research Veterinary and Medical Institute.

LOCATION (No. of Tel and Fax) OF THE RESPONSIBLE BODY:

National Veterinary and Medical Service in Sofia

Tel. 54 971/ 363: 52 14 42

TITLE OF THE PROJECT

2. Expert assessment of the exploitation fitness of small dams for land improvement purposes.

STAGE OF EXECUTION**NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT**

A joint project of the Department of Hydrotechnics of the University of Architecture, Construction and Geodesy, experts from the Bulgarian Academy of Sciences, VOD PROJECT and the Ministry of Agriculture.

VALUE OF THE PROJECT

150, 000 leva

FINANCING

National Council of Water

EXECUTIVE BODY

The Scientific and Research Section at the University of Architecture, Construction and Geodesy

LOCATION (NO. of Tel and Fax) OF THE RESPONSIBLE BODY:

Head of the Project: Prof. M.Sc. Eng. Ivan Papazhev

Tel. 63 321 / 216.

(D) LONG-TERM PREVENTIVE MEASURES**TITLE OF THE PROJECT**

1. A model-strategy for large-scale training of the population concerning seismic danger in the country.

STAGE OF EXECUTION

The project has been fully completed

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT

The Bulgarian Academy of Sciences - Sofia 1113 - The Institute of Geophysics

VALUE OF THE PROJECT:

9, 500 leva

FINANCING

The Standing Commission for the Protection of the Population in Case of Calamities and Accidents at the Council of Ministers of the Republic of Bulgaria.

LOCATION (No. of Tel. and Fax) OF THE RESPONSIBLE BODY:

The BAS - the Institute of Geophysics - Sofia 1113

Acad. G. Bonchev BL 3, Municipality "Slatina"

S. Sc.w Boiko Ranguelov

Tel. 70 02 06: Tlx. 22 632.

TITLE OF THE PROJECT:

2. Organisational and technical problems of temporary accommodation of shelterless people in case of major earthquakes.

STAGE OF EXECUTION

50% of the project has been completed.

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

The Scientific and Research Institute of Construction

VALUE OF THE PROJECT

90, 000 leva

FINANCING:

The Standing Commission for the Protection of the Population in Case of Calamities and Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY

The Scientific and Research Institute of Construction

Sofia - Nikola Petkov bul.36

LOCATION (NO of Tel. and Fax) OF THE RESPONSIBLE BODY:

The Scientific and Research Institute of Construction

Sofia - Nikola Petkov bul. 36

S.Sc.W. Eng. Lora Ranguelova

Tel. 55 50 64

Fax 55 61 65

TITLE OF THE PROJECT

3. Modern tendencies in developing seismically reliable constructions

STAGE OF EXECUTION:

50% of the volume of the project is completed.

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT:

The Bulgarian Academy of Sciences - The Central Laboratory of Seismic Mechanics and Seismic Engineering.

VALUE OF THE PROJECT

35, 000 leva

FINANCING

The Standing Commission for the Protection of the Population in Case of Calamities and Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY:

The Bulgarian Academy of Sciences - Sofia 1113 - The Central Laboratory on Seismic Mechanics and Seismic Engineering.

LOCATION (No. of Tel and Fax.) OF THE RESPONSIBLE BODY:

The Bulgarian Academy of Sciences - Sofia 1113 - The Central Laboratory on Seismic Mechanics and Seismic Engineering

Acad. G. Bonchev BL 3, Municipality "Slatina"

Prof. L. Tzenov

Tel. 713 33 38 ; Fax: 22 632

TITLE OF THE PROJECT

4. The negative impact of the work of hydrocomplexes "Iron Gate" I and "Iron Gate" II in the Bulgarian section of the Danube river from an ecological, economic and social point of view.

STAGE OF EXECUTION

It was elaborated in 1993.

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT:

The Technical University of Architecture, Construction and Geodesy,

The National Institute of Meteorology and Hydrology

VALUE OF THE PROJECT

60, 000 leva

FINANCING

The Scientific and Co-ordinating Council of the Standing Commission for the Protection of the Population in Case of Calamities and Accidents at the Council of Ministers of the Republic of Bulgaria

EXECUTIVE BODY

The Technical University of Architecture, Construction and Geodesy

WHEREABOUTS (No. of Tel. and Fax) OF THE RESPONSIBLE BODY:

The Technical University of Architecture, Construction and Geodesy

Hristo Smirnenki bul. 1; tel. 65 66 48

TITLE OF THE PROJECT

5. Emergency situations in the area of the Danube river including the Timok river and the town of Vidin caused by accidents in the Hydro-Electric Complex "Iron Gate".

STAGE OF EXECUTION

It was elaborated in 1993.

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT

The Technical University of Architecture, Construction and Geodesy

The national Institute of Meteorology and Hydrology

VALUE OF THE PROJECT

60, 000 leva

FINANCING

The Scientific and Co-ordinating Council of the Standing Commission for the Protection of the Population in Case of Calamities and Accidents at the Council of Ministers of the Republic of Bulgaria.

EXECUTIVE BODY:

Respective Municipal Councils, the Ministry of Energy, the Ministry of Environment, the Civil Protection Office of the Republic of Bulgaria

LOCATION (No. of Tel. and Fax.) OF THE RESPONSIBLE BODY:

The Technical University of Architecture, Construction and Geodesy
Hristo Smirnenski bul. 1, tel. 65 66 48

TITLE OF THE PROJECT

6. Analysis of breakdowns in hydrotechnical equipment and projects aimed at improving their functioning.

STAGE OF EXECUTION

Work on the project was started in 1984 and completed in 1986.

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT:

A team from the Departments of Hydrotechnics and Hydromelioration of the Technical University of Agriculture, Construction and Geodesy. Experts from the Enterprise "Dams and Cascades" and the state-owned company Hydrosroi.

VALUE OF THE PROJECT:FINANCING:EXECUTIVE BODY:

The Scientific and Research Section at the University of Architecture, Construction and Geodesy.

LOCATION (No. of Tel. and Fax) OF THE RESPONSIBLE BODY:

Prof. M.Sc.Eng.Liubomir Georgiev tel. 63 321/670

(F). UTILISATION OF LANDS AND SOILS AND HAZARD CONTROLTITLE OF THE PROJECT

1. General scheme of shore protection on the Black Sea coast line.

STAGE OF EXECUTION:

20-25% of the volume of the project has been completed.

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

The Bulgarian Academy of Sciences

The Scientific and Research Institute of Construction

The Institute of Ship Dynamics - City of Varna.

The Institute of Oceanology - City of Varna

VALUE OF THE PROJECT:

550, 000, 000 leva (1988 prices).

FINANCING

The Ministry of Construction and Architecture

EXECUTIVE BODY

The National Standing Commission for Dealing with Landslides and Abrasives.

LOCATION (No. of Tel and Fax) OF THE RESPONSIBLE BODY:

The Geoprotection - City of Varna, tel. 43 11 71 75 / 237

S.Sc.W Eng.Todor Vasilev, home tel. 24 12 01

TITLE OF THE PROJECT:

2. An automated alert system for floods in the basin of the Maritza river.

STAGE OF EXECUTION:

At a working stage.

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

National Institute of Meteorology and Hydrology

VALUE OF THE PROJECT

2, 000, 000 leva

FINANCING:

"G.Zolotovich". Foundation

EXECUTIVE BODY:

State-owned company "Amtek"

LOCATION (No. of tel. and Fax) OF THE RESPONSIBLE BODY:

The National Institute of Meteorology and Hydrology

tel. 72 22 71/232

TITLE OF THE PROJECT:

3. A unified frequency data delivery system for hydrometeorological phenomena.

STAGE OF EXECUTION

First stage of the project has been completed.

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

The Scientific and Research Institute of Meteorology and Hydrology

VALUE OF THE PROJECT:

1, 000, 000 leva

FINANCING

"G. Zolotovich" Foundation

EXECUTIVE BODY:

The Scientific and Research Institute of Meteorology and Hydrology

LOCATION (No. of Tel. and Fax) OF THE RESPONSIBLE BODY:

The Scientific and Research Institute of Meteorology and Hydrology

Tel. 72 22 71 / 232

TITLE OF THE PROJECT

4. Project and base for the development of an expert system for the diagnosis and forecast of hazardous hydro-meteorological phenomena.

STAGE OF EXECUTION:

Preliminary stage

NATIONAL INSTITUTIONS PARTICIPATING IN THE PROJECT:

The Scientific and Research Institute of Meteorology and Hydrology.

VALUE OF THE PROJECT

1, 000, 000 leva

FINANCING

"G.Zolotovich" Foundation

EXECUTIVE BODY:

The Scientific and Research Institute of Meteorology and Hydrology

LOCATION (No. of Tel. and Fax) OF THE RESPONSIBLE BODY

The Scientific and Research Institute of Meteorology and Hydrology

Tel. 72 22 71 / 232

TITLE OF THE PROJECT

5. Operational hydrometeorological system, providing repair and rescue operations in case of natural calamities and industrial accidents in the Western part of the Black Sea.

STAGE OF EXECUTION

At a working stage

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT:

The Scientific and Research Institute of Meteorology and Hydrology

VALUE OF THE PROJECT

1, 000, 000 leva

FINANCING

"G.Zolotovitch" Foundation

EXECUTIVE BODY

The Scientific and Research Institute of Meteorology and Hydrology

LOCATION (No. of tel. and Fax) OF THE RESPONSIBLE BODY:

The Scientific and Research Institute of Meteorology and Hydrology
tel. 72 22 71 / 232

(F). TRAINING AND NOTIFICATION OF THE POPULATIONTITLE OF THE PROJECT

1. Training of the population to cope in case of natural calamities and industrial accidents.

STAGE OF EXECUTION

A conception has been developed for the training of the population to cope in case of natural calamities and industrial accidents via three main channels - the media, the educational system and the specialised civil defence training centres.

Monthly programme time is reserved on the Bulgarian Radio and Television dedicated to civil defence education.

Within the framework of the educational system there are obligatory civil defence training classes for the students starting from the first grade until the tenth grade.

32 Centres for civil defence training have been established and provided with qualified instructors.

NATIONAL INSTITUTIONS, PARTICIPATING IN THE PROJECT

- The Civil Protection Office of the Republic of Bulgaria;
- The Ministry of Science and Education;
- The Bulgarian National Television;
- The Bulgarian National Radio;
- The Bulgarian Red Cross;
- The National Fire Protection Service.

The Project does not provide, so far, for the participation of international institutions.

VALUE OF THE PROJECT

For initial accomplishment - \$ 1, 500, 000.

For each year prolongation - \$ 500, 000.

FINANCING

Financing is effected exclusively from the budget of the Civil Defence Administration.

EXECUTIVE BODY:

The Civil Defense Administration of the Republic of Bulgaria

LOCATION (NO. of Tel. and Fax) OF THE RESPONSIBLE BODY:

Fax: 68 81 15

Tlx: 22 465; 22 966

CHAPTER "C": JOINT ACTION1. PUBLICATIONS CONTRIBUTING TO THE THEMES, CONNECTED WITH THE ACTIVITIES OF THE DECADE

The following are publications, guides, leaflets, bulletins, etc. which can be of interest to the decade.

- The Civil Defence Administration of the Republic of Bulgaria issues a monthly magazine "VIK" for protection and self-protection in case of natural calamities, accidents and catastrophes.
- Collective and individual activities in case of major earthquake - V.I. : Sofia 1989 Authors: Prof. Dr. Liudmil Hristosiov; Sc.W. Ph.D. Boiko Rangelov; Sc.W. Ph.D. Edelvais Spasov; Sc.W. Ph.D. Nikolai Dotzev;
- Meteorological Characteristics of the Disaster Situation in Eastern Bulgaria Caused by Snow Storms in 1993. (Reports at the Scientific Conference for the Protection of the Population in Case of Natural Calamities and Accidents - September 1993 - Sofia;
- Floods in Bulgaria During Hydrological 1990-91 Years (Report of the Scientific and Co-ordinating Council of the Standing Commission for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers - 1991). Authors: S.Gerasimov, D.Ivanov and V.Veselinov - Edition 1991;
- Natural and Antropogenic Factors for the Floods in Sofia (A Selection; Problems of the Protection Against the Floods in Sofia). Authors: S.Gerasimov and A. Anguelov from the Science and Research Institute of Meteorology and Hydrology at the Bulgarian Academy of Sciences - Sofia 1992;
- Meteorological Conditions for the Appearance of Tornadoes and Dust Storms in Bulgaria (Reports at the Second Scientific and Practical Conference on the Protection of the Population in Case of Natural Calamities and Accidents). Authors: P.Ivanov, L. Latinov - September 1993, Sofia;
- Snow-Drifts and the Redistribution of Snow in Northen Bulgaria (A Selection of Reports at he Third National Symposia). Author: L. Krastev - town of Pleven 1988;
- Severe Hailstorms and the Damages Caused by Them (a Selection of Reports at the First Scientific and Practical Conference on the Protection of the Population in Case of Natural Calamities and Accidents - Volume 3, Sofia). Author: P. Simeonov;
- An Analysis of the Damages, Caused by Hard Rains and Floods in the City of Sofia (A selection of reports of the Scientific and Co-ordinating Council of the Standing Commission for the Pprotection of the Ppopulation in Ccase of Nnatural Ccalamities and Aaccidents by the Scientific and Research Institute of Meteorology and Hydrology). Authors: P. Simeonov and S.Gerasimov - Sofia, 1992.
- Constructive Engineering (Chapters "Natural Calamities and Constructive Engineering" and "Constructive Engineering of Buildings and the International Cooperation on Ntural Calamities") Author: Prof. Dr. M. Brainov. The University of Architecture and Geodesy, Sofia - 1989, Publishing House - Bulgarian State owned Corporation "Metal Constructions".
- Engineer and Constructive Work (Part Two "Risk Diminishing of Natural Calamities") Author: Prof. Dr. M. Brainov, Sofia 1990. Publishing House of the Union of building constructors in Bulgaria.

2. MEETINGS, CONFERENCES, HELD OR PLANNED TO BE CONVENED CONNECTED WITH THE DECADE'S ACTIVITY

28 - 29 April 1992, Sofia, Bulgaria

Scientific and Practical Conference on the Protection of the Population in Case of Natural Calamities and Accidents

Organizer: The Scientific Co-ordinating Council of the Standing Commission for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers.

Participation: 450 scientists and experts from the country.

28 - 29 September 1993, Sofa, Bulgaria.

Scientific and Practical Conference on the Protection of the Population in Case of Natural Calamities and Accidents

Organizer: The Scientific and Co-ordinating Council of the Standing Commission for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers.

Participation: 550 scientists and experts from the country and two participants from abroad.

22 - 23 October 1993 Sofia, Bulgaria

National Conference on the Problems of the Reliability of Buildings and of Risk Prevention in Case of Natural Calamities and Industrial Accidents.

Organizer: The Union of Building Designers in Bulgaria and the Bulgarian Chamber of Engineers, Builders and Designers.

Participation: State Bodies and Offices, Central and Regional Administrations, Syndicates and Chambers, Designer's and Building Organisations, scientists and experts in planning, designing, construction and exploitation of buildings and equipment.

3. JOINT INTERNATIONAL ACTIVITIES AIMING AT THE IMPLEMENTATION OF THE TASKS OF THE DECADE.

International contacts are maintained in order to implement the tasks of protecting the population against natural calamities and industrial accidents at different levels (National Commission, Institutions and Organisations).

The Civil Defence of the Republic of Bulgaria exchanged expert opinions and experience on questions of protection, training of cadres and experts and on planning of joint efforts with other countries like France, Switzerland, Germany, Russia, Poland, Romania, and others.

The Civil Defence Administration of the Republic of Bulgaria has signed contracts on bilateral basis with a number of countries.

CHAPTER "D": ASSESSMENT

1. A GLOBAL ASSESSMENT OF THE NATIONAL PROGRAMME FOR DISASTER RELIEF AND OF THE WORK DONE

The aim of the activity of the National Programme for Disaster Relief is preventive work and the development of scientific methods for the protection of the population and the national economy.

The tasks incorporated in the Programme are endorsed, directed and financed by the Standing Commission for the Protection of the Population in Case of Natural Calamities and Industrial Accidents at the Council of Ministers of the Republic of Bulgaria.

The programme includes an applied science organisational part which includes sixteen topical protection tasks.

The priority projects on measures of prevention and protection in case of natural calamities and accidents are as follows:

- creating accident relief teams to cope with all aspects protection activity;
- setting up effective systems of communication and information in case of natural calamities and accidents;
- preliminary assessment of the effects of major earthquakes and landslides;
- analysis of the deformations in case of local earthquakes in order to minimize protection risks;
- operational hydrometeorological system to support disaster relief and rescue measures ;
- developing an automated system for prompt meteorological research.

Activity of the scientific and co-ordinating Council and experts' Councils at the Standing Commission for protection of the population in case of natural calamities and accidents is widely expanded in order to complete the national Programme. Important scientific and technical as well as scientific and research tasks of the preventive measures and of protection of the population have been successfully solved.

2. EXAMINATION OF THE INTERNATIONAL DECADE OF DISASTER PREVENTION AND RELIEF MEASURES

The international community under the auspices of the United Nations has not been able to popularize sufficiently the resolutions and efforts aimed at implementing the tasks of the International Decade.

During the period in question, the United Nations have not co-operated satisfactorily with the separate countries for the purposes of exchanging experience concerning disaster prevention and relief measures, aid provision and co-ordination of rescue operations.

At the beginning (in the period of 1990-1994), those protection activities were given priority which were necessary "immediately before, during and after the calamity": in other words, at the time of and after the disaster.

We are convinced that the effort against natural calamities must be strategically focused on the preventive phase before - rather than after - the disaster has taken place.

NATIONAL FOCUS CENTRE
OF THE REPUBLIC OF BULGARIA
FOR NATURALDISASTER PREVENTION
MEASURES.

Sofia, 1994