3. The State Programme of Environmental Protection of the ČSFR

The Federal Committee for Environment

The Ministry of Environment of the Czech Republic

The Slovak Commission for Environment

The State Programme of Environmental Protection of the ČSFR

approved by the ČSFR Government's Resolution nr. 229 on April 18, 1991

Introduction

In 1990 a complex approach for environmental protection including goals, principles and strategies for progress, was proposed by a team of Czechoslovak experts. For the first time in Czechoslovakia, such a document was worded, not only according to the results of analysis of environmental evolution in our country, but also according to health, social, economic and political consequences of environmental changes, respecting topical and potential risks and using foreign opinion and recommendations. This philosophy was officially accepted by the federal and republic governments as a Conception of State Ecological Policy, as a common base of the Federation, of the Czech Republic and the Slovak Republic for the solution of serious ecological problems and an expression of co-responsibility of the State for creating conceptual, legislative, economic, institutional, educational, information and source conditions to stimulate the population and organizations on the field of environmental protection. Direct responsibility for environmental quality is of course connected with production, consumption and other activities influencing the environment.

The goals of the state ecological policy are systematically materialized in the State Programme of Environmental Protection of the ČSFR, approved by the government of the ČSFR and the government of the Czech Republic in April 1991 and by the government of the Slovak Republic in May 1991.

The Programme was proposed by the Federal Committee for Environment, by the Ministry of Environment of the Czech Republic and by the Slovak Commission for Environment in active co-operation with other federal and republic institutions and using ideas of voluntary ecological institutions.

The State Programme of Environmental Protection is an open document that will be periodically supplemented and refined in order to reflect as precisely as possible the development of the situation and progress of knowledge, while respecting the adopted conception of the state ecological policy. Apart from this topical upgrading, the programme will be regularly evaluated every year and if necessary its orientation, structure or other characteristic features will be precised. That is why the Federal Committee for Environment is publishing the matter-of-fact programme orientation and its structure as they were discussed by the Federal Government.

The Programme follows immediately the state structural policy (Resolution of the ČSFR Government nr. 681/90). As far as its upgrading and materialization are concerned, the Programme will react to other state programmes (for example the State Energy Programme) and will influence these programmes so that they may contribute to the solution of ecological problems. The State Programme of Environmental Protection may be successful only in that case if it is an integral part of the development programme of the Czechoslovak society as a whole.

Basic information on the State Programme of Environmental Protection will be systematically published so that the specialists and broad public may participate in the shaping and materialization of the Programme and in the control of its course and results. Our and foreign enterprises will have, generally speaking, an equal access to the state means given for the realization of the Programme from the means of the Federation and both Republics.

Functions of the Programme

The State Programme of Environmental Protection is not only, as it was already said, a means of a systematic materialization of goals and objectives, but it is, at the same time, a strategy of the adopted ecological policy of the ČSFR, especially in a way of initiating and generally supporting the activities directed at eliminating existing resources of environmental pollution, prevention of further damage and creating harmonious relations between the society and the environment. The Programme's mission lies mainly in:

- recognizing the most serious ecological problems in the ČSFR and determining the environmental protection's priorities at a nation-wide level and in relation to the international commitments of the ČSFR

- formulating ecological programmes and projects that will be supported by the State financially or in other way

- organizing activities of the state institutions that are in charge of environmental protection

- creating legislative, information, economic, international and other conditions for effective environmental protection in the ČSFR

- regulating research, development, project, production, educational and other activities in the spheres linked to the environment

- optimizing the use of financial resources reserved in the Federation's and republics' budgets for environmental protection (if need be also appropriate funds for the environment), as well as of financial means received from abroad

- inspiring Czechoslovak citizens, enterprises and scientific, educational and other institutions to search for new production programmes directed at products with better ecological qualities, introducing ecologically less harmful production and consumption technologies, preparation and implementation of research, information or educational programmes directed at environmental protection

- coordinating international co-operation of the ČSFR on the field of environment

Creation and Materialization of the Programme

The preparation and materialization of the Programme is being co-ordinated by the Federal Committee for Environment's Advisory Board composed of all three Ministers of Environment, Hygiene Chief Officers of the Czech and Slovak Republics, Deputy Federal of Foreign Affairs, of Deputy Federal Ministers of Finances and Presidents of the Committees for Environment from both Parliament Houses, from the Czech and Slovak National Councils.

The process of creation and materialization of the State Programme of Environmental Protection will envolve in these stages that will be cyclically repeated:

1. Identifying ecological problems of a republic, nationwide or international character linked to ecological problems of regional importance; in the first cycle this stage was substituted by previous analyses in order to save time. It concerns especially a study of the Ecological Section of the Biological Society of the Czechoslovak Academy of Sciences called "Conditions and Development of the Environment in Czechoslovakia" and analyses carried out by the Ministry of Environment of the Czech Republic and the Slovak Commission for Environment.

2. Determining Common Goals of environmental protection directed at solving identified ecological problems and determining strategies of their implementation; the outcome of this stage is the adopted "Conception of the State Ecological Policy", "The Rainbow Programme" of the Czech Republic and "The Ecological Policy" of the Slovak Republic.

3. Determining the Structure of the State Programme of Environmental Protection that is composed of reciprocally complementary and timely unlimited programmes of various orders.

4. Determining the amount and Structure of Financial means reserved in the Federation's and both republics' budgets to the solution of ecological problems.

5. Determining concrete projects directed at solving priority ecological problems of state, republic or regional importance in the framework of programmes determined in the preceding stage.

6. Publishing the programme and ordering concrete projects that express the priorities determined by the state; these orders are expressing the principle goals of projects and time course of their materialization, the institution's passing the order, supposed expenditure for the materialization, national and foreign financial resources and other characteristic features.

7. Organizing Tenders directed at choosing the most convenient way of solution or materialization of individual projects and of optimum use of resources reserved by the State for environmental protection or of those means offered by other states or international organizations for these purposes. Financial resources determined to support selected projects will be either grants or loans. Generally speaking, all our and foreign enterprises and institutions may participate in the Tender when grants or foreign loans are not bound in a certain way.

8. Continuous Control of the Programme Materialization linked with eventual partial corrective measures.

9. Evaluating the Course and Results of the Programme for the past year, preparing further cycle and publishing all relevant pieces of information on the programme so that the entire process may be controlled by the public.

In the course of this process there appears a mutual interconnection of a method that could be called "from the whole to the parts" that is represented by the state environmental protection institutions and of the method "from the parts to the whole" in which individual enterprises and other subjects will participate. For the time being, the fifth stage of the first cycle of programme's work has been completed.

The whole process is being co-ordinated by the Advisory Board of the Federal Committee for Environment, executively by the Ecological Programme Commission made up of representatives from the Federal Committee for Environment, the Ministry of Environment of the Czech Republic and the Slovak Commission for Environment. Operational upgrading of the programme is being assured by the Federal Committee for Environment in co-operation with the Ministry of Environment of the Czech Republic and the Slovak Commission for Environment. As for each programme, its director is appointed and he is responsible for co-ordinating the preparation and implementation of appropriate projects.

Programme's Structure

The State Programme of Environmental Protection must help solve the basic ecological problems of the ČSFR, respecting at the same time large external and internal links. That is why the programme has a multiple structure (it is a polystructural programme) and is composed of different reciprocally complemantary and overlapping main programmes. These programmes will enable to cover all important existing and potential ecological problems of the ČSFR in their mutual links. Individual ecological problems can be solved in this arrangement in different contexts and in this way make it possible that partial solutions follow one after the other.

In the first work cycle the State Programme of Environmental Protection contains seven principal programmes:

A. Care for the Environmental System
B. Care for the Components of the Environment
C. Ecologization of Products, Technologies, Services and Localization of Activities in the Region
D. Education and Courses in Ecology and the Support of Voluntary Activities in Ecology
E. Development of Knowledge on the Environment
F. Solution of Regional Ecological Problems
G. International Ecological Programmes and Projects

Each of these main programmes is further divided into subprogrammes. Individual programmes are directed at solving determined groups of ecological problems and are usually of a long-term or even permanent character. In the framework of these programmes and as an echo of persons interested in solving problems, concrete project conditions are determined that will end up in implementation projects with clearly defined goals and precisely limited time schedules.

The orientation of the State Programme of Environmental Protection and of projects determined for its materialization are based mainly on the adopted conception of the state ecological policy, "The Programme of Environmental Improvement of the Czech Republic" and "The Ecological Policy of the Slovak Republic". Further resources of incentives are the international commitments adopted by the ČSFR and the recommendations of the European Communities, of the World Bank, the International Monetary Fond, the Nordic Investment Bank (NIB), the European Economic Commission of the UNO, the Development Programme of the UNO (UNDP) and other international and national institutions including ministries of environment of the participating states.

<u>The State Programme of Environmental Protection for 1991-1991</u>

The hitherto result of the first work cycle concerning the preparation of the state programme is a complex set containing programmes and projects. This set of programmes was created on the basis of important criteria concerning a particular ecological problem and on the basis of degree of its urgency of solution, degree of preparation of potential implementors or of people materializing the project, depending on the amount of available financial means of the Federation and Republics and the emount of subsidies (grants) of foreign subjects and their eventual preference (as they are usually willing to support projects that are contributing to decrease the transfer of harmful substances across our borders).

In the following text the <u>aims of the State Programme of Environmental Protection for 1991-92</u> are expressed.

A. <u>Care for the Environmental System</u>

A common goal of this programme is the completion of basic components of environmental protection system, especially as far as ecological legislation, economic instruments positively influencing the attitude towards the environment, central and local institutions caring for the environment and ecological information system are concerned.

A1. <u>Amendment and Completion of a System of Ecological Laws and Ensuing Legal Regulations</u> that shape the framework of economic and other activities in relation to the environment. The non-existing norms (especially the Environmental Act and the Waste Disposal Act) and completely obsolete norms (the Atmosphere Act) are being quickly complemented. All norms are being shaped in such a way as to comply with the European Communities' legislation (that follows many American and Japanese norms) and inter-state Conventions on the field of environment.

A2. <u>Environmental Aspects of the Economic Reform</u> mainly the creation of a system of economic tools stimulating the environmental protection and punishing all forms of its violation and a system of evaluating natural resources, economic expression of ecological damage and evaluation of effectiveness and efficiency of measures aimed at improving the environment.

A3. <u>Establishment of Institutional Environmental Care</u> at a federal, republics', regional, district level, at a level of towns and communities, including the creation of an intergrated inspection of environment that will monitor the development of all components of environment in their mutual context and will evaluate, in a complex way, the influence exerted by different factors on the quality of environment.

A4. <u>Environmental Impact Assessment of Activities and Products</u> that would enable on one hand an early recognition of potential negative and positive consequences of different investment activities and their environmental impact, on the other hand a probable impact of some selected products on the environment during the whole "life cycle" of these products - that is production, use or consumption and recycling or storage or disposal after the expiration of their technical, moral or economic service life.

A5. <u>Completion of Information System about the Environment</u> including the information on development of all environmental components, information on health, social and economic consequences of this development and information concerning the emissions of harmful substances and other physical, chemical, biological or other factors affecting the environmental quality, further information about environmental influence exerted by particular branches of our national economy and documentary and graphic information.

B. Care for the Components of the Environment

This main programme concerns ecological waste management, reduction of negative environmental pollution from the existing resources of harmful substances and the protection and renewal of the nature. It follows the "ex post" strategy that is restricting and putting right ecological damage caused by existing resources of harmful substances.

B1. Limitation of Waste Creation, Waste Recycling or Ecologically friendly Combustion and Waste Disposal
The objective of the programme lies in selectively collecting and more intensively using waste as secondary raw material or heat resources (atmosphere friendly waste combustion), ecologically friendly waste disposal and decrease in consumption of renewable and non-reneable natural resources.

B2. Protection of Atmosphere against Pollution from the existing Resources, especially concerning power plants, heating plants, technological processes, cars and other mobile resources. The goal is mainly to reach an effective dust exhausting of all big and medium-size energy resources, desulphurization of at least one third of all power stations (especially of the newest power and heating plants) and of more important heating plants and to reduce nitrogen oxides during the process of combustion. The programme contains further the preparation and realization of fluid combustion (atmospheric and high pressure combustion) with desulphurization and denitrification of waste gases and the development of other technologies reducing in a substantial way atmospheric pollution from stationary resources. The attention is also being paid to reducing pollution from vehicles and other mobile pollution sources' through a more perfect combustion and catalytic denitrification.

B3. <u>Economical Water Management, Supply of Quality Drinking Water for all Inhabitants and Protection of Surface and Underground Water Resources</u>

The primary goal of this programme is to reduce substantially water consumption by reducing losses caused by squandering and pipe leakages and through water recirculation in technological processes. Another objective is to assure quality, healthy drinking water for the inhabitants of our state, by protecting water resources, improving water treatment in water works, distributing packed sucklings' and table water and by supporting the development of drinking water treatment equipment in households. The principal objective of the programme is to improve substantially the quality of surface and underground water resources by removing both point resources of water pollution (especially phasing out facilities threatening water resources, use of alternative technologies and construction of sewage disposal plants) and decreasing water resources pollution caused by large-scale pollution.

B4. <u>Recovery of Forest and Renewal of Forests Polluted by Immissions or Mismanagement</u>

The objective is to optimize principally a species composition of forest together with the reduction of conifer monoculture and a renewal of immission-related bald places, integrated protection of forest areas and a systematic forest care including ecologically friendly cutting and transportation technologies and use of less valuable wood mass. The programme is directed at renewing productive and non-productive forest functions, especially water economy, protection, recreation and aesthetic functions.

B5. Natural Preservation and Restoration of Landscape Ecological Stability

This programme is directed at protecting more consistently specially valuable parts of the nature (international and national parks and other protected regions), active management, protection, restoration and reintroduction of freely living animals and wild plants outside protected areas (including conservation of plant and animals generic resources), renewing or rebuilding ecological landscape stability, including transregional, regional and local stability structures, especially the network of protected areas and biocorridors. The programme is based on an analysis of a critical load of ecosystems and is searching for ways how to decrease efficiently this load and strengthen the ecosystem's resistance.

C. Ecologization of Products, Technologies, Services and Localization of Activities in the Region

The goal of this programme is a set of mainly preventive measures aimed at preventing ecological damage by principally introducing ecologically more valuable products and technologies and by a better thought-out localization of activities in the region. Taking into consideration the fact that these technologies and products are at the same time economically more effective and in many cases appropriate ecological parameters of products constitute the basic condition for their sale or export, this programme is also a substantial contribution to a purposeful restructuring of our national economy and a factor of economic growth.

C1 Power System Ecologization /excepting the measures aimed at reducing emissions included in Programme B2/.

The objective of this programme is to contribute mainly to a reduction in energy consumption in all its forms. The programme is oriented further towards minimazing negative influence of coal power system that is affecting adversely the environment.

The programme aims at using waste /flying ash, desulphurization products etc./, secondary raw materials /specially raw materials contained in hanging walls/, reclaiming the landscape disturbed both by surface and underground mining, coal treatment prior to combustion together with a partial desulphurization and experimental underground coal gasification. The programme also supports the development of renewable and non-traditional energy resources and creation of decentralized energy systems and rational use of natural gas so that it might be used in an efficient way as a means of substitution of "dirty" energy resources, mainly in afflicted regions with bad dissipation conditions. A substantial part of the programme concerns further the nuclear power system, both minimization of negative effects of uranium ore extraction and treatment on the environment and sanitation of extraction localities, and a substantial oncrease in security of existing and projected nuclear power plants and minimalization of ecological consequences of their operation, including the whole fuel cycle.

C2. Ecologization of Agriculture aimed at substantially improving the soil care, minimizing agricultural influence on the ecosystems and both surface and underground water and minimizing the contamination of agricultural products by foreign matters. The programme supports the development of ecologically sound agricultural technologies, including alternative technologies.

C3. Ecologization of Food-Processing Industry whose objective is a complex protection of a human food chain, introduction of ecologically friendly technologies in food-processing industry and support of ecologically friendly ways of packaging and distribution of foodstuffs.

C4. <u>Ecologization of Chemical and Pharmaceutical Industry</u> whose objective is to minimize the impact of these kinds of production on the environment, producing products necessary for the development of ecologically friendly technologies, especially of catalysts, agents, membranes etc. - "ecological chemistry" and specially the production of such products that during their whole life cycle "from cradle till grave" disturb the environment minimally.

C5. <u>Ecologization of Wood-Processing Industry and Production of Paper and Cellulose</u>
The objective of the programme is a better waste paper use and utilisation of technologies that minimize the impact on the environment /including noise pollution limitation/.

C6. <u>Ecologization of Textile and Tannery Industry</u>
The programme supports the development of textile production used in cleansing technologies and development of environmentally friendly technologies in these manufacturing processes.

C7. <u>Ecologization of Rubber Industry and Plastic Processing Industry</u> aimed at producing ecologically more appropriate products /for example biologically degradable waste/ and technologies minimizing negative environmental impact.

C8. <u>Ecologization of Ore Mining and Metallurgy</u>
The goal of the programme is firstly to minimizace ecological consequences of extraction of ferrous metals and non-ferrous metals ores and the development of ecologically-friendly metallurgical technologies.

C9. <u>Ecologization of Engineering, Electrical and Electronics Industries</u>

The first aim of this programme is the development of "ecological engineering industry", specially of machines, apparatuses and equipment for low-waste, recyclable, cleaning and other environmentally-friendly technologies, measuring and laboratory instruments, sensors and communication networks for the environmental monitoring. Further goal of the programme is the development of ecologically friendly technologies in the above mentioned production branches and the manufacture of products having favorable ecological properties during their whole life cycle.

C10. <u>Ecologization of Building Material Production and of Building Industry</u>
The programme is aimed at minimizing ecological consequences of building material extraction and building material production, at providing buildings with better ecological properties /specially with better thermodynamic characteristics, with minimum radon pollution and with improved utilization of used raw materials during the recycling/, at developing ecologically friendly construction and maintenance technologies.

C11. <u>Ecologization of Settlements</u>
This programme is aimed at improving, in a complex way, the settlement environment and improving its aesthetic qualities, supporting thus the degree of habitability of these settlements. The objective is to create a general strategy of this process, a more perfect maintenance and municipal and village cleaning, a development of public mass transport, enlargement and maintenance of green areas and support of cultural, recreational and sport activities.

C12. <u>Ecologization of Transport</u> whose goal is to reduce impacts of different kinds of transportation on the environment and ecologization of management and operation of routes and transport equipment.

D. Education and Courses in Ecology and the Support of Voluntary Ecological Activities

The programme's goal is to develop an ecological awareness among all groups of population and an all-round support of creative activity aimed at developing school and out-of-school education, spontaneous movement of nature protectors and other ecologically oriented voluntary organizations and activity.

D1. Education and Courses in Ecology aimed at dissemination environmental knowledge in general, human ecology in particular. The programme comprises pre-school education, education at schools of all degrees and types /including post-graduate studies/ and out-of-school education. Its goal is to inform the population about ecological problems and how to solve them - information being given via the mass media, lectures, discussions etc, including public opinion polls.

D2. Support of Environmentally - oriented Citizens'Activity and Voluntary Organizations aimed at their development while respecting a full autonomy so that they may maintain their independent and control functions.

E. Development of Knowledge on the Environment

It will concern the support given to investigating relationships between the society and its environment with the goal to understand in more detail general context and create theoretical bases for the restoration of a dynamic balance necessary for a permanently maintainable development. The results of this programme will be used in all follow-up programmes.

E1. Investigating the Relationships between the Value Orientation of People and the Quality of Environment directed at ethical problems, stressing ecological ethics.

E2. Evaluation of the Relations between the Environment Quality and the Health of Population
The programme shall specify more precisely the impact of pollutants affecting synergically the environment and of other negative factors on the population's health /stress being given to the most afflicted areas/ and the programme shall set priority problems requiring an accelerated solution.

E3. Reduction of Negative Environmental Effects on Human Health with the objective of limiting the penetration of allochthonous matters into the food chain /specially into the respiratory zone of humans/ and reducing the load of organism caused by noise, vibrations and ionization and non-ionization radiation.

E4. Theoretical Foundations of Environmentally friendly Technologies and Products
The programme is geared towards investigating new physical, chemical, biological and other methods that could contribute to the acceleration of new ways and principles of environmental care which could be applied in practice.

E5. Theoretical Foundations of Environment Friendly Landscape Management
The programme's objective is to develop methods of optimum space utilization aimed at harmonizing different interests wits the objective of maintaining or renewing the nature and restoring ecological landscape stability.

E6. Global Ecological Relations aimed at getting more profound knowledge of basic life systems of our planet and determining the factors influencing the functioning of these systems.

F. Solution of Regional Ecological Problems

The programme's goal is a complex solution of environmental problems in the most afflicted regions of our state.

F1. Regional Problems of the Czech Republic with the accent to a complex sanitation of the North-West Bohemian Basin, the Ostrava-Karviná-Agglomeration, of Prague and the Central Bohemia Agglomeration.

F2. Regional Ecological Problems of the Slovak Republic
The programme's objective is a complex solution of ecological problems of Žitný ostrov, of the Southern Slovak Hollow, the Eastern Slovak Lowlands, of Bratislava, Sereď-Šaly, Horní Nitra and Žiar n.H., Ružomberok, Košice, Strážské, Stredný Spiš and Jelšava - Lubeník.

G. International Ecological Programmes and Projects

The objective of this programme is a systematic development of co-operation of the ČSFR with international organizations and selected states /specially the neighbouring ones/ with the priority to solving regional, continental and global problems going beyond state boundaries.

G1. International Ecological Conferences and Seminars held in the ČSFR or requiring our active participation. Here our objective is to create an European Environmental Care System and an Ecological Programme for Europe, respecting global context.

G2. International Ecological Programmes aimed at solving regional problems together with all neighbouring states. Individual programmes concentrate on the cleanness of big rivers basins /the Elbe, the Odra, the Visla, the Danube/, large industrial agglomerations /the Silesian Basin, the "Dirty Triangle" in North-West Bohemia, South-West Poland and South-Easst Germany/ or aimed at protecting the regions of high natural or aesthetic value /the Poloniny, the Slovakian Karst, the Danube Basin, the Šumava etc./.

G3. Seminars organized for Foreign Specialists
The objective is to inform foreign experts about selected problems of the ČSFR that might be a source of knowledge. In the first phase seminars "The Environment and Health" and "The Quality of Atmosphere and Forests" are being prepared. Further programmes are being prepared too, as well as projects aimed at the assistance provided by the ČSFR concerning the solution of ecological problems in developing countries.

The approved proposal is an open set of ecological problems and projects that will be currently supplemented on the basis of projects' drafts submitted by both our and foreign subjects and on the basis of new financial resources /acquired for example in the framework of international assistance/ and development of our knowledge.

The above-mentioned set contains mostly the projects that are partially financed from the Federal committee for Environment's Budget, eventually from financial resources of the republics, further projects in whose financing the European Communities and Switzerland are participating and other projects in preparation and materialization of which the governments or ministries of environment of co-operating countries are interested, especially Japan, the USA, Norway, Finland, Sweden, the FRG, Poland, Hungary, Holland, France and Denmark.

The fact that a certain project has been included into the Programme does not automatically give rise to claims of financial coverage from state or republic resources. The state assistance or that of the republics as for the financial support of Programme's projects or their parts will preferentially concentrate on the initiation of projects, the creation of favourable conditions for their preparation and materialization and co-participation during the implementation of the project by way of grants, purpose-bound subsidies or loans.

The Programme thanks to its large matter-of-fact content will enable the orientation in activities of entrepreneurial and other organizations as far as the, problem regions recognized by the government are concerned. That is why it is supposed that major part of costs linked to the solution and implementation of the projects will be covered by these organizations' own financial resources, with the prospects of a permanent participation in the developing process of environmental protection in the framework of the economic reform.

The organizations that will show their interest at the Federal Committee for Environment, the Ministry of Environment of the Czech Republic or the Slovak Commission for Environment concerning the solution of some projects or will propose the project within the established programmes shall formulate their proposals according to the below-mentioned syllabus of project in such a way that the incoming proposals might be processed in an unified way by computers.

1. Programme Number, Project Number (e.g. A1.2/02), Project Title

2. Project's Proposer

3. Organization solving or implementing the Project (title, address, telephone, fax, sort of organization)

4. Characterization of Project Implementation (a brief, matter of-fact analysis of the initial state with indication of possible implementation risks)

5. Project Goals (a matter-of-fact expression of changes of the initial state that should be reached by the solution, date of implementation - year, month)

6. Methods of Attaining this Goal (Methods of Solution)

7. People or Organizations Co-Solving and Materializing the Project (indicate what kind of organization, address, telephone, fax)

8. Users of Solution's Results

9. Time-schedule of the Preparation and Materialization of the Project /time-schedule of partial goals or solution stages)

10. Overall financial costs needed for the preparation and materialization of the project, specifically:
    a) research and development (including testing stage)
    b) construction part
    c) apparatuses and technological equipment
    d) personnel and organization
    e) other

    Add: overall costs in thousands of crowns (Kčs), yearly costs, financial resources of the solver (implementor), eventual share of the implementors

11. Required amount of contribution from the Federal Committee for Environment, possible or already assured contribution from the Ministry of Environment of the Czech Republic or from the Slovak Commission for Environment
    Supposed or existing tax, customs, credit or other reliefs

12. Foreign participation in the preparation and materialization of the Project (agreed, supposed or proposed country, foreign organization, amount, currency)

The incoming proposals will be evaluated by the Ecological Programme Commission that will also decide upon the appropriate form of evaluation. Either the best solution will be chosen on the basis of consensus of Commission's members (specially in case of bigger number of received project proposals), or there will be a narrower selection, eventually a public tender in accord with the Economic Code.

In the following text you will find the above-mentioned set of programmes in tables.

Basic Programme A "CARE FOR ENVIRONMENTAL SYSTEM"

A 1 <u>Legislative Care for Environment</u>

A1.1 General Acts Concerning Environment

01 Environmental Act
02 Nature act Protection in the Czech Republic (Amendment)
03 Nature act Protection in the Slovak Republic (Amendment)

A1.2 Regulations Concerning Protection of Environment

01 Protection of Atmosphere Act (Amendment)
02 Regulations to Protection of Atmosphere in the Czech Republic Act
03 Regulations to Protection of Atmosphere in the Slovak Republic Act

A1.3 Regulations Concerning Protection of Water Sources

01 Water Act (Amendment)

A1.4 Regulations Concerning Care for Soil

01 Protection of Agricultural and Forest Soil

A1.5 Care for Forest Regulations

A1.6 Protection of Raw Materials Regulations

A1.7 Protection of Animals Regulations

01 Protection of Farm and Home-Bred Animals Act

A1.8 Landscape Farming Regulations

01 Territorial Planning and Building Order Act (Amendment)
02 Environmental Impact Assessment Act

A1.9 Regulations Concerning Waste Management

01 Waste Management Act
01.1 Regulations to Waste Management in the Czech Republic Act
01.2 Regulations to Waste Management in the Slovak Republic Act

A1.10 Regulations Concerning Ecological Properties of Products

01 Indication of Ecological Properties of Products Act
02 Toxic and Hazardous Substances Act
03 Technological Norms and Stanadards of Products and Technologies with Regard to Environment Actualization

A1.11 Regulations of the Protection against Radiation

01 Radiation and Nuclear Safety Law
02 Protection against Radiation Act
03 Electromagnetic Radiation Law

A1.12 Regulations of the Prevention, Recording and Sanitation of Technical Emergencies and Natural Disasters

01 Statute of the Governmental Commissions for Nuclear Plant and Emergencies
02 Emergency Prevention Recording and Sanitation Law
02.1 Procedural Regulations to the Emergency Law in CR
02.2 Procedural Regulations to the Emergency Law in SR

A1.13 State Administration in Care for Environment Regulations

01 Action of Federal Central Authorities Act
02 Action of the Czech Republic Central Authorities Act
03 Action of the Slovak Republik Central Authorities Act

A 2 <u>Economic Aspects of Care for Environment</u>

A2.1 Systems of Economic Instruments Stimulating Care for Environment and Affecting its Disturbance

01 System of Economic Instruments Relating to Environment Project (I. version)
02 Economic Instruments Influencing Transport Relationship to Environment

A2.2 Ecologically Motivated Deliveries and Taxes from Products and Services

01 Ecological Regulation in Taxation Reform

A2.2.1 Ecological Taxes from Products with Unsufficient Ecological Properties in Production, Consumption, Utilization and Recyclation or in Deposition into Environment

A2.3 Credits, Grants and Appropriations in Care for Environment

A2.4 Deliveries, Taxes and Dues for Utilization of Natural Resources

01 Economic and Legislative Water Resources Policy Aspects

A2.5 Dues and Penalties for Disturbance of Environment

A2.6 Import, Export and Customs Regulation in Care for Environment

A2.7 Care for Environment Financing (Federal, Republics, Regional and Local Funds of Environment, their Creation and Utilization)

A2.8 Natural Resources Estimation and Economic Calculation of Damages Caused by Disturbance of Environment

A2.9 Ecological Effectivness and Economic Effectivness of Matters Oriented at Care for Environment Estimation

A 3 <u>Care for Environment Institutional Regulation</u>

A3.1 Central Authorities Systems of Care for Environment

01 Organization Structure of the Federal Committee for Environment
02 Organization Structure of the Ministry of Environment of the Czech Republic
03 Organization Structure of the Slovak Commission for Environment

A3.2 Care for Environment on Republic Level Systems

01 Care for Environment Regional Systems in the Czech Republic
02 Care for Environment Regional Systems in the Slovak Republic

A3.3 Local Level Management of Care for Environment Systems (Municipalities, Districts)

A3.4 Integrated Environmental Inspection

A3.4.1 Protection of Atmosphere Inspection

A3.4.2 Water Resources Inspection

A3.4.3 Soil Conservation Inspection

A3.4.4 Protection of Forests Inspection

A3.4.5 Conservation of Natural Beauty and Wildlife

A3.4.6 Protection of Environment against Physical Influences Inspection

A3.4.7 Wastes Inspection

A3.5 Prevention, Registration and Sanation of Technological Accidents and Uncontrolled Disasters Systems

A\4 <u>Environmental Impact Assessment of Activities and Products</u>

A4.1 Assessment of Influences of Activities and Production on Environment Methodology (with Utilization of the European Community Countries Experience)

01 Investment Actions in Stage of Projects Preparation from the Point of View of Environmental Protection Multi-criterion Assessment
02 Conflict Situations in Protection of Environment Solution
03 Sets of Maps for Ecologization of Decision-Making Processes)

A4.2 Multi-criterion Assessment, Indication and Registration of Ecological Properties of Products System

01 Ecological Properties of Products Assessment, Indication and Registration

A4.3 Advisory and Authorised Organizations Assessing Influence of Activities and Products on Environment Network

x 01 Ecotoxicological Centre Pardubice
x 02 Ecotoxicological Centre Bratislava

A4.4 Determination of Best Practically Attainable Technologies System

01 Confrontation of Existing Technologies of the Ministry of Economy and the Ministry of Industry of the Slovak Republic with Best Attainable Technologies of the European Community

A 5 <u>Information System about Environment</u>

A5.1 Integrated Information System about Environment Conception (Including Monitoring)

01 Integrated Information System about Environment Project
02 International Information Systems About Environment Analysis
02.1 Contact with Information Systems INTERNET
02.2 Contact with Geoinformatic Systems (GIS Including CORINE)
03 Information Systems for Management and Introducing of Programmes with International Participation

A5.1.1		Complex Information about Motion of Dangerous Substances in Environment
	01	Registration and Assessment of Chemical Hazards from the Point of View of Environment System
	01.1	Integrated Information System of Environment including Monitoring in SR
	01.2	Integrated Information System of Environment including Monitoring in CR
	02	Monitoring of Toxic Organic Substances in Environmental Sphere System (TOCOEN)
	03	Toxical Chlorinated and Poly-cyclic Aromatic Compounds in Slovak Environment Control
	04	Chemical Analyses in Monitoring of Quality of Environment Metrology
A5.1.2		Methods, Apparates and Communication Network for Complex Monitoring of Environment (Icluding Long-Distance Exploration of the Earth and Bio-Monitoring)
A5.2		Monitoring of Atmosphere System
	01	Monitoring of Atmosphere System Conception
A5.2.1		Monitoring of Pollutant Emissions Resources into Atmosphere
A5.2.2		Immission Monitoring System
A5.2.3		Pollutants Transmission Across Border of State System
A5.2.4		Methods, Apparates and Communication Networks of Atmospheric Quality Monitoring
A5.3		Water Resources Monitoring System
	01	Monitoring of Quality and Quantity of Surface and Underground Water Resources Conception of System
A5.3.1		Monitoring of Surface and Underground Water System
	01	Basic Network of Bio-Chemical Monitoring of Small Water Flows in the CSFR
A5.3.2		Monitoring of Points-Source and Territorial Polution of Water Resources (Including Monitoring of Farming in Protected Water Resources Belts) System
A5.3.3		Monitoring of Water Intake of Surface and Underground Water and Balance of Outlet of Waste Water
	01	Analytic Methods of Identification and Determination of Toxic Substances in Underground Water of the Water Flows

02 Sapro-biological Monitoring of Water Flows and Control of Their Toxicity-Model Working out

A5.3.4 Apparates and Communication Network of Water Resources, Water Intake and Waste Water

A5.3.5 Monitoring of Water Flows and Melioration Treatment System

A5.4 Monitoring of Soil System

01 System of Quantitative and Qualitative Characteristics Features of Soil State Conception

A5.4.1 Ways of Utilization of Soil and its Affection by Erosion Information System

A5.4.2 Physical, Chemical and Biological Properties of Soil Monitoring System

A5.4.3 Methods, Apparates and Communication Networks of Soil s Quality Monitoring

A5.5 Monitoring of Forests System

01 Monitoring of Forests Conception

A5.5.1 State of Forests System Monitoring

01 Influence of Emissions on Forest Ecosystems in Territories Sustained by Immissions (Krušné hory and other) Monitoring

A5.5.2 Monitoring of Biological Pests of Forest System

A5.5.3 Monitoring of Ways of Economic Utilization of Forest, Including Influence of Animals Hunting on Ecosystems System

A5.5.4 Methods, Apparates and Communication Networks of Forest Monitoring

A5.6 Conditions of Nature Monitoring System

A5.6.1 State of Wildlife Animals System Monitoring

01 Conception, Unification and System of Utilization of All-State Selected Group of Organisms Network Mapping

A5.6.2 Monitoring of Conditions of Uncultivated Plants System

A5.6.3 Protection of Non-Living Parts of Nature System

A5.7 Affection of Environment by Physical Influences Information System

A5.7.1 Environment Load by Noise and Vibrations Monitoring System, Including Resources Monitoring

01 Environment Load by Noise and Vibrations Monitoring

A5.7.2 Environment Load by Artificial and Natural Resources of Ionization Radiation Monitoring System

01 State Ethalons of Ionization Radiation Figures Development, Formation of Czechoslovak Working Place of International Network SSDL Finishing

02 State Ethalon of Dozimetric Figures, Neutron and Foton Fiels and Bonds Formation

A5.7.3 Monitoring of Environment Load by Electromagnetic Field

01 Electromagnetic Field in Prague Territory Monitoring

A5.7.4 Environment Load by Waste Heat System

A5.7.5 Methods, Apparates and Communication Networks of Environment Load by Physical Influences

A5.8 Wastes Information System

A5.8.1 Creation, Transport and Ways of Utilization or Liquidation of Wastes, Especially Dangerous Wastes, Information System

A5.8.2 Dumping Grounds Information System

01 Dumping Grounds Registration

A5.8.3 Methods, Apparates, Laboratories and Communication Networks for Wastes Monitoring

x 01 Educational System in Teaching of Specialists for Laboratory Analyses

A5.9 Influence of Environment on Man and Society Information System

A5.9.1 Quality of Food Chain of Man Monitoring System

x 01 Motion of Allochthonous Substances in Environment and Their Penetration into Food Chain

A5.9.2 Monitoring of Drinking Water Quality System

A5.9.3 Development of Health Situation of Population (in Relationship with Health Service Information Systems)

01 Persons Susteined by Chronical Poisoning with Utilization of Parralel Information Processing in CSN Monitoring

A5.9.4 Social Pathological Consequences of Worsening of Environmental Quality Monitoring System

A5.9.5 Evaluation of Relations Among State of Environment, its Medical, Social and Economic Consequences and Functioning Factors

01 "Environment and Health" Atlas

A5.10 Influence of National Economic Branches on Environment Information System

A5.10.1 Influence of Fuel and Energy Mining on Environment Information System

A5.10.2 Influence of Agriculture and Food Industry on Environment Information System

A5.10.3 Influence of Forestry, Hunting and Water Resources Policy on Environment Information System

A5.10.4 Influence of Ore Mining, Metallurgy, Engineering and Electrotechnics on Environment System

A5.10.5 Influence of Mining and Production of Building Materials and Civil Construction on Environment Information System

A5.10.6 Influence of Chemical, Pharmaceutical. Light and Wood Processing Industry on Environment Information System

01 Terrain Analytic Methods of Chlorid Determination in Oils, Contamined Liquids and Earths (Determination of Chlorided Hydrocarbons Content)

A5.10.7 Influence of Transport on Environment Information System

A5.10.8 Influence of Domiciles, Services and Turism on Environment Information System

A5.11 Documentary Environment Information System

A5.11.1 International and National Ecologically Oriented Governmental Institutions Information System

A5.11.2 Ecologically Oriented Scientific Advisory and Screen Organizations Information System

A5.11.3 Ecologically Saving Technologies, Products and Ways of Economics Information System

A5.11.4 Producers and Suppliers of Ecological Technologies, Products, Services and Constructions (Czechoslovak and Foreign) Information System

A5.11.5 Non- Governmental Ecological Organizations Information System

A5.11.6 Bibliographic Ecological Information System (Books, Journals, Studies)

A5.12 Territories Enabling Ecologically Optimum Landscape Utilization in Framework of Territorial Planning Information System

A5.12.1 Integrated Information Service of Territorial Authorities for Environment of the Czech Republic

A5.12.2 Integrated Information Service of Territorial Authorities for Environment of the Slovak Republic

Basic Programme B "CARE FOR COMPONENTS OF ENVIRONMENT"

B 1 <u>Economic System Concerning Wastes and Limitation of their Creation</u>

B1.1 x Conception of Economic System Concerning Wastes

B1.1.1 Limitation of Wastes Creation System

B1.1.2 Selected Collection, Transport and Utilization of Wastes as Secondary Raw Materials System

B1.1.3 Collection, Transport and Processing or Ecologically Non- Defective Deposition of Wastes, Including Dangerous Wastes, System

B1.2 Deposition and Processing of Radiation Wastes, Especially Bunt Fuel Links from Atomic Power Stations

- 01 Solution of Geological Conditions for Secure Deposition of Bunt Fuel from Czechoslovak Atomic Power Stations
- 02 Solution of Geological Conditions for Secure Deposition of Slightly and Medium Radioactive and Toxic Wastes
- 03 Liquidation of Dumping Ground in Stone-Pit Kozel (Buck)
- 04 Liquidation of Dumping Ground in Stone-Pit Alkazar

B1.3 Economic System Concerning Dangerous Wastes (with Exception of Radioactive), their Ecologically Undangerous Utilization, Combustion or Waste Storage

- x 01 Information Centre for Dangerous Wastes (ICONO)
- x 02 Centre for Liquidation of Toxic Wastes (Including PCP) in Ostrava
- x 03 Centre for Liquidation of Toxic Wastes (Including PCB) in Šala
- 04 Electrolytic Destruction of Chlorined Organic Wastes, Including PCB
- 05 Liquidation of Combustible Toxic Wastes in Cementation Rotary Furnace
- 06 Test Facility of Combustion Products from Thermic Liquidation of Industrial Wastes
- 07 Sludges Containing Heavy Metals Liquidation
- x 08 Selected Projects in Field of Galvanic Sludges Discharge
- x 09 Refuse Destruction Plant of Dangerous Wastes Martin

B1.4 Recycling Technologies

01 Used Mineral Oils Regeneration (KORAMO)
02 Raw Materials Formed in Processing of Used Tyres with Steel Cords
03 Recycling of Plastic Containers - Beer Bottle Crate in CSFR
04 Collection and Processing of Used Paper
05 Collection and Processing of Used Accumulator Batteries

B1.5 Selective Collection and Processing of Communal Wastes

x 01 Separated Collection and Processing of Communal Wastes in Prague
x 02 Separated Collection and Processing of Communal Wastes in Bratislava

B1.6 Dumping Grounds of Wastes

01 Technology of Location, Building and Operation of Dumping Grounds Proposal
02 New Technological Building of Secure Dumping Grounds and Secondary Usable Long-Scale Created Wastes, Including Sanation of Old Dumping Grounds and Polluted Areas System
03 Spaces of Mining Works for Ecologically Secure Waste Storage Utilization

B1.7 Old Dumping Grounds and Polluted Areas Sanation

01 Buštěhrady Dumping Ground Influence on Environment Analysis
02 Possibility of Transport and Sanation of Dumping Ground in Chabařovice Verification Proposal
03 Ways of Sanation of Oil Waste Dumping Ground OSTRAMO Proposal
04 Ways of Dangerous Dumping Ground Wastes Sanation in Žiar nad Hronom Proposal
05 Utilization or Liquidation of Leaching Wastes in Nickel Metallurgical Plant Sereď Proposal

B1.8 Regional Waste Utilization Economic System

x 01 Integrated Utilization of Wastes Třinec Region Study
x 02 Integrated Utilization of Wastes for Nový Jičin Region Study
x 03 Integrated Utilization of Wastes for Liberec-Jablonec nad Nisou Study
x 04 Integrated Utilization of Wastes for Strážské Region Study

B1.9 Large-Scale Purification of Soviet Army Staying Localities

B 2 Protection of Atmosphere against Pollution

B2.1 Reduction of Pollutant Emmissions into Atmosphere Strategy

01 Reduction of SO_2 Emissions Strategy
02 Reduction of NO_x Emissions Strategy
03 Reduction of NO_x Emissions at Stationary Resources Study
04 Reduction of CO_2 Emissions Strategy
05 Reduction of Emissions of Volatile Organic Substances Strategy
06 Reduction of Stiff Substances Emissions Strategy
07 Securing of International Obligations of CSFR in Assessment of Atmospheric Pollution and its Global Hazards

B2.2 Detoxication of Combustion Products and Dust Exhausting of Existed Power Stations

01 Power Station Počerady (4 x 200 MW) Desulphurization
x 02 Power Station Prunéřov II (4 x 210 MW) Desulphurization
03 Power Station Mělník I, II (6 x 55 MW, 4 x 100 MW) Desulphurization
04 Power Station Chvaletice (2 x 200 MW) Desulphurization
05 Power Station Tisová (212 MW) Desulphurization
06 Power Station Nováky (2 x 110 MW) Desulphurization
07 Regeneration of Desulphurization Facility at 200 MW Block in Tušimice II power Station Reconstruction (1. Construction - Preparatory Plant)
08 Power Station Tušimice II Desulphurization (2. Construction - 3 x 200 MW)
09 SO_2 and NO_x from Combustion Products of Power and Heating Plant Slovnaft Bratislava Removal
10 Sulphur Dioxides and Nitrigen Dioxides from Combustion Products of Chemical Works Litvínov Removal
11 Sulphur Dioxides and Nitrigen Dioxides from Combustion Products of Power Station VSŽ Košice Removal
12 Sulphur Dioxides and Nitrogen Dioxides from Combustion Products of Power Station and Heating Plant Chemko Strážské Removal
13 Sulphur Dioxides and Nitrogen Dioxides from Combustion Products of Power Station and Heating Plant Duslo Šala Removal
14 Sulphur Dioxides and Nitrogen Dioxides from Combustion Products of Power Station and Heating Plant Martin Removal
15 Sulphur Dioxides and Nitrogen Dioxides from Combustion Products of Power Station and Heating Plant Zvolen Removal

B2.3 Detoxication and Dust Exhausting of Waste Gases of Existing Technological Plants

- 01 Pressure Gas Plant Vřesová Desulphurization
- 02 Reduction of NO_x Emissions at Big Resources
- 02.1 Reduction of NO_x at Metallurgical Plants by Optimization of Technological Processes
- 03 Emissions from Cyclohexanon Production at Chemko Strážské Liquidation
- 04 Ammonia Separation from Gases at Washing of CO_2 at Duslo Šala

B2.4 Denitrification of Combustion Products and Processed Gases Technologies

- 01 Burners with Low NO_x Emissions
- 02 Catalytic Denitrification of Combustion Products and Processed Gases

B2.5 Fluid Combustion with Desulphurization and Denitrification of Flue Gases Products (Atmospheric and Pressive)

B2.6 Pressure Gasification of Coal in Integrated Steam-Gassed Cycle

B2.7 x Elektrostatic, Substances and Biological Filters

- 01 Liquidation of Low Concentration Pollutants from Big Volumes Air Locks With Help of Biological Filters
- 02 Emissions of Solid Parts in Power Stations and Power and Heating Plants with Help of Electrostatic and Substances Filters (with Pulse Regeneration)

B2.8 Emissions of Pollutants from Mobile Resources Depression

- 01 Finishing of Gas Lines Building of Spark. Ignition Engines
- 02 Spark-Ignition Engines with Lower Emissions
- 03 Supplement of Technological Apparates for Motor Engines Exhalation Measurement
- 04 Specification of Motor Cars Emission Calculation
- 05 Directed Catalysts

B 3 <u>Water Economy, Supply of Quality Drinking-water, Protection of Water Sources against Pollution</u>

B3.1 Strategy of Water Economy, including the Reduction of Losses in Distribution Systems

B3.2 Technology with a Lower Water Consumption

- 01 Reducing of Water Consumption in Metallurgical Plants

B3.3 Provision of Quality Drinking-water for Inhabitants

x 01 Strategy of Quality Drinking-water Supply
02 Regime Monitoring of Underground Drinking-water Sources

B3.3.1 Waterworks Treatments of Drinking-water (including Denitrification)

01 Waterworks Technologies

B3.3.2 Packaged Drinking-water

B3.3.3 Drinking-water Treatment in Housholdes

01 Technology of Drinking-water Treatment in Householdes

B3.4 Strategy of Reducing the Water Pollution from Point and Larger-scale Sources

B3.5 Technology of Sewage Treatment in Mechanical and Biological Sewage Disposal Works

01 Equipment for Membrane Processes of Sewage Treatment
02 Devices for Sorbing Detrimental to Health Substances (especially Petroleum Hydrocarbons) out of Water

B3.6 Nontraditional Sewage Treatment Technologies (Lagoons, Artificial Swampy Lands etc.)

B3.7 Improvement of Water Quality in the Elbe Basin
x
B3.7.1 Improvement of Water Quality in the middle Elbe Basin

B3.7.2 Improvement of Water Quality in the Vltava Basin

B3.7.3 Improvement of Water Quality in the Berounka Basin

B3.7.4 Improvement of Water Quality in the Ohře Basin

B3.8 Improvement of Water Quality in the Oder Basin

B3.9 Improvement of Water Quality in the Danube Basin

B3.9.1 Improvement of Water Quality in the Morava Basin

B3.9.2 Improvement of Water Quality in the Váh Basin

B3.9.3 Improvement of Water Quality in the Laborec Basin

B3.9.4 Improvement of Water Quality in the Ipel Basin

B3.9.5 Improvement of Water Quality in the Hron Basin

B3.9.6 Improvement of Water Quality in the Hornád Basin

B3.10		Improvement of Water Quality in the Vistula Basin
B3.10.1		Improvement of Water Quality in the Poprad Basin
B3.11		Technology of Underground Water Protection
	01	Underground Water Protection in the Areas of Industrial Pollution
	02	Underground Water Protection in the Areas Significant from the Aspect of Water Management
B3.12		Regulation of Landscape Hydrogeological System
	01	Regulation of Water Runoff at a Locality and Nutrient Bio-elimination in the Basins Equipped with Drainage Systems
	02	Research of Water Regime Changes of the Landscape and Surface Water Quality, Possibilities of their Protection and Sanitation
	02.1	Development of the Analytic Identification Methods of Toxic Substances
	03	Ecological Water Management in a Landscape and in Soil
	04	Revitalization of Water Sources

B 4 Care of Forest

B4.1			Care of Forests Strategy
		01	Development of Forest Ecosystems under Anthropogen Influence
		02	Modelling of Growth Processes under Immission Load Conditions
	x	03	Instruction Programme in Forestry
	x	04	Education Programme in Forestry
B4.2			Optimization Strategy in Species Co-position of Forest Plantation
		01	Optimization in Species Co-position of Forest Plantations
B4.3			Integrated Forest Protection with Minimum Utilization of Chemicals
B4.4			Ecologically Sound Exploitation and Transport Technology in Forestry
B4.5			Regeneration of Forests Exposed to Noxious Immissions
	x	01	Rehabilitation of Forest Ecosystems in the Jeseníky Mountains Region
	x	02	Rehabilitation of Forest Ecosystems in the Šumava Mountains Region
	x	03	Rehabilitation of Forest Ecosystems in the Jelšava - Lubeník Region

x 04 Rehabilitation of Forest Ecosystems in the Slavkovský les Region

B4.6 Technology of Exploitation of Less Valuable Wood

x 01 Waste Wood as Fuel Employment

B 5 <u>Natural Preservation and Restoration of Landscape Ecological Stability</u>

B5.1 Establishment, Management and Employment of Structures of Landscape Ecological Stability

01 Restoration of Ecological Stability Monitoring and Development of European Ecological Network
02 Projects of European, National and Local Systems of Ecological Stability (Ecological Network) on Scale 1 : 500 000, 1 : 200 000 and 1 : 50 000
03 Projects of Restoration of Landscape Ecological Stability in Selected Regions (i. e. Southern Moravia, Polabí, Východoslovenská nížina, Podunajská nížina)

B5.2 Establishment, Preservation and Development of National and Multilateral Parks and other Protected Landscape Areas

01 Bilateral Natural Park Šumava
02 Bilateral National Park Krkonoše
03 Multilateral Natural Park Podunají
04 Bilateral National Park Vysoké Tatry
05 Multilateral Natural Park Východní Karpaty (Poloniny)
06 National Park Muráňská Planina
07 National Park Velká Fatra

B5.3 Conservation of Plant and Animals Genetic Resources

B5.4 Management in Regions with Special Protective Regime (National Parks, Protected Landscape Areas, Zones of Hygienic Protection)

01 Principles and Methods of Management
02 Methods of Landscape Ecological Planning LANDEP

B5.5 Diminuation of Critical Load in Ecosystems

01 Diminuation of Critical Load in Ecosystems Strategy
02 Disturbance of Production Abilities, Buffering Capacity and Self-purification Properties of Landscape Systems and Possibilities of their Improvement
03 Disturbance of Ecological Stability and Aestetic Values of the Landscape and Possibilities of its Improvement
04 Synergic Effects of Noxious Agents and other Anthropogen Influences on Natural nad Man-made Ecosystems

05 Control of Acidifying Processes in Soils, Forests and Agroecosystems

06 Methodology of Determination of Critical Stress-level in Ecosystems caused by some Important Stressors.

Basic Programme C "ECOLOGIZATION OF PRODUCTS, TECHNOLOGIES, SERVICES AND LOCALIZATION OF ACTIVITIES IN REGION"

C 1 <u>Power System Ecologization</u> (with Exception of Emissions Reduction into Atmosphere Programme that is Contained in Basic Programme B)

C1.1 Consumption of Fuel and Energy Reduction

01 Reduction of Energy Consumption Strategy
02 Reduction of Fuel and Energy Consumption with Ecological Contribution in Production Processes
03 Reduction of Fuel and Energy Consumption with Ecological Contribution in Non-Productive Sphere

C1.2 Negative Consequences of Coal Power System for Environment Minimalization

C1.2.1 Utilization of Coal Power System Wastes

01 Plaster Utilization as Desulphurization Product-Structural Board Materials for Civil Engineering
02 Solid Energetic Wastes Processing and their Utilization
03 Rational Economic System with Raw Materials Contained in Hanging Wall Layers Stripping in Surface Coal Mining

C1.2.2 Landscape Recultivation in Regions of Surface and Deep Mines

01 Utilization of Non-Toxic Wastes to Recultivations in North Bohemian Basin
02 Landscape Recultivation in Deep Mines Regions

C1.2.3 Coal Preparation before Combustion (including Partial Desulphirization)

C1.2.4 Underground Coal Gasification

01 Underground Black Coal Gasification

C1.3 Utilization of Renewable Power Resources

01 Utilization of Renewable Power Resources Strategy

C1.3.1 Small Water Power Stations

C1.3.2 Wind Power Stations

C1.3.3 Solar Energy

C1.3.4 Biomass

C1.3.5 Utilization Waste Heat Classical and Nuclear Power Plants

C1.3.6		Geo-Thermal Energy Utilization
	01	Geo-Thermal Energy Utilization in Southern Moravia (Mušov-Březi)
C1.4		Natural Gas Rational Utilization for Technological Processes and Preferential Gas Lines Building in Localities with High Population Concentration and Bad Scattering Conditions
	01	Process of Gas Lines Building in Regions with Sustained Environment Proposal
C1.5		Minimalization of Mining and Processing of Uranium Negative Influence on Environment and Sanation of Mining and Processing Localities
	01	Subsequent Uranium Mining Limitation and Mining with Help of Chemical Methods Strategy
	02	Uranium Mining and Preparation Plants Localities Analysis
	02.1	Influence of Chemical Uranium Preparation Plants on Environment
	02.2	Operation Analysis and Liquidation of Underground Uranium Leaching from Environmental Point of View
	02.3	Influence of Contemporary and Uranium Industry Mining Works on Environment
C1.6		Minimalization of Negative Influences in Existing and Discharged Nuclear Power and Improving
	01	Influence of Jaslovské Bohunice Nuclear Power Station on Environment Analysis
	02	Influence of Dukovany Nuclear Power Station on Environment Analysis
x	03	Change of Contemporary Information and Computer System (IVS) Blocks and Operating Blocks with V 213 Reactor
x	04	JE VVER 440 Type V 230 Evaluation and Increasing its Safety
	05	Dismantling and Liquidation of Nuclear Plants after their Operation Finishing System
C1.6.1		Liquidation and Step-by-Step Je A-1 in Jaslovské Bohunice Dismantling
C1.6.2		JE V-1 with V 230 Reactors in Jaslovské Bohunice Safety Increasing
C1.6.3		JE V-2 with V 213 Reactors in Jaslovské Bohunice Safety Increasing
C1.6.4		JE with Reactors V 213 in Dukovany Safety Increasing

C1.6.5 Safety Radioactive Wastes Deposition and Management System

C1.6.6 Minimalization of Radioactive Grashes in Nuclear Power Plants System

C1.7 Minimalization of Negative Influence on Environment in Designed Nuclear Power Station and thoirs Operation Safety

C1.7.1 Temelín Nuclear Power Plant

01 Potential Nuclear Power Plant Temelín Influence on Environment Analysis

x 02 Order of Management and Information System of Temelín Nuclear Power Plant Expertise

03 Probable Security Values of Temelín Nuclear Power Plant with VVER 1000

04 Causes of Supposed High Ammount of Radioactive Wastes in Temelin Nuclear Power Plant Analysis and Matters Aimed at their Declining Propasals

C1.7.2 Kecerovce Nuclear Power Plant

01 Independent Ecological Study for Nuclear Power Plant Kecerovce

C1.7.3 Tetov Nuclear Power Plant

C1.7.4 Blahutovice Nuclear Power Plant

C 2 Ecologization of Agriculture

C2.1 Soil Management

01 Proposal of the Ecologization Process of Soil Management

02 Composting Methods and the Methods of Solution of Edaphon Problems

03 Research of Sources, Cumulation, Transport and Inactivation of Riskful Substances in Soil

C2.2 Environment-friendly Agricultural Technologies Minimizing the Utilization of Chemical and not Threatening the Landscape Ecological Stability

01 Environment-friendly Forms of Agricultural Management in Various Types of Natural Conditions and Civilization Stress

02 Control System of Regulable Inputs into Plant Production

03 Ecological Utilization of Waste Substances of Plants and of Animal Origin

C 3 Ecologization of Food-processing Industry

C3.1 Protection of the Human Food Chain

C3.2 Low-waste, Recycling, Purifying and other Environment-friendly Technologies in Food-processing Industry

01 Recirculation of Water in Starch Manufactures
02 Recirculation of Water in Breweries and Distilleries

C3.3 Ecologization of Food products (including Distribution and Packing)

C 4 Ecologization of Chemical and Pharmaceutical Industry

C4.1 Replacing Read Petrol by Low-lead and Zero-lead Petrol

01 Production of Low-lead and Zero-lead Petrol
02 Distribution Net of Low-lead and Zero-lead Petrol

C4.2 Replacing Fuels and Lubricants nated on Crude Petroleum

01 Production of Methylester from Rapasseed oil as an Alternative Fuel for Spark-ignition Engines

C4.3 Environment-friendly Chemical Products for Households, mainly hygienically non-detrimental Washing Powders and Liquids

C4.4 Industrial Fertilizers with Slow Release of Nutrients and Minimum Negative Effects on the Environment

C4.5 Pesticides with Minimum Negative Effects on the Environment

C4.6 Catalysts, Agents,Polymere Membranes and other Chemical Products for Cleaning Waste Waters

C4.7 Replacing the Substances Detrimental to the Earth Ozone Layer

01 Replacing Freons as Fluent Gasses, Cooling Media and Degreasing Agents
02 Decreased Production and Consumption of Substances damaging the Earth Ozone Layer

C4.8 Water-dilutable Paints and Coats

C4.9 Ecologization of Pharmaceutical Industry

C 5 Ecologization of Wood-processing Industry and Production af Paper and Cellulose

C5.1 Utilization of Waste Paper

C5.2 Environment-friendly Technologies in Wood Processing Industry

C5.3 Environment-friendly Technologies in the Production of Cellulose and Paper

C 6 Ecologization of Textile and Tannery Industry

C6.1 Textile Industry

01 Reducing of Emmissions and Water Pollution in the Production of Viscose Staple Rayon
01.1 Reducing of Emmissions of Carbon Bisulphide and Hydrogen Sulphide in the Production of Viscose Rayon in the s.p. Slovenský hodváb, Senica
02 Production of Textile Fibres for Filtres for Cleaning Waste Gases in Power Stations (Energy Production Facilities) and in Industry

C6.2 Tannery Industry

C 7 Ecologization in Rubber Industry and in Plastic Processing Industry

C7.1 Production of Biodegradable Packings and hygienically Harmless, Reusable Packing which are not Detrimental to Environment

C7.2 Production of Friction Materials without Asbestos

C7.3 Production of Reverse Osmosis Membranes and Modules

C 8 Ecologization of Ore Mining and Metallurgy

C8.1 Environment-friendly Ore Mining and Reclamation of Mining Areas

C8.2 Low-waste and other Environment-friendly Technology in Metallurgy

01 Environmental Programme of the Czechoslovak Metallurgy
02 Effects of Foundry Technology on Environment Studies
03 Assessment of Ecological Impact on the Production of Aluminium in Žiar n.H.
04 Assessment of Ecological Impact of Metallurgical Production in Rudňany Iron - Ore Mine
05 Regeneration Technology of Processing of Foundry Sludges

C 9 <u>Ecologization of Machinery, Electrical and Electronics Industry</u>

C 9.1 Optimizing of the Development in Machinery Industry with Respect to Environment

01 Development of Machinery Industry with Respect to Environment Conception

C9.2 Low-waste and other Environment-friendly Technology in Machinery

01 Degreasing of the Metal-chip Scrap by non-chemical Process
02 Surface Treatments of Metals
02.1 Effect of Surface Treatment of Metals on Environment and Proposal for Solving the Problem by Employing of Low-waste Technology Studies

C9.3 Production of Processing Equipment for Low-waste, Recycling and Cleaning-plant Technology

01 Equipment for Waste Water Treatment
02 Equipment for Air Pollution Cleaning
03 Equipment for Waste Management and Reusing

C9.4 Production of Instruments and Sensors for Measuring of Emmissions and Monitoring of Environment Quality

01 Analysis of the State of the Czechoslovak Production of Instruments and Sensors for Measuring of Emmissions and Monitoring of Environmental Quality (in International Correlation)
02 Production of Emmissions Analyzing and Control Systems
03 Production of Gas - exhaust Analysers

C9.5 Minimalization of the Negative Effects of Machinery, Electric and Electronic Technology and Plants on Environment

C9.6 Product of Machinery Industry with Excellent Properties with Respect to Environment

C 10 <u>Ecologization of the Production of Building Materials and of Building Industry</u>

C10.1 Ecologization of Extraction and Production of Building Materials

01 Substitution of Asbestos in Building Materials

C10.2 Ecologization of Building Technology

C10.3 Improvement of Ecological Parameters of Buildings

01 Diminuation of Inhabitants Loadings by Radon, escaping from Bedrocks and from applied Building Materials
01.1 Development of Methods for Determination of Radon Exposition
02 Improvement of Thermodynamic Characteristics of Building

C 11 <u>Ecologization of Settlements</u>

C11.1 Strategy for Rehabilitation of Settlements Environment

01 Methods for Evaluation of Indoor and Outdoor Environment
02 Laboratory for Measurement of Parameters of Indoor Environment (Praha, Bratislava)
03 Management of Town and Rural Settlement Development with Emphasis on Ecological and Recreational Aspects and with Regard to Reconstruction of Historical Core-parts and Monuments
04 Analysis of Urbanization in ČR and SR and Existing Plans of Territory for Settlement Units
05 Advancement of Urban Hydrology and Climatology

C11.2 Cleaning and Maintenence of Towns and Villages

C11.3 Advancement of Urban Mass Transport
01 Optimizing and Management System of Urban Mass Transport

C11.4 Extension and Maintenance of Greenplots in Towns and Villages

C11.5 Support of Cultural, Recreational and Sport Activities

C 12 <u>Ecologization of Transport</u>

C12.1 Reduction of Negative Effects of Railway Transport on Environment

C12.2 Reduction of Negative Effects of Air Transport on Environment

C12.3 Reduction of Negative Effects of Water Transport on Environment

C12.4 Reduction of Negative Effects of Road Transport on Environment

C12.5 Ecologization of Establishment and Operation of Line Transport Facilities
01 Ecologization of Urban Mass Transport Vehicles in Praha and other Cities CSFR

Basic Programme D "EDUCATION AND COURSES IN ECOLOGY AND THE SUPPORT OF VOLUNTARY ACTIVITIES IN ECOLOGY"

D 1 <u>Education and Courses in Ecology</u>

D1.1 Pre-school Education in Ecology

D1.2 Primary and Secondary School Education in Ecology

D1.3 University and Post-graduate Study Education in Ecology

D1.4 Out-of-school (after school) Education in Ecology

01 Proposals of Conception of Out-of-school Education in Ecology
02 Establishing of ten Experimental Centers for Education in Ecology (Praha 10, Chomutov, Ústí nad Labem, Prachatice, Uherské Hradiště, Frýdek-Místek, Banská Štiavnica + another three in the Slovak Republic)
03 Academy for Education in Ecology Scientific Educational Programme

D1.5 Public Information on Ecological Problems and about Ways how to solve them

01 Engaging and Supporting TV Education Programme
02 Engaging and Supporting of Educational Programme in Radio Broadcast
03 Engaging and Supporting of Education in non periodical Publications
04 Engaging and Supporting of Lectures and Instructions
05 Engaging and Supporting of Lectures and Meetings

D1.6 Public Opinions Survey aimed at Systematic Findings of Attitudes of Public to the Problems of Environment

D2 <u>Support of Environmentaly oriented Citizens Activities and Voluntary Organizations</u>

D2.1 Establishing Consulting Centers for Ecology "Green Houses" and Providing them with Material and Financial Support

D2.2 Material and Financial Support of Voluntary Ecological and Conservationists Organizations from Budgets and Funds reserved for Environment

D2.3 Citizens Inspection System covering the Protection of Environment and Professional Assistance for Citizens

Basic Programme E "DEVELOPMENT OF KNOWLEDGE ON ENVIRONMENT"

E 1 <u>Recognition of the Relation between the Value Orientation of Peoples and Environment Quality</u>

E 2 <u>Evaluation of the Relation between Environment and the Health of Population</u>

E2.1 Relation between the Environment Quality, State of Health and Reproduction Ability of Inhabitants

01 Relation between the Depletion of Ozone Layer and the Health of the Human Population
02 Survey of the State of Health and Development of Childern in Areas with Heavy Air Pollution
03 Influence of Environment contaminated with Organic Components (of Substantial Priorities) on the State of Health of Population
04 Relation between the Contaminated Environment and the State of Health of the Inhabitants in the Teplice Region
05 Control of the Inhabitants in the Mníšek Region exposed to Vanadium
06 Evaluation of Toxic Metals Load on Representative Groups of Inhabitants in the Frýdek-Místek Region
07 Relationship between Contaminated Environment and State of Health of the Inhabitants in Nováky Region

E 3 <u>Reducing of Negative Effects of Environment of the Peoples State of Health</u>

E3.1 Allochthonous Substances present in Food-chain and in Drinking Water and their Influence on Human Body

01 Penetration of Allochthonous Substances in Food-chain Control

E3.2 Polluted Air and the Human Health

E3.3 Noise and Vibrations Annoyance of Human Body

E3.4 Ionizing and Non-ionizing Radiation Loading of Human Body

01 Assessment of Hygienic and Ecological Impact of Praha Žižkov Television Transmitter

E 4 <u>Theoretical Foundations of Environment-friendly Technologies and Products</u>

E4.1 New Natural Raw Materials for the Environment Improvement

E 5 <u>Theoretical Foundations of Environment-friendly Landscape Management</u>

E 6 <u>Global Ecological Relations</u>

E6.1 Research of the Change of the Quality of Atmosphere, Climatic Changes and Impairing of Protective Propertis of Atmosphere

Basic Programme F "REGIONAL ECOLOGICAL PROBLEMS SOLUTION"

F 1 Regional Ecological Problems of Czech Republic

F1.1 General Rehabilitation of North-west Bohemian Basin

F1.2 General Rehabilitation of the Ostrava-Karviná Region

F1.3 Solution of the Ecological Situation in the Capital of Prague and Central Bohemian Agglomeration
01 General Solution of Wastewater System in Praha
02 Wastewater Plant Sludge Disposal in Praha

F 2 Regional Ecological Problems of Slovak Republic

F2.1 General Solution of Ecological Problem of Žitný ostrov

x 01 Ecological Impact Assessment of Gabčikovo-Nagymáros Waterwork
02 Proposal of the General Protection of the Underground Waters of the Žitný ostrov

F2.2 Ecological Optimizing of the South Slovak Basin

F2.3 Ecological Optimizing of the East Slovak Lowland

F2.4 Solution of the Ecological Situation in Bratislava

F2.5 Solution of the Ecological Situation in the Sereď-Šala Region

F2.6 Solution of the Ecological Situation in the Region of Horní Nitra and Žiar nad Hronom

F2.7 Solution of the Ecological Situation in Ružomberok

F2.8 Solution of the Ecological Situation in Košice

F2.9 Solution of the Ecological Situation in Region of Strážske-Vranov-Humenné

F2.10 Solution of the Ecological Situation in the Stredný Spiš Region

F2.11 Solution of the Ecological Situation in the Jelšava-Lubeník Region

Basic Programme G "INTERNATIONAL ECOLOGICAL PROGRAMMES AND PROJECTS"

G 1 International Ecological Conferences and Seminars

01 The Conference of the European Ministers for Environment, Dobříš 1991
02 Establishing the System of Study Stays abroad, Exchange of Specialists, Joint Research etc.
03 The Draft of Proposed Connection between the International Exchange of Information Sources and the Field of Environment and Scientific and Technical Co-operation
04 Preparatory Work on the Proposal for Establishing the International Centre
05 Eco-Public-Forum Prague, October 1991 (Our Common Future, Mrs. Bruntlandová, NGO Central, East and South European Workshop on Preparations of the UNCED Brazil 1992)
06 Preparation of the Czechoslovak Participation in the United Nations Conference for Environment and UNCED Development, Rio de Janerio 1992 (National Administration, Working Papers for Negotiations, Documents, Preparatory Actions, Studies).

G 2 International Ecological Programmes

G2.1 "The dirty Triangle" - Podkrušnohoří (sub.Saxon-Erzgebirge), Bogatyňa, Tittau (together with the Federal Republic of Germany and Poland)

G2.2 The International Natural Park Česko-saské pískovce (the Bohemia-Saxon Sandstone) - together with the Federal Republic of Germany, direct Co-operation between the Ministry of Environment of the Czech Republic and Saxony

G2.3 The Oder River (together with Poland and the Federal Republic of Germany)

G2.4 The Visla River (together with Poland, direct Co-operation between the State Commission for Environment and Polish Institutions

G2.5 Slezská pánev (Silesian Basin) - (together with Poland)

G2.6 Východní Karpaty (East Carpathian mountains) - Poloniny (together with Poland and Ukraine direct Co-operation between the State Commission for Environment and the Relevant Institutions)

G2.7 International protected region "Slovenský kras" (Slovakian Karst) - Aggetelek - including the Cave Areas Domica-Barandla - (together with Hungary, direct Co-operation of the State Commission for Environment with the relevant Hungarian Institutions)

G2.8 Multilateral National Park Podunajsko a Podyjí (the Danube and Dyje Basins) - (together with Hungary and Austria)

G2.9 Danube (together with all Countries situated in the Danube Basin)

G2.10 Bilateral Natural Park Šumava (together with the Federal Republic of Germany, direct Co-operation between the Ministry of Environment of the Czech Republic and Bavaria

G2.11 Protection of Environment in the Region Košice - Miskolc (together with Hungary - direct Co-operation of the State Commission for Environment)

G2.12 Protected Region Burda - Porzonyi - Pilisi (together with Hungary - direct Co-operation of the State Commission for Environment)

G 3 Seminare organized for foreign specialists

G3.1 Seminar "Environment and Health"

G3.2 Seminar "The Quality of Atmosphere and State of Forest"