

JOHANNESBURG SUMMIT 2002

FEDERAL REPUBLIC OF YUGOSLAVIA



COUNTRY PROFILE



UNITED NATIONS

INTRODUCTION - 2002 COUNTRY PROFILES SERIES

Agenda 21, adopted at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, underscored the important role that States play in the implementation of the Agenda at the national level. It recommended that States consider preparing national reports and communicating the information therein to the Commission on Sustainable Development (CSD) including, activities they undertake to implement Agenda 21, the obstacles and challenges they confront, and other environment and development issues they find relevant.

As a result, in 1993 governments began preparing national reports for submission to the CSD. After two years of following this practice, the CSD decided that a summarized version of national reports submitted thus far would be useful. Subsequently, the CSD Secretariat published the first Country Profiles series in 1997 on the occasion of the five-year review of the Earth Summit (Rio + 5). The series summarized, on a country-by-country basis, all the national reports submitted between 1994 and 1996. Each Profile covered the status of all Agenda 21 chapters.

The purpose of Country Profiles is to:

- Help countries monitor their own progress;
- Share experiences and information with others; and,
- Serve as institutional memory to track and record national actions undertaken to implement Agenda 21.

A second series of Country Profiles is being published on the occasion of the World Summit on Sustainable Development being held in Johannesburg from August 26 to September 4, 2002. Each profile covers all 40 chapters of Agenda 21, as well as those issues that have been separately addressed by the CSD since 1997, including trade, energy, transport, sustainable tourism and industry.

The 2002 Country Profiles series provides the most comprehensive overview to date of the status of implementation of Agenda 21 at the national level. Each Country Profile is based on information updated from that contained in the national reports submitted annually by governments.

Preparing national reports is often a challenging exercise. It can also be a productive and rewarding one in terms of taking stock of what has been achieved and by increasing communication, coordination and cooperation among a range of national agencies, institutions and groups. Hopefully, the information contained in this series of Country Profiles will serve as a useful tool for learning from the experience and knowledge gained by each country in its pursuit of sustainable development.

NOTE TO READERS

The 2002 Country Profiles Series provides information on the implementation of Agenda 21 on a country-by-country and chapter-by-chapter basis (with the exception of chapters 1 and 23, which are preambles). Since Rio 1992, the Commission on Sustainable Development has specifically addressed other topics not included as separate chapters in Agenda 21. These issues of trade, industry, energy, transport and sustainable tourism are, therefore, treated as distinct sections in the Country Profiles. In instances where several Agenda 21 chapters are closely related, for example, chapters 20 to 22 which cover environmentally sound management of hazardous, solid and radioactive wastes, and chapters 24 to 32 which refer to strengthening of major groups, the information appears under a single heading in the Country Profile Series. Lastly, chapters 16 and 34, which deal with environmentally sound management of biotechnology, and transfer of environmentally sound technology, cooperation, capacity-building respectively, are presented together under one heading in those Country Profiles where information is relatively scarce.

TABLE OF CONTENTS

CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES.....	1
CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES - TRADE.....	2
CHAPTER 3: COMBATING POVERTY.....	3
CHAPTER 4: CHANGING CONSUMPTION PATTERNS.....	6
CHAPTER 4: CHANGING CONSUMPTION PATTERNS - ENERGY.....	8
CHAPTER 4: CHANGING CONSUMPTION PATTERNS - TRANSPORT.....	9
CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY	10
CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH	11
CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT.....	12
CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING.....	14
CHAPTER 9: PROTECTION OF THE ATMOSPHERE.....	18
CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES.....	21
CHAPTER 11: COMBATING DEFORESTATION.....	23
CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT.....	25
CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT.....	27
CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT.....	29
CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY.....	31
CHAPTER 16 AND 34: ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY AND TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING.....	33
CHAPTER 17: PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES.....	34
CHAPTER 18: PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES.....	36
CHAPTER 19: ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS.....	38
CHAPTER 20 TO 22: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS, SOLID AND RADIOACTIVE WASTES.....	39
CHAPTER 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS.....	42

CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS.....	45
CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT.....	47
CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING.....	48
CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES.....	50
CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS.....	51
CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS.....	52
CHAPTER 40: INFORMATION FOR DECISION-MAKING.....	54
CHAPTER: INDUSTRY.....	56
CHAPTER: SUSTAINABLE TOURISM.....	58

LIST OF COMMONLY USED ACRONYMS

ACS	Association of Caribbean States
AMCEN	Africa Ministerial Conference on the Environment
AMU	Arab Maghreb Union
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CARICOM	The Caribbean Community and Common Market
CBD	Convention on Biological Diversity
CIS	Commonwealth of Independent States
CGIAR	Consultative Group on International Agricultural Research
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMESA	Common Market for Eastern and Southern Africa
CSD	Commission on Sustainable Development of the United Nations
DESA	Department for Economic and Social Affairs
ECA	Economic Commission for Africa
ECCAS	Economic Community for Central African States
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ECOWAS	Economic Community of West African States
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIDA	Foundation for International Development Assistance
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
GHG	Greenhouse Gas
GIS	Geographical Information Systems
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IAEA	International Atomic Energy Agency
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
ICT	Information and Communication Technology
ICTSD	International Centre for Trade and Sustainable Development
IEEA	Integrated Environmental and Economic Accounting
IFAD	International Fund for Agricultural Development
IFCS	Intergovernmental Forum on Chemical Safety
IGADD	Intergovernmental Authority on Drought and Development

ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	Integrated Pest Management
IRPTC	International Register of Potentially Toxic Chemicals
ISDR	International Strategy for Disaster Reduction
ISO	International Organization for Standardization
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature and Natural Resources
LA21	Local Agenda 21
LDCs	Least Developed Countries
MARPOL	International Convention for the Prevention of Pollution from Ships
MEAs	Multilateral Environmental Agreements
NEAP	National Environmental Action Plan
NEPAD	New Partnership for Africa's Development
NGOs	Non-Governmental Organizations
NSDS	National Sustainable Development Strategies
OAS	Organization of American States
OAU	Organization for African Unity
ODA	Official Development Assistance/Overseas Development Assistance
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
PRSP	Poverty Reduction Strategy Papers
SACEP	South Asian Cooperative Environment Programme
SADC	Southern African Development Community
SARD	Sustainable Agriculture and Rural Development
SIDS	Small Island Developing States
SPREP	South Pacific Regional Environment Programme
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNCED	United Nations Conference on Environment and Development
UNCCD	United Nations Convention to Combat Desertification
UNCHS	United Nations Centre for Human Settlements (Habitat)
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNIFEM	United Nations Development Fund for Women

UNU	United Nations University
WFC	World Food Council
WHO	World Health Organization
WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wildlife Fund
WWW	World Weather Watch (WMO)

CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

**CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE
DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC
POLICIES - TRADE**

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 3: COMBATING POVERTY

Decision-Making: Federal Secretariat of Labor, Health and Social Care is competent for: the basic principles of labor relations; the support for unemployed; social insurance (pension, disability, health); and for the financial support for old people and refugees. At the level of the Republics, the ministries for Social Protection and Labor are competent for other questions, e.g. aid for children and mothers and compensation in cases of job loss.

The pertinent laws are: the Law of Pension and Invalid Insurance (1997); the Law of Veteran and Invalid Protection; and the similar Laws at the Republic level.

Programmes and Projects: No information available.

Status: The prolonged and serious economic crisis, accompanied by hyperinflation in 1992 and 1993, and further aggravated by negative effects of the sanctions, resulted in significant changes in the social and economic position of the Yugoslav population. As a result, there was: a drastic decline in economic activity and Gross domestic Product (GDP); an accelerated increase in the unemployment; a severe decline in the population's income and subsequently in the standard of living; and especially the increased poverty. The real salaries showed a drastic decline in 1992 and 1993 that were only 15% of the amount in 1989. Since 1994, the real salaries showed an increase and in 1996 they were 55.5% of the salaries in 1989. However, in 2000, after the war, they amounted only to 28% of the level in 1989. The consequence was a drastic increase in poverty.

The analysis on inequality and poverty in Federal Republic of Yugoslavia (FRY) during the period 1992-1995, based on data from the Survey on Household Consumption conducted by the Federal Statistical Office, shows that in 1995, 28.9% population (almost 3 million people) were poor, i.e. unable to satisfy their needs for the minimum normal nutrition. Compared to the situation in 1990, poverty coefficient, which is calculated by using the same line of poverty in the real amount, was 14.1% of the population (about 1.5 million people). This represents a twofold increase. Among the rural population, poverty increased more slowly (from 14.6% in 1990 to 22.9% in 1995). The increase in poverty of the urban population was higher, since poverty index increased from 13.2% to 32.8% in the analyzed period. Current estimates show that about 80% of people in FRY live at the minimum of subsistence, whereof about 50% need some kind of social aid and over 20% live below the line of poverty.

During the past ten-year period, there has been different kinds of social aids (for children, mothers, disabled persons, etc.), which have not been enough. All the facts show that the best solution for combating poverty is economic prosperity; precisely, a good economic program.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: There are Funds for social protection on both the Federal and the Republic levels.

Cooperation: No information available.

* * *

CHAPTER 4: CHANGING CONSUMPTION PATTERNS

Decision-Making: Some federal institutions have certain responsibilities related either to the coordination with republican activities or to the issues of changing consumption and production patterns and international relations. The body primarily responsible for the consumption is the Ministry responsible for environmental protection, i.e., the Federal Secretariat of Labor, Health and Social Care, the Environment Department, in cooperation with the relevant parliamentary and governmental bodies. The other responsible federal institutions are: the Institute for Standardization; the Federal Secretariat for Science and Development; the Federal Ministry of Economy and Internal Trade; and the Federal Ministry of Finance. At the republican level (Serbia and Montenegro), ministries for Environmental Protection and other ministries, agencies, enterprises, institutions and organizations are responsible for this issue.

The following laws regulate this issue: the Law on the Basic Principles of Environmental Protection in Yugoslavia (1998); the Law on the Environmental Protection of the Republic of Serbia (1991); and the Law on the Environmental Protection of the Republic of Montenegro. FRY has appropriate legislation and mechanisms regarding Environmental Impact Assessment (EIA) at the federal and republic levels. At the federal level, the EIA in transboundary context is covered in the Law on the Basic Principles of the Environmental Protection. A procedure of assessment of the relevant effects is applied in planning and carrying out the operations potentially harmful for the environment. In the Republic of Serbia, this procedure is regulated by the Law on Environmental Protection, and Regulation on the Environmental Impacts Assessments (1992). In the Republic of Montenegro, the EIA is regulated by the Law on Environment, and Regulation on the Environmental Impact Assessments (1997). In addition, there are several relevant laws: the Law on Foreign Trade; the Law on Standardization; and the Customs Act. The Laws on Basic Principles of Environmental Protection and the Law on Standardization created the Environmental Label, as one of the instruments for achieving the change in consumption patterns.

The Government of FR Yugoslavia (FRY), having considered the state of environmental protection under newly created conditions, adopted the Resolution on the Environmental Protection Policy (1993), setting also the national objectives of consumption patterns, basically on the basis of Agenda 21 long-term goals.

Programmes and Projects: According to the Resolution on the Policy of the Environmental Protection in FR Yugoslavia, the policy has been designed as a specific, unified and long-term programme and a component of the integral economic system of FRY. The principal goals of the policy of cleaner production and waste minimization are as follows: to reduce waste generation; to introduce a low-waste material technology and recycling of wastes in interconnected industrial production; to introduce programmes for the enhancement of production along with the reduction of energy consumption; to give importance to the preventive approach by reducing quantities for final disposal either through prevention of waste (by “clean technologies” and lengthening the lifetime of products and device treatments of waste), or by re-use (recycling); and to implement the “polluter pays” principle, meaning that the greatest responsibility for the produced waste lies with the one who produces such waste.

Status: Recent changes (positive and negative) in the production and consumption patterns have been basically determined by the economic recession, wars in the neighborhood and problems within the country. These changes only delay the real solution of the problems. For example, GDP in 2000 was 50% of the level in 1990. In the conditions of the international isolation, economy in the country turned to domestic resources. Moreover, the performances of domestic technology weakened. Because of that, although the economic activity decreased, pollution resulting from production did not decrease accordingly. Also, the low level of capacity utilization during past ten years decreased energy and material efficiency in industry, so that the economy had the course of lower sustainability.

The state of the environment has been monitored in Yugoslavia for many years. However, because of the non-harmonized methods of monitoring, it is not possible to get a full insight into the state of the environment in FRY. Even so, the available data does allow a partial insight into the matter. The major polluters of the environment are

industrial facilities. To become a part of international market quality-control systems and certificates, and with reference to the International Standards Organization, standard ISO 9000 is widely adopted by the industry. In the field of management of environmental protection - "eco-management", five basic Yugoslav standards, YUS ISO 14000, have been published (14001, 14004, 14010, 14011, and 14012). They are identical with international standards of the International Standards Organization - ISO 14000.

The effect of lower production, poor economic conditions and a high percent of poverty, is the reduction of personal consumption and the disappearing of consumer society. In these conditions, it is impossible to expect high-level awareness of consumers. However, environmental authorities support environmentally-friendly production and goods and they combat those that are environmentally harmful. However, the instruments of such support are still not developed or widely applied (eco-labeling, tax differentiation between environmentally friendly - non-friendly goods and activities, *inter alia*). Environmental fines play an important role in changing consumption and production patterns. However, according to experience, the efficiency of this instrument is not sufficient.

Capacity-Building, Education, Training and Awareness-Raising: It is justified and even necessary, in order to ensure sustainable development, to raise environmental education, i.e. to improve old-fashioned education with actual information. There has been some improvements in FRY (concerning Departments of some Universities, training at global and company levels, education through schools, and etc.). Numerous conferences, exhibitions and fairs dealing with environmental issues have been organized. The conferences encouraged the industries to develop and introduce low-waste, low-emission, low-power and resource-saving technologies, as well as closed production cycles, and to manufacture environmentally-friendly products. In the field of dissemination of information and popularization of environmental protection, activities are aimed at: organizing exhibitions/conferences in the country and abroad; creating contacts with the representatives of the media; sponsoring certain periodicals and other publications; and etc.

In the given economic situation, when it is difficult to satisfy even the minimum personal needs, people are not in a position to concern themselves over the quality of the environment and its protection.

Information: There is no integral national information system on the environment. However, some subsystems have been developed.

Research and Technologies: Environmental Policy and legislation, as well as ISO 14000 standards create the framework to promote clean production processes. Some examples of the practice of cleaner production decisions are developed (Chemical Industry Pancevo; Lepenka Novi Knjazevac; Tipoplastika Gornji Milanovac, etc.). Capacities at all levels are affected by the shortage of funds. As far as the changes in ongoing production and/or technologies are concerned, the extent to which the best available technologies are used depends on the existing technical-technological situation and the available financial resources of the particular organization.

Financing: At the present stage of transition, financial resources are insufficient to serve the rapid recovery of the economy and simultaneously to solve accumulated environmental problems. The nature of the existing laws, regulations and their enforcement is mostly restrictive and, hence, cannot be regarded as economic instruments.

Cooperation: International cooperation in the field of environmental protection was very intensive and fairly successful before the sanctions were imposed on FR Yugoslavia. Yugoslavia has ratified 51 international treaties relating to the issues of the environment.

One has to bearing in mind, that one of FRY's strategic commitments is to be re-integrated in the fastest, fullest and most meaningful manner in all the structures and activities of international institutions. FR Yugoslavia needs any assistance or cooperation that would have as its goal the fastest possible harmonization of legal, institutional, technical and other capacities with those of the European Union and other regional organizations.

CHAPTER 4: CHANGING CONSUMPTION PATTERNS - ENERGY

Decision-Making: FRY has a specific position in comparison with other countries in the region. In addition to the Federal Government, there are two Republic Governments: the Government of Republic of Serbia and the Government of Republic of Montenegro. There are a few laws in the field of energy, some on the federal level and some on the republic level. The laws on the federal level are: the Law on Affiliation to the Association of Yugoslav Electric Power Utility, 1978; the Law on Pipeline Transport of Gaseous and Liquid Hydrocarbons, 1997; and the Law on Determination and Classification of Reserves of Raw Minerals and Presentation of Geological Survey Results, 1998, as well as its amendment. The laws of the Republic of Serbia are: the Law on Electric Power Utility, 1991 and a few amendments to this Law; the Law on Mine, 1995; the Law on Geological Survey, 1995; the Law on Transport, Distribution and Use of Natural Gas, 1991 and a few amendments to this Law. The laws of the Republic of Montenegro are: the Law on Energy 1990; the Law on Geological Survey 1993; and the Law on Mine 1993.

There is Strategy of development of the energy supply industry of the FRY until the year 2020.

Programmes and Projects: The main projects/investments (1990-2001) on energy sector are: the Completion and commissioning of TPP Drmno 348,5 MW; Completion and commissioning of HPP Djerdap 2,2 X 27 MW; Gas pipeline Nis - Pojate and Connections; and Low scale upgrade of electric transmission network.

Status: From about 1.8 toe per capita in 1990 to about 1,2 toe per capita in 2000, Yugoslavia is on low level of total primary energy consumption. However, in regard to GDP, the level of this consumption is high. That indicates to an inefficient utilization of energy, primarily because of obsolete technique and technology in production. The energy resources of the FR Yugoslavia are mostly in the lignite reserves and much less in water power, crude oil, natural gas, oil share and new renewable energy sources. The potentials of the new and renewable energy sources are considerable, but their use is still not cost-effective in many fields of application.

On the other hand, tariffs of energy were means of social policy and were not determined in accordance with calculated real economic costs of energy production because of low standard of living in FR Yugoslavia in last decade and nowadays. Situation was especially bad in electricity and heat sectors. Electric Power Utilities had to accept the consequences of this electricity tariff policy. As a result, a poor equipment maintenance, ceasing of new investments and bad economic and financial situation of Electric Power Utilities occurred. Local municipalities, operating public district heating companies, had to accept the consequences of bad heat tariff policy. The result is again poor equipment maintenance, ceasing development and increase of debt. Local municipalities in majority of cases were not able to finance just fuel expenses for import fuels. This made heating quality in residential sector worse and forced people to use electricity heat devices as additional heat source. Electricity consumption in residential sector significantly increased and caused difficulties for regular and proper electricity supply.

In the past few years gas price, although depreciated, was significantly higher than electricity price for households' consumers and, as a consequence, consumers connected to gas network were "stimulated" to use electricity instead of natural gas.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 4: CHANGING CONSUMPTION PATTERNS – TRANSPORT

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: According to the last census (1991), the population in FR Yugoslavia was estimated to be 10,394 thousand. Compared to 7.13 million in 1950, the population of the country has increased by 30%. The territorial distribution of the population is as follows: 5.8 million inhabitants live in Central Serbia; 2.0 in Vojvodina; 1.95 in Kosovo (estimation); and 615 thousand in Montenegro. Yugoslavia is a multi-ethnic state. According to estimates and results of the last census (1991), the majority of Yugoslavia's inhabitants are Serbs (62.2%); the second largest ethnic group is Albanians (16.5%), followed by Montenegrins (5.0%), Yugoslavs (3.1%), Hungarians (3.3%), Moslems (3.3%), and etc. According to the most recent census conducted in 1991, the percentage of females in the total population of Yugoslavia was somewhat higher than that of males: 50.10% (50.22% in Montenegro and 50.20% in Serbia). In Serbia as a whole, the percentage of females is higher in Serbia proper (50.50%) and Vojvodina (51.03%) than in Kosovo and Metohija (48.60%). The link between gender and the environment in FR Yugoslavia has not yet been appropriately addressed. After the estimate of the Federal Statistical Office, based on the 1991 census and natural increase, in 2000 the number of inhabitants was 10,634,620 (excluding internal and external migrations and data for Kosovo and Metohija). Preliminary results of the 2002 census show a more negative trend: for the first time, a registered decrease in population since the beginning of the statistical surveys. This decrease is the result of mortality increase and birth rate decrease in the past ten years, when the country was pressed with negative effects of very strong international isolation and war consequences (for example, the effect of NATO bombing in 1999, according to informal data, was the death of between 1,200 and 2,500 people, whereof 79 children).

It should be noted that the demographic movement in FRY is characterized by migrations, especially in last ten years. In this period, about 646 000 refugees from the former part of the Socialist Federal Republic of Yugoslavia (SFRY) and about 250 000 internally displaced people from Kosovo and Metohija found their temporary homes in Yugoslavia. This caused an increased demand for drinking water, contributed to the previously mentioned land deterioration, as well as to an increased pollution, especially from households. The unfavorable spatial distribution of economic activities and population is causing deterioration of living conditions both in urban settlements and underdeveloped regions. On the other hand, during the same period, many young people are leaving the country for economic and/or other reasons and this process is still intense.

There is not unique population policy in FRY,

Capacity-Building, Education, Training and Awareness-Raising: No information available

Information: The Federal Statistical Office collects the demographic data and is competent for the information. The censuses carry out on about every ten years. The last census was in April 2002 and the official results has not published yet. The number of the population and some other data (mean age of population, aging index and expectancy of life at birth, fertility and mortality rates, etc.) have been estimated for each year. The Federal Ministry of Home Affairs and some other institutions on republic level are responsible for migration data.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

Decision-Making: The Republic ministries of Urban Development and Planning are the main coordinators of territorial planning in Serbia and Montenegro. The Republic ministries of Environmental protection take also part in the decision-making.

The regulatory measures and strategic documents at the level of the republic include: the Law on Planning and Space and Settlements Arrangement (1995) and the Construction Law (1995) that regulate the spatial and urban planning in Serbia; The Law on Spatial Plan of Serbia (1996) that includes the principle of sustainability; the Spatial Plans of Serbia and Montenegro (1996); and the Law of Local Communities (2002). By the Law of Planning Regulation on public participation in planning process, local municipalities became responsible for urban planning and management. This law contributed to the increased transparency of land use and better use of public and private land.

Programmes and Projects: There has been certain State housing programmes (1997) in Republic of Serbia, but they have been unsuccessfully implemented. In addition, there are "LEAP Nis" (Local Environmental Action Plan in NIS) and some other initiatives for Local Agenda 21 in Belgrade, Kotor, Vrnjacka Banja, Subotica and Valjevo.

Status: The process of urbanization in FRY has been followed by numerous anomalies, primarily because of rapid process of industrialization and uncontrolled abandonment of villages. The consequence was an excessive concentration of population in urban areas and depopulation in other regions. For example, from the total population of Central Serbia, the share of inhabitants of Belgrade increased from 15.3% in 1948 to 28.2% in 1999, causing a disproportion of the country's regional development. Despite of the rise of the population living in towns and other settlements caused by the reasons described above, people are abandoning agriculture at a higher rate than they are moving into towns (Agricultural population was 37.6% in 1971 and 16.7% in 1991; urban population was 34.7% in 1971 and 51.2% in 1991.). This is an important characteristic of these dynamic demographic movements. The people living outside the cities cover a great area (almost 15 times larger than the urban area) with bad living conditions, for example lack of sewage infrastructure, water supplies, public facilities, etc.

Urban development continues to be in a state of flux as the town planners, in making their arrangements, anticipated the turbulent social flows that characterized the last century. The Balkan region was affected by wars and numerous destructions, which changed the look of the towns. Huge violent migrations also created a strong pressure on the urban areas that reflected in temporary, rapid and inadequate residential solutions. Because of that, a significant rise of illegal building was registered in the last ten years. This can be illustrated by the example of Belgrade. The expansion of ghettos, living in slums, and the circle of poverty are relatively new processes, which were almost unknown in Belgrade in 1980's. The research in 1996 shows that there are 220 slums in Belgrade, in which more than 120.000 inhabitants live. Their general characteristics include: a bad communal infrastructure; very bad living conditions (houses are often made of cardboard); highly endangered environment; lack of green spaces; and etc. The deficient City strategy or policy of solving the slum problem makes this issue even more difficult.

The 1990's was also characterized by widespread construction of semi-legal housing (houses which are permitted to connect to basic infrastructure but not to be built) and allotment of construction rights of land that has been unobstructed for a long period (only 18% of the allowed land was built, which is equivalent to the number of 50.000 apartments, sufficient to take practically the whole increase in population till 2021). All these facts show that the City should not be spread in special sense, especially knowing that spatial expansion of Belgrade often causes a loss of fertile agricultural land, so that in the last decade about 2,800 ha of fertile land was lost. The major trend in spatial planning is the equal regional development, which is going to stimulate the development of small and intermediate cities. In order to solve environmental problems in towns, the same cities in FRY initiated Local Agenda 21.

Capacity-Building, Education, Training and Awareness-Raising: The Ministry of Environment, Belgrade; University of Belgrade (Faculty of Architecture and Faculty of Geography); the University of Novi Sad and University of Niš promote education and training on sustainable human settlement development.

Information: The Ministry of Environment is periodically presenting information in its annual reports. Some local municipalities are periodically presenting their own information about environment. There are quite often articles in national and local newspapers too. Primary data on the environment is collected, processed and published by the network of bureaus of the Federal Statistical Office at all territorial levels, from the municipalities to the federal level

Research and Technologies: No information available

Financing: Financial sources are: the State and municipal budgets, as well as the means of private and legal entities.

Cooperation: No information available

* * *

CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

Decision-Making: Environmental protection and promotion in FRY, as an integral part of development, implies the integrated formulation and pursuit of environmental policies in planning, natural resource management and decentralized implementation. Environmental protection is a part of the responsibilities of the Federal State and the republics, which formulate their policy, enact and enforce legislation, other laws and general enactment and ensure judicial protection in the fields of environmental protection determined within the constitutional system. The competence of regulating the environmental matters is divided between the Federal State, the Republics and municipalities. The body, primarily responsible at the federal level is the Secretariat for Labor, Health and Social Care through the Departments of Environment (issues concerning environmental protection; ozone layer; and transboundary pollution of air, water and sea) and Health (protection against ionizing radiation; import, export and transit of ozone depleting substances; production, trade and transport of medicaments, poisons and other hazardous substances; and sanitary inspection at the borders).

Following the governmental reorganization in July 2001, the environmental responsibilities are vested in the Ministry of Town Planning and Ecology (MoTPE). The environmental responsibilities of this Ministry comprise: the system of environmental protection; nature protection and nature goods; national parks; protection of natural resources from pollution; conditions for construction; production and use of radioactive materials and their disposal; ionizing and non-ionizing radiation, excluding the medical use; protection of air; protection from noise and vibration; production, sale and disposal of hazardous substances; inspection; and international cooperation.

There are other responsible bodies in the field of environmental protection, which are: the Ministry of Economy and Internal Trade; the Ministry of Interior Affairs; the Ministry for Foreign Economic Affairs; the Ministry for Health and Social Policy; the Ministry for Agriculture, Water Resources and Forestry; the Ministry for Industry and Energy; the Ministry for Transport; the Institute for Nature Protection; the Institute for Health; the Hydro-Meteorological Institute; the Institute for Standardization; the Institute for Plant and Animal Genetic Resources; and other parliamentary and governmental bodies.

Two ministries have the main responsibilities for environmental issues in the Republic of Serbia: the Ministry of the Protection of Natural Resources and Environment (MoPNRE) and the Ministry of Agriculture, Forestry and Water (MoAFW). The responsibilities of MoPNRE are: the sustainable use of natural resources; system of environmental protection; nature protection and protection of natural resources against pollution; conditions for construction of installations; protection against ionizing and non-ionizing radiation; noise and vibration; production, sale and disposal of hazardous substances; and international cooperation. The responsibilities of the MoAFW concerning the environment are the protection of soil, forest and water resources. The Ministry of Health is connected to environmental issues through sanitary regulations, and the Ministry of Urbanization and Construction through the urban and space planning as well as through urban construction and utilization permits. The Ministry for Mining and Energy has responsibility in the field of: mining; geological investigations; and approval for exploitation of mineral resources. A number of institutes have a role to play in the environmental sector, namely: The Institute for Nature Protection; the Public Institute for Health; the Hydro-Meteorological Institute; the City Public Institutes for Health (Belgrade, Novi Sad); and the Recycling Agency.

In municipalities, the competent environmental authorities are the secretariats for environmental protection regarding air protection, noise, urban planning, and construction permits for smaller facilities. The municipal competent secretariats are also in charge of communal waste management (waste collection, location of landfills and their operation as well as waste transport). All municipalities do not have an environmental secretariat. In these cases, the duties are carried out by the Republican inspectors.

FRY accepted the concept of sustainable development during its preparation for the 1992 Rio Summit. The implementation of environmentally sustainable development was suspended during the recent period of economic sanctions imposed by the international community. Two resolutions were adopted at the federal level in 1993: the

Resolution on the Policy of Protecting the Environment in FRY and the Resolution on the Policy of Conserving Biodiversity in FRY that set also the national objectives on the basis of Agenda 21 long-term goals.

The Parliament of the Republic of Montenegro in 1991 adopted the “Declaration on the Ecological State of Montenegro”, a commitment that was repeated in the 1994 Constitution. The declaration was followed by Directions of Development of the Montenegro Ecological State, prepared by the European Center for Peace and Development, and the University for Peace established by the United Nations in 1998.

The main objective of environmental protection in FRY, based on the policy documents, is the creation of conditions arising from the concept of sustainable development as well as protection and improvement of the environment, to be analyzed and taken into account when making plans for the development of settlements and use of natural resources.

The system of legislation in the field of environmental protection and improvement in Yugoslavia comprises a large number of laws (more than 50) and regulations (more than 100) enacted at all levels (federal, republic and local). At the federal level, the Federal Assembly adopted the Law on the Basic Principles of Environmental Protection in 1998. The Laws on Basic Principles of Environmental Protection and the Law on Standardization created the Environmental Label, as one of the instruments for achieving a change in consumption patterns. In Serbia, the 1991 Environmental Law regulates the following matters: measures of protection in planning and construction; protection of the air, water, soil, forests and natural goods; noise; ionizing radiation and hazardous waste control; as well as financing for protection and inspection.

FR Yugoslavia has appropriate legislation and mechanisms regarding Environmental Impact Assessment (EIA) at the federal and republic levels. At the federal level, the EIA in transboundary context is covered by the Law on the Basic Principles of the Environmental Protection. In planning and carrying out operations potentially harmful for the environment, a procedure is applied for assessment of the relevant effects. In the Republic of Serbia, this procedure is contained in the Law on Environmental Protection and Regulation on the Environmental Impacts Assessments (1992). In the Republic of Montenegro, the EIA is regulated by the Law on Environment and Regulation on the Environmental Impacts Assessments (1997). The concept of sustainable development has also been incorporated in the adopted Spatial Plan for the Republic of Serbia (1996) as well as the Changes of the Spatial Plan of Montenegro (1997).

The role of the private sector is increasing rapidly in influencing the attitudes of consumption and production. In Yugoslavia, there are companies and firms operating successfully in the world of dynamic competition and taking responsibility for their environmental problems. How a company responds to environmental problems may, in fact, be a leading indicator of its overall competitiveness. These have to be a part of the industrial reconstruction process and institutional changes on the road. The Federal and Republic Chambers of Commerce provide consultative mechanisms. There are several other major groups that are influencing the Decision-making process, such as professional associations, environmental NGOs, associations and chambers of enterprises, trade unions, associations for consumer protection, workers, indigenous people, and etc.

Programmes and Projects: According to the Resolution on the Policy of the Environmental Protection in FRY, the policy has been designed as a specific, unified and long-term programme and a component part of the integral economic system of FRY. The basic approach of this policy is sustainable development. Proceeding from the state and proclaimed objectives of environmental protection in FR Yugoslavia, the policy of environmental protection shall be implemented under the 12 Yugoslav programmes set out in this Resolution. All the programmes are of a continuous nature, while their contents shall be established for periods not shorter than a year, nor longer than five. The programmes include research on subject areas and legislation, as well as measures, activities and projects. For example, there are: the Programmes of Integral Environmental Protection and Promotion; the Programme of Protection of Water Resources; the Programme of Soil and Ground Protection; the Programme of Air and Atmosphere Protection; the Programme of Forest Protection; the Programme of Protecting Sensitive Ecosystems; the Programme of Protection of Natural Heritage and Biodiversity; the Programme of Climate Protection; the Programme of Protection of Architectural Heritage; the Programme for Management of Waste, Harmful Substances

and Chemicals; the Programme of Protection against Ionizing Radiation; and the Programme for Promotion of Regional Planning, Town Planning and Noise Abatement. To implement the programme covered by this resolution, priority measures and activities have been identified. The proposed priority measures and activities (49) proceed from the assumption that the sanctions will be lifted and that changes that have been embarked upon will be successfully finalized. The proposed measures and activities are determined by annual and five-year plans with defined protagonists, methods of work and the required funds.

The measures are preventive, rehabilitative and developmental of nature, and are planned for short-term and long-term periods. Of the set of measures envisaged with a view to attaining the targets, only the crucial ones are presented in these priorities, and the programme of measures and activities remains open for annual up-dating. Preventive measures are intended to prevent pollution at its source, rehabilitation measures are to improve the state of the environment in areas and settlements with critical exposure to pollution. These are mostly short-term measures, but may also be long-term and developmental. Developmental measures are intended to preventively protect the environment from new degradations and to ensure a sustainable growth. These measures are planned within the socio-economic and technical-technological development and are implemented by appropriate economic policy instruments, urban and territorial planning and the investment policy in which the reception capacity of the space is taken into consideration.

The Finnish project on “the Development of Environmental Legislation” aims at harmonizing the environmental legislation with the EU directives in order to have adopted systematic framework legislation that is complemented with supporting legislation, regulations and guidelines in the areas of: EIA; integrated licensing and control of activities with environmental impacts; access to environmental information; and the most urgent instruments for the full implementation of the said legislation prepared by the end of 2002. The purpose of the Phase I of the Project is to create the framework for the environmental protection in Serbia. It is expected to be in force from the commencement of the project activities. Phase II is expected to involve the Republic of Montenegro and the Federal level too.

Status: The environmental authorities support environmentally-friendly production of goods and combat those that are environmentally harmful. However, the instruments for such support are still not developed or widely applied (eco-labelling, tax differentiation between environmentally friendly - non-friendly goods and activities, etc.). Environmental fines play an important role in changing consumption and production patterns. However, according to experience, the efficiency of this instrument is not sufficient.

The integral approach to environmental protection and improvement in Yugoslavia has not yet been established at any level despite of the awareness of its' necessity. In the past period, the developmental objectives were to step up production and increase the Gross National Product (GNP), but insufficient attention was paid to the criteria of environmental protection and improvement, the quality of technologies as well as to the products and services. Recent positive and negative changes in production and consumption patterns have been basically determined by economic recession, wars in the neighborhood and problems within the country. It only delays the real solution to the problems.

The state of the environment has been monitored in Yugoslavia for many years now. However, because of the non-harmonized methods of monitoring, it is not possible to get a full insight into the state of the environment in FRY. Even so, the available data do allow a partial insight into the matter. The major polluters of the environment are industrial facilities. As the instrument for being a part of international market quality control systems and certificates, and with reference to the International Standards Organization, standards ISO 9000 are spreading within industry. ISO 14000 and EMAS procedures (Eco-Management and Audit Scheme) are widely applied. Environmentally Sound Technologies (ESTs) and Production (ESPs) are needed in all sectors.

The capacities at all levels are affected by the shortage of funds. As far as the changes in ongoing production and/or technologies are concerned, the extent to which the best available technologies are used depends on the existing technological situation and the available financial resources of the particular organization.

Five priorities were established along with the preparations for donors' conferences for the new democratic Yugoslavia and Serbia. The first priority was given to building the capacities for environmental monitoring and development of environmental protection, including training, technical help, institutional strengthening and establishment of the new Ministry for Protection of Natural Resources and Environment in Serbia, which is competent for integrated environmental protection, as well as for adjusting the legislation and economic instruments in the environmental field to EU legislation. The key necessary steps are the preparation and adoption of the following documents in Serbia, through projects supported by international organizations and donor countries: Strategy for Sustainable Use of Natural Resources; the National Environmental Program and action plans; Local Environmental Program and action plans; the Law on the System of Environmental Protection in RS as well as other laws and regulations harmonized with this Law; and the harmonization of the environmental legislation with EU directives.

Capacity-Building, Education, Training and Awareness-Raising: It is justified and even necessary, in view of ensuring sustainable development, to improve environmental education, i.e. to improve old-fashioned education with actual information. There has been some improvements (Departments of some Universities, Training at global and company levels, education through schools, etc) in the FR Yugoslavia. Numerous conferences and exhibitions and fairs dealing with environmental issues were organized. The conferences encouraged the industries to develop and introduce low-waste, low-emission, low-power and resource-saving technologies, as well as closed production cycles, and to manufacture environmentally-friendly products.

In the field of dissemination of information and popularization of environmental protection, there has been: exhibitions/conferences both in the country and abroad; contacts with the representatives of the media; sponsoring certain periodicals and other publications; and etc. In the given economic situation, when it is difficult to satisfy even the minimum personal needs, people are not in a position to concern themselves over the quality of the environment and its protection.

Information: There is no integral national information system on the environment. However, some subsystems have been developed.

Research and Technologies: Environmental Policy and Law, as well as ISO 14000 standards created the framework to promote clean production processes. Some examples of the practice of cleaner production decisions are developed (Chemical Industry Pancevo; Lepenka Novi Knjazevac; Tipoplastika Gornji Milanovac, etc.). See also under **Status**.

Financing: At the present stage of transition, financial resources are insufficient to serve the rapid recovery of the economy and simultaneously solve accumulated environmental problems. The existing laws and regulations, i.e. their enforcement, are of a restrictive character mostly and cannot be regarded as economic instruments. Financial sources are determined by the federal and republican budget. Different international organizations provide financing for the projects submitted by the state bodies, private companies and NGOs.

Cooperation: International Cooperation in the field of environmental protection was very intensive and fairly successful before the sanctions were imposed on FR Yugoslavia. Yugoslavia has ratified 64 international treaties relating to the issues of the environment.

Bearing in mind that one of our strategic commitments is to be re-integrated in the fastest, fullest and most meaningful manner in all the structures and activities of international institutions, FRY needs any assistance or cooperation which would have as its goal the fastest possible harmonization of legal, institutional, technical and other capacities with those in the EU and other regional organizations.

CHAPTER 9: PROTECTION OF THE ATMOSPHERE

Decision-Making: The Federal Secretariat for Labor, Health and Social Care through its Environmental Department is in charge of the basis of environmental protection that includes ozone layer as well as transboundary pollution of air, water and sea. The Health Department, in turn, is in charge of protection against ionizing radiation as well as import, export and transit of substances that deplete ozone layer. The Federal Ministry of Economy and Internal Trade, through its departments, is responsible for: energy sources; nuclear energy; and etc. The Federal Hydro-Meteorological Institute carries out monitoring of the atmosphere regime and air. The Federal Health Institute is responsible for the collection and reporting of data and information in the field of health protection as well as standards and conditions for health protection. The Federal Institute for Statistics is responsible for the collection and reporting of statistical data and information in the field of environment.

Administrative bodies responsible for protection of the atmosphere at the Republican level are identical as those at the Federal level. The City level includes: the Secretariat for Environment Protection; the Secretariat for Health Protection; and the Institute for Health Protection. Several Non-Governmental Organizations are involved in these activities and one of them is Clean Air Society of Serbia.

The following Laws regulate the protection of the atmosphere at the Federal level: the Resolution on the Environmental Policy in FRY (1993); the Federal Law on the Basis of Environmental Protection (1998); and the Law on Hydro-meteorological Affairs of Interest to the Entire Country (1988). In the Republic of Serbia, the pertinent legislation include: the Law on Environmental Protection (1991); the Regulations on Critical Values, Immission measuring Methods, Selection of Sample Points Criteria and Data Collecting (1992); the Regulations on Emission Limiting Values, Methods and Timeframe for Measuring and Data Noting (1997); and the Decree on Defining Air Quality Control Program in 2000 and 2001 (2000). In the Republic of Montenegro the pertinent legislation include: the Law on Pollution Protection of Air (1990), the Regulation on Permissible Concentrations of Harmful Substances in the Air (1982), the Regulation on Analysis Methodology, Timeframe and Forms of Informing on Results of Monitoring and Detecting Harmful Substances in the Air on the Sources of Pollution (1982); and the Decree on Determining Sampling Points for Measuring Expert Analyses and Determining Air Pollution in Montenegro (1986).

Concerning ozone depleting substances, FRY is a signatory to the Montreal Protocol on Substances that Deplete the Ozone Layer and is obligated to follow the provisions of the Protocol. The Federal Secretariat for Labor, Health and Social Care, with its Environmental Department working on environmental issues is currently developing a legislative act that will define: the list of substances that deplete the ozone layer; the method of their utilization; data noting procedures; and import and export terms for these substances. The main legislation comprises the Federal Law on Foreign Trade (1999) and the Federal Decision on goods classification into forms of export and import (2001).

Programmes and Projects: FR Yugoslavia participates in the EMEP (Cooperative Program for the Monitoring and Evaluation of Long-Term Air pollution in Europe) and MED-POL Programmes (Programme for the Assessment and Control of Pollution in the Mediterranean Region) for monitoring air quality and transboundary transport. The Capacity-Building Programme in FR Yugoslavia was started in 2001 through the UNFCCC (UN Framework Convention on Climate Change) with Greece initiative for the Balkan countries. The priority is on the compilation of cadastre emission with greenhouse gases effect (1990-1998). The Federal Secretariat for Science and Development has sponsored a lot of research projects. Some of them are the projects on the effect and improvement of transport system and mining, and research on new and sustainable sources of energy, and also the Development Strategy of FR Yugoslavia till 2020.

Status: Air quality and emissions of CO₂, NO_x and SO_x are monitored, as well as the pollutants. Air pollution emissions slightly declined between 1990-1992. One of the main reasons for the decline was the decrease in Gross Domestic Product (GDP), including industrial output, and the slight decrease in transport. After 1992, emissions

increased, and reached the maximum in 1998 (much higher than emissions in 1990). According to the appraised balance of emissions of SO₂ and NO_x, the emission of SO₂ is 396-522.000 t/year and emission of NO_x is 49-66.000 t/year. The main source for SO₂ pollution are the thermal-power plants (80% - 88%). Other sources are industry (3%-14%) and general consumption (9%). Almost similar situation occurred with NO_x emissions. It is very important to stress that the balance appraisal was made without data for fluid fuels, especially from transport (vehicles, airplanes), which is the source of most of the NO_x emission. One has to bear in mind that from 1992, because of the sanctions, the quality of fuels as well as the shape of vehicles were bad. It is possible to conclude that NO_x emissions were much higher. Appraisals of Emissions of SO₂ and NO_x for 1999 were made without data for Kosovo and Metohija. The highest emissions are in the Kolubara lignite opencast mining area. Ambient air pollution concentrations still exceed the guidelines of World Health Organization (WHO) and EU Directives.

Projection of SO₂ and NO_x until 2010: According to the obligations in the Convention on Long Range Transboundary Air Pollution, the trend analyses of SO₂ and NO_x have been made for the period from 1980 to 2010. Projection of emissions was made in 1994 on the basis of macro-economic parameters according to the total economic growth with 6% average growth rate per year until 2000, 5.5% rate from 2000 to 2005, and 5% rate for the period from 2005 to 2010. Because of the NATO bombing of energy facilities, the data from analyses should be updated. In the frame of the Cooperative Program for Monitoring and Evaluation of the Long-Range Transmission of Air Pollutants in Europe, by mathematical modeling for transport, an appropriate estimate has been made for deposition of sulphur and nitrogen. Calculation and measurement showed that about 50% of emitted sulphur and about 20% of emitted nitrogen remains in the territory of FRY. Yugoslavia imported 195 thousand tons of sulphur and exported 109 thousand tons in 1998. In the same year, Yugoslavia exported about 15.8 thousand tons and imported about 40.1 thousand tons of nitrogen.

Deposition of sulphur oxide in FR Yugoslavia in the period of 1985-1998 shows that, most of the depositions were made by domestic emissions. The biggest depositions were imported from Bosnia and Herzegovina (20-30%), Romania and Bulgaria (10%). Yugoslavia exported deposition of sulphur to Romania, Bulgaria and Ukraine. Depositions of nitrogen were mostly imported from Italy and exported from Yugoslavia to Romania. Meteorological Synthesize Center EMEP in Oslo elaborated the procedure for calculation of critical acidification loads. The highest load 29% was in 1986 with the tendency of decline to 12% in 1993. From 1991, the trend of increase was up to 24% in 1998.

Capacity-Building, Education, Training and Awareness-Raising: At the Federal and Republic levels, there are continuous works on capacity building, education, training and awareness-raising. The programmes (basic studies, postgraduate studies, etc.) are financed by the national budget and carried out in cooperation with relevant organizations.

Information: Information related to air quality assessment, and transboundary air pollution can be found in Statistical Yearbook of Yugoslavia. The Federal and Republican administrative bodies responsible for this field make Reports of Environmental Conditions every year. The Federal and Republic Hydrometeorological Institutes and the Federal, Republic and City Institutes for Health Protection (Belgrade and Novi Sad) are responsible for collecting and reporting of data and information in this field. It should be pointed out that air quality in Kosovo has not been monitored since 1998, due to political reasons.

Research and Technologies: The Federal Hydro-Meteorological Institute is partly engaged in research projects with other international institutes. See also under **Programmes and Projects and Status**.

Financing: Researches of pollution control, protection and quality of air are partly financed through national budget and international projects. Anyhow, the amount is not adequate for a serious work.

Cooperation: Yugoslavia has ratified the following conventions and protocols: the Convention on Long-Range Transboundary Air Pollution - CLRTAP (1986), and the Protocol on Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe -EMEP (1987). By

ratifying the conventions, FR Yugoslavia became obliged to put them into force. The Vienna Convention for the Protection of the Ozone Layer (1990) and the Montreal Protocol on Substances that Deplete the Ozone Layer (1990) have also been ratified. These conventions anticipate the obligation of measuring atmospheric ozone and ultraviolet radiation as well as research of effects on human health and ecosystems.

FRY, as a party of Montreal Protocol and as a country that is using less than 0.3 kg ODS per capita, has a right to certain priorities provided by the Protocol. Since FRY has not yet ratified the amendments of Protocol, it is not possible to execute the National Program (adopted by FRY in 1998) approved by MF (Multilateral Fund) in the amount of 10 million US\$. Due to the democratic changes, FRY was involved in the Multilateral Fund, so in 2001, the decision was made for about 3 million US\$ for the realization of the program for changing of technologies related to the use CFC.

UN Framework Convention on Climate Change - UNFCCC has been ratified (1997), but Kyoto Protocol is still waiting for ratification. In July 2001, Secretariat of UNFCCC addressed the Environmental Department of Federal Secretariat of Labor, Health and Social Care with a request of joining FR Yugoslavia to National Communication, because FR Yugoslavia is not in the Annex 1 Countries. FR Yugoslavia has to make the National Cadastre of Greenhouse Gases Effect and proceed it to the Secretariat of the Convention. The implementation of the National Cadastre was financed by the Global Environmental Facility (GEF) through such organizations as UNEP, UNDP and World Bank.

* * *

CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES

Decision-Making: At the Federal level, the Federal Ministry of Economy and Internal Trade is responsible for the issue of land survey and its presentation on charts and maps, along with the assessment of economic system as well as its development and transition. The Federal Secretariat for Labor, Health and Social Care, Environmental Department is responsible for environmental protection and international cooperation (negotiation and ratification of conventions and agreements) and, therefore, for land resources as well. At the republican level, responsible bodies (with brief description of their main affairs) are: the Ministry of Agriculture and Water Resources (decision-making for agricultural policy, improvement of agricultural production, and protection of agricultural land); the Ministry of Urbanization and Construction (spatial planning and urbanization as well as making, preparing and monitoring of the Republican Spatial Plan through the Institute for Spatial Planning and Urbanization); and the Ministry for Protection of Natural Resources and Environment (protection and sustainable use of natural resources - air, water, soil, mineral resources, forests, etc.). At the local level responsible bodies are the Institute of Architecture and Town Planning and the Institute of Soil Science in Belgrade.

The legislative framework for the management of land use is provided by: the Resolution on the Environmental Policy in FRY (1993); the Federal Law on the Basis of Environmental Protection (1998); the Federal Law on Water Regime (1998); and the following Republic Laws: the Law on Environmental Protection (1991), the Law on Agricultural Land (1992), the Law on Mining (1995), the Law on Expropriation (1995), the Law on Planning and Organization of Space and Settlements (1995), the Law on National Parks (1993), the Law on Forests (1991) and the Law on Waters (1991).

Strategic documents for National policy design of planning and management of land resources are: "Republic of Serbia Spatial Plan" (1996); "Republic of Montenegro Spatial Plan" (1996); "the Long Term Policy of Agricultural Development in FRY" (1999); as well as "the Conditions and Mode of Land Restitution According to Agricultural Land Fund" (1991).

Programs and Projects: The following projects are financed by the Ministry of Science Technology and Development:

- Investigation of the soil potentials in Serbia and their conservation in agriculture and forestry;
- Irrigation scheduling optimization for cereals and vegetables under conditions of reduced soil aeration;
- Application of new techniques and materials for conservation, improvement and protection of soils; and
- Production of basic information on the protection, regulation and use of agricultural soils in Serbia;

In 1993, Yugoslav society of soil science (JDPZ) organized a congress "Regulation, Utilization and Conservation of Soil", and in 2001, The tenth jubilee congress. The main conclusion of these congresses was the basic line for research project "Potential of Soils in Serbia And Sustainable Use in Agriculture And Forests", financed by the Serbian Ministry of Science Technology and Development. The Faculty of Agriculture at the University of Belgrade carried out part of this research.

The Institute of Soil Science started the program "Survey of Content of Dangerous Materials and Control of Soil Fertility in FR Yugoslavia" in 1996, but it was discontinued. According to their data and survey, which was done in the north part of Serbia, on 162,000 ha (18.6%) one or more elements of dangerous substances was detected (mostly Ni, Cr, Pb, rarely As, Cd, Cu) that were above the permissible limit, according to the Code of Republic of Serbia. This project was interrupted due to the lack of funding, but it has recently started again, continuing the phase III. This means that a survey for another 400,000 ha will be started.

Status: Total area of Serbia and Montenegro is 10,217,300 ha. Half of the area is arable land (5,192,600 ha) and the rest is mostly forest land. A high percentage of the land is very fertile, deep, well drained (1,790,000 ha) but 2,046,000 ha have to be reclaimed. About 20,000 km² of Yugoslav territory can be classified as degraded area, due to erosion and opencast mining or waste disposal. An inadequate performance, along with the disturbance of soil structure; delay of chats across good quality soils, which results in the new types of relief along with the change of microclimate; change of groundwater regime; pollution of natural watercourses with heavy metals or phenols through waste water; pollution of air; and etc., pollute the environment and surely leave long-lasting consequences. Rehabilitation of degraded spaces, which originate from various ways of mining, is really low. Until 1994, only 8.38% of degraded spaces were recultivated. There are no new data on recultivated areas in Yugoslavia, but according to individual reports, some parts of mining areas are being recultivated. Only minor surveys at the local level were done in the last 10 years, because of the lack of funding and international sanctions, however, erosion processes are increasing and the negative consequences are huge.

Due to international sanctions in FR Yugoslavia, the utilization of natural resources was intensified, including those under special protection. Erosion processes are also intensified due to international economic and political sanctions. There has been only minor investments in preventing and reclaiming of lands under ongoing processes of erosion. The NATO bombing of Yugoslavia caused long-term soil pollution because of the use of ammunition with radioactive charges at more than 112 localities, mainly in Kosovo and Metohija, at four locations in Southern Serbia and at one location in Montenegro.

Capacity - Building, Education, Training and Awareness-Raising: Five Faculties of Agriculture, one Faculty of Geography (department for Spatial Planning), and one Faculty of Forestry (department for Erosion Control) contribute to the issue of land resources. In addition, there are several educational and public magazines in this field, namely: "Space"; "Architecture and Urbanism"; and "Erosion".

Information: The Federal Institute of Statistics and National Meteorological Bureau publish valuable information in bulletins and yearbooks.

Research and Technologies: Most of the investigations and surveys are conducted through the projects of the relevant Faculties and Institutes, but only at a few localities, because of the lack of funding. See also under **Programmes and Projects**.

Financing: Most of the financing comes from the Ministry of Science, Technology and Development and only a small part from the local municipalities.

Cooperation: The Faculty of Agriculture at the University of Belgrade realized cooperation with Moscow University Lomonosov, Faculty of Pedology on the Project "Content of Heavy Metals and Nucleus in Soils" and "Soils and Microbiology of Soils". In the project "Reclamation of Acidic Soils", cooperation also exists between: the Academy of Agricultural Science; the Institute of Soil and Fertilization of the Province An Hui, People's Republic of China; and with European Agency for Reconstruction.

The Ramsar Convention and Convention for the Protection of the World Cultural and Natural Heritage cover this issue.

* * *

CHAPTER 11: COMBATING DEFORESTATION

Decision-Making: Decision making at the Federal level is under responsibility of: the Federal Ministry of Economy and Internal Trade (including economic system, development and transition in FR Yugoslavia, geodetic surveys, maps and plans); the Federal Institute for Plant and Animal Genetic Resources, which is part of the Ministry of Economy and Internal Trade (including collection, elaboration and conservation of plant and animal genetic resources in FRY and collecting various data for gene banks, limited usage, production and turnover of GMOs and products that are made of GMOs); and the Federal Secretariat of Labor, Health and Social Care - Environment Department, generally responsible for environmental protection and also for the protection of forest resources. At the republic levels, responsible ministries are: the Ministry of Agriculture and Water Resources (including agrarian policy, improvement of agricultural production as well as protection and use of agricultural soil), the ministries for Protection of Natural Resources and Environment (including system of protection and sustainable use of natural resources - air, water, soil, mineral resources, forests, etc); the ministries for Science, Technology and Development; the ministries for Economy and Privatization (including economical development, privatization and regulations in the area of market reform and public enterprises); and the ministries of Urbanization and Construction (including spatial planning and urbanization; preparation and application of Spatial Plan through the Institute for Spatial Planning and Urbanism). At the local level there are: the Institute of Forestry, Belgrade; the Poplar Research Institute, Novi Sad; the Institute of Soil Science, Belgrade; SE Srbijasume; SE Vojvodinasume; SE Crna Gora Sume; SE National Parks of Serbia and Montenegro; and the Institute for Nature Protection, Belgrade and Podgorica.

The following Laws regulate this issue: the Resolution on the Environmental Policy in FR Yugoslavia (1993); the Federal Law on the Basis of Environmental Protection (1998); The Resolution on Biodiversity Protection Policy in FRY (1994); the Federal Law on Admission of Agricultural and Forest Plant Varieties (1998); the Federal Law on the Protection of Agricultural and Forest Plant Varieties (2000); the Federal Law on GMO (2001). At the republican level the pertinent legislation includes: the Law on Hunting (1993); the Law on Expropriation (1995); the Law on Environmental Protection (1995); the Law on Agricultural Land (1995); the Law on Planning and Organization of Space and Settlements (1995); the Law on National Parks (1995); and the Forest Law (1996). Strategic documents for the creation of National policy in this area are: the Declaration on the Ecological State of Montenegro (1991); the Spatial Plans of Serbia and Montenegro (1996, 1988); and the Development of National Plan for Protection of Forest Genetic Resources and Central Database.

Programmes and Projects: Yugoslav forests are managed according to the Forest Management Programme, approved by the Ministry of Agriculture, Forestry and Water Resources and in accordance with the Spatial Plan of the Republic of Serbia, or Montenegro. The programme is revised every ten years. The Federal Ministry of Economy and Internal Trade conducts the programme to Combat Forest Decline with BFH Institute from Hamburg (Germany), which is the coordinator of the programme. There is one undergoing technological project funded by Ministry of Science, Technology and Development and SE Srbijasume called "Structural and productivity characteristics of artificially established conifer stands and proposals for optimal management".

Status: Forests cover about 2,856,220 ha, or 29.6 % of the total area of Yugoslavia (in Serbia 2,312,867 ha, 26.7 %; in Montenegro 543,353 ha, 39.3 %). This is estimated to be about 65% of the optimal forest cover. The standing volume is about 307 mill. m³ (in Serbia about 235 mill m³ and in Montenegro about 72 mill. m³). The average standing volume is 107.4 m³/ha (in Serbia 101.6 m³/ha and in Montenegro 132 m³/ha). Average annual increment is 2.70 m³/ha (in Serbia 2.70 m³/ha and in Montenegro 2.60 m³/ha); total annual increment is 7.62 mill m³ (in Serbia 6.18 mill. m³ and in Montenegro 1.44 mill. m³). Broad-leaved trees represent 79.3% (Serbia 91%; Montenegro 39.2%); conifers 9.7% (in Serbia 6% and in Montenegro 26.2%); and mixed stands 11% (in Serbia 3% and in Montenegro 34.6%). The State owns 58.5% of the forests (1,927,353 ha); Serbia owns 56.2% (1,384,000 ha); and Montenegro owns 75.3% (543,353 ha). The remaining 41.5% (1,253,334 ha) is under private ownership: in Serbia 43.8% (1,169,940 ha) and in Montenegro 24.7% (175,334 ha).

The decline in the scale of afforestation and the decrease in afforested areas (by about 12% a year) directly endanger the previously afforested areas. This particularly applies to Montenegro, where only 14,681 ha were afforested during 1980 – 1998, which is 2.1% of the forest land. Afforestation in Serbia was 187,680 ha in the mentioned period, or 7.6% of the area under forests. The consequences will be felt soon and they will depreciate the large extent of afforestation efforts made in the past decades. Damage in forests varies from year to year. In 2 000, 300 fires occurred damaging 4000 hectares of forest. In 2001, there were only 45 fires, which destroyed 200 hectares. During NATO intervention in 1999, many forest complexes, national parks and other protected areas were targets and were damaged in the bombing, which caused forest fires and noise pollution threatening also wild animals. International economic and political sanctions caused the over-utilization of natural resources, especially in forests and even areas under special protection. The use of wood for heating and trade purposes was increased resulting in a greater degradation of forests and disturbed biological balance in large areas.

Capacity-Building, Education, Training and Awareness-Raising: Professional education in Serbia is contributed by the Faculty of Forestry in Belgrade and technical education by the High School in Kraljevo, Sremska Mitrovica and Berane. The Faculty has four departments: Forestry; Wood Processing; Landscape Architecture; and Erosion Control. Post-graduate courses and programmes at M.Sc. and Ph.D. levels in the four areas of specialization are also available. From its establishment in 1920 to 2000, the Faculty produced 6,370 graduates, of which 3,580 in Forestry, 1,341 in Wood Industry, 978 in Landscape Architecture and 464 in Erosion Control. Employment possibilities for graduates have been poor in recent years. The teaching staff needs to renew their international contacts and update their professional knowledge, especially in the areas of: private forestry; participatory forest management; public relations and education; forest technologies; and free market economics. Modernization of laboratory equipment and technology is also necessary, as well as acquisition of recent scientific books, journals and periodicals in forestry and related disciplines. There are several NGOs, like the Forestry Movement of Serbia (established in 1960, mainly working on afforestation of bare lands) and the Yugoslav Association of Hunters (consists of Montenegro and Serbian Association of Hunters). In addition, there are several popular and educational magazines, namely: Forestry, Wood Herald, Forests, Erosion, Ecologica, Trace (hunting magazine), and etc.

Information: The Federal Institute of Statistics and National Meteorological Bureau publish valuable information in bulletins and yearbooks. Information about forest resources and conditions of protected areas, species and endangered wild plants and animals, can be found at: www.srbijasume.co.yu; and www.natureprotection.org.yu.

Research and Technologies: The Research programme on safe food is financed by the Ministry of Science, Technology and Development, as well as by the Faculty of Forestry strategic research program: “Heavy Metals in Forest Ecosystems in Serbia”.

Financing: Financing comes from the federal and republican budgets, by the SE Srbijasume, the SE Vojvodinasume, the SE Crna Gora Sume and the Republican Ministries of Science, Technology and Development and by the Republican Ministries for Protection of Natural Resources and Environment.

Cooperation: There is cooperation between: international institutions and the Federal Institute for Plant and Animal Genetic Resources - UPOV (Union for the Protection of new Varieties of Plants); FAO (Food and Agriculture Organization); IPGRI (International Plant Genetic Resources Institutes); EUFORGEN (European Forest Genetic Resource Programme); ICGEB (International Center for Genetic Engineering and Biotechnology); Faculty of Forestry with the Institute in Freiburg (Germany); the Federal Ministry of Economy and Internal Trade with BFH Institute from Hamburg (Germany); and with UNESCO – Biosphere Reserves Golija and the Canyon of Tara River; IUCN (International Union for Conservation of Nature). International conventions are: the Convention on Biological Diversity; Ramsar Convention; CITES Convention; and Bern Convention.

CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT

Decision-Making: The Federal Ministry of Economy and Internal Trade (the land survey); the Federal Secretariat for Labor, Health and Social Care - Environmental Department (environmental protection and international cooperation); and the Federal Hydrometeorological Institute (managing various climatological surveys), are indirectly responsible for coordination, legislation and managing of fragile ecosystems, combating desertification and drought. At the republican level, responsible bodies (with brief description of their main affairs) are: the Ministry of Agriculture and Water Resources (decision-making for agricultural policy, improvement of agricultural production and protection of agricultural land); the Ministry of Mining and Energy (geological survey with annual plans for exploitation of mineral resources); the Ministry for Protection of Natural Resources and Environment (protection and sustainable use of natural resources - air, water, soil, mineral resources, forests, etc.); and the Hydro-meteorological Institute (monitoring and collecting various climatological data). At the local level, responsible bodies are: the Institute of Forestry; the Institute of Soil Science from Belgrade, "Jaroslav Cerni" Water Resources Scientific Research Department; SE Srbijasume; SE Vojvodinasume; SE Crna Gora Sume; and SE Srbijavode.

The legislative framework for the management of land use is provided by: the Resolution on the Environmental Policy in FR Yugoslavia (1993); the Federal Law on the Basis of Environmental Protection (1998); the Federal Law on Water Regime (1998); and the following Republic Laws: the Law on Environmental Protection (1991), the Law on Agricultural Land (1992), the Law on Mining (1995), the Law on National Parks (1993), the Law on Forests (1991) and the Law on Waters (1988).

Strategic documents about this issue are: the Water Management Plan (1996); the Republic of Serbia Spatial Plan (1996); and the Republic of Montenegro Spatial Plan (1988). At this moment, there is not any national strategy for managing fragile ecosystems, especially to combat desertification and drought, because of financial constraints. As FRY is currently under the process of ratification, it is expected that after the ratification, the national strategy will be developed pursuant to the Convention to Combat Desertification and Drought.

Programmes and Projects: The Faculty of Agriculture in the University of Belgrade participates in the Ministry of Science, Technology and Development project "The Overcoming and Mitigation of the Consequences of Drought Effect on Plant Production". Another technological project is "Multifunctional Valorization and Improvement of Anthropogenically Devastated Areas" financed by the Ministry of Science, Technology and Development as well as by the SE Srbijasume.

Status: According to erosion map (1973), 86% of the total area of Serbia is subject to erodible processes of various intensity, in Vojvodina 72.29%, in Kosovo 94.82% and in Montenegro 95.10%. Another map was produced in 1984 by the Institute of Forestry and Wood Processing, but without any significant differences compared to the map made in 1973. Since that time, no new maps were produced. Erosion categories (I, II and III) present the areas and torrents with undergoing processes of high intensity, with the specific yield of sediment 900-4,600 m³km²/year (depending on area type). Erosion processes of IV and V category (weak and very weak erosion) comprise 18.6% and 41.20% respectively, of Serbian territory. In these areas, specific yield of sediment is not above 400 m³km²/year; sometimes it is even lower. According to data from various competent and scientific magazines and surveys, which were done at the local level, problems with erosion in Yugoslavia are still present. In some parts of Yugoslavia, processes of erosion are intensified due to the international economic and political sanctions and minor investments in the prevention and sanitation of areas, which are under ongoing processes of erosion.

Desertification occurs over most of the Serbia, especially in the eastern part and in Vojvodina. For example, annual rainfall in eastern Serbia (Zajecar) dropped from about 700 mm in 1950 to only 515 mm in 2000, and during that time the number of days with temperatures above 30°C increased from about 15 to more than 50. In consequence, crop yields are often dramatically reduced. Thus maize yield in eastern Serbia were reduced from the long-term

average by over 60% during 2000 and wheat yield for 2002 are predicted to be only about 2 t/ha in many areas because of an extremely dry sowing period and winter 2001/2002.

The UN Security Council imposed sanctions to FRY in the middle of 1992 and caused economic, technological and environment regression. Severance of ties with the former Yugoslav republics, resulted in a higher hazard of transboundary pollution of water, especially the river Sava. Erosion processes in FRY are intensified due to the international economic and political sanctions and minor investments in prevention and sanitation of areas, which are under ongoing processes of erosion.

The NATO bombing of Yugoslavia caused pollution of fresh water flows and underground waters, and the destroyed bridges slowed down the water flow and threatened with flooding of upstream regions with cultivated land, cities and villages. The NATO bombing also caused long-term soil pollution, by using ammunition with radioactive charges at more than 112 localities, mainly in Kosovo and Metohija, at four locations in Southern Serbia and at one location in Montenegro.

Capacity - Building, Education, Training and Awareness-Raising: The Faculty of Agriculture and the Faculty of Forestry (Department of Erosion Control) have long-term experience of research in both theoretical and applied aspects of the effects of drought. Therefore, it is planned to make new Master's Degree course entitled "Improving Plant Productivity under Environmental Stress Conditions" for possible introduction in 2004 at the Faculty of Agriculture, since the Faculty of Forestry also has its Master's Degree courses. There are several magazines addressing these issues, namely: "Erosion", "Forestry", and "Wood Herald".

Information: All valuable information can be obtained from bulletins and yearbooks from the Federal Institute of Statistics and National Meteorological Bureau. Information about present situation at SE Srbijavode and water management issues are presented at www.srbijavode.com.

Research and Technologies: The Faculty of Agriculture in the University of Belgrade is an active member in the Integrated Drought Project of the Ministry of Science, Technology and Development, which covers all aspects of drought and effects of crop production, namely: climatology, agronomy, irrigation, pedology, molecular biology, selection and stress physiology.

The Agricultural Research Institute "Serbia" organized in 1998 a regional Balkan Drought Workshop at Zajecar, attended by the representatives of seven Balkan countries. The Delegates at the meeting signed a declaration of cooperation, forming Balkan Drought Working Team (BDWT) and Balkan Regional Drought Center in Zajecar. The BDWT held two meetings to discuss how to tackle desertification in the region, including contact with the Secretariat of the Convention to Combat Desertification (CCD) for information on the Convention. The NATO bombing campaign terminated the activities of the BDWT. Nevertheless, a Serbian National Drought Committee was initiated, though no funding was available from the Serbian government at that time to fund either the Drought Committee's activities or to set up of the Regional Drought Center.

Financing: The lack of funding is very characteristic for this issue; minor investments come from the state budget, republic budget, and from the Ministry of Science, Technology and Development.

Cooperation: There is cooperation with other countries in the Balkan region and with the Secretariat of the CCD pending the ratification of Convention to Combat Desertification and Drought.

* * *

CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT

Decision-Making: At the Federal level, decision-making is under the guidance of: the Federal Ministry of Economy and Internal Trade; the Federal Institute for Plant and Animal Genetic Resources, which is part of the Ministry of Economy and Internal Trade; and the Federal Secretariat of Labor, Health and Social Care - Environment Department. They influence legislation, national policy, international cooperation and agreements. At the republic levels, responsible ministries are: the Ministry of Agriculture and Water Resources; the ministries for Protection of Natural Resources and Environment; the ministries for Science, Technology and Development; and the ministries of Urbanism and Construction with the Institute for Spatial Planning and Urbanization. Responsible institutions at the local level are: the Institute for Forestry, Belgrade; the Institute of Soil Science, Belgrade; SE Srbijasume; SE Crna Gora Sume; SE National Parks of Serbia and Montenegro; and the Institute for Nature Protection, Belgrade and Podgorica.

The following Laws regulate this issue: the Resolution on the Environmental Policy in FR Yugoslavia (1993); the Federal Law on the Basis of Environmental Protection (1998); the Resolution on Biodiversity Protection Policy in FRY (1994); the Federal Law on Admission of Agricultural and Forest Plant Varieties (1998); the Federal Law on the Protection of Agricultural and Forest Plant Varieties (2000); and the Federal Law on GMO (2001). At the republican level the pertinent legislation includes: the Law on Hunting (1993); the Law on Expropriation (1995); the Law on Environmental Protection (1995); the Law on Agricultural Land (1995); the Law on Planning and Organization of Space and Settlements (1995); the Law on National Parks (1995); and the Forest Law (1996). Strategic documents for the creation of National policy in this area are: the Declaration on the Ecological State of Montenegro (1991); the Spatial Plans of Serbia and Montenegro (1996, 1988); and the Development of National Plan for Protection of Forest Genetic Resources and Central Database.

Programmes and Projects: The Federal Ministry of Economy and Internal Trade in cooperation with the BFH Institute from Hamburg (Germany), which is the coordinator of the programme, have a Program to Combat Forest Decline. The project financed by Federal Secretariat of Labor, Health and Social Care – Environmental Department is called “Basis of Informatic System for biodiversity of Serbia and Montenegro Mountains”. There are no action plans at the national level, referring to mountain ecosystems and their conservation.

Status: Yugoslav mountains are part of several mountain systems (massifs). Montenegro mountains, as well as the mountains of western and the greater part of central Serbia, belong to the Dinaric Mountains (calcareous composition), while eastern part of Serbia belongs to the Carpathians. Major mountains of Yugoslavia are: Durmitor (UNESCO-world heritage), Kopaonik, Sarplanina, Tara, Fruska Gora (National Parks), Golija (UNESCO-biosphere reserve), Zlatar, and etc. Consequently, Yugoslav mountains can be high representatives of the European mountains from biological diversity aspects. The basis of the development of National Strategy of mountain ecosystems is the conservation, development and sustainable use of mountain ecosystems.

The NATO bombing of Yugoslavia caused pollution of numerous valuable habitats of flora and fauna and vulnerable ecosystems, such as mountains, by the use of dangerous eco-toxic materials. Fresh water bodies and underground waters were polluted; air pollution endangered a vast area causing long-term soil pollution and endangering agricultural and forest areas, leading to unforeseen threats to bio-diversity. Many protected areas suffered from bombing, which caused forest fires and increased noise pollution, which threatened rare bird and carnivore species. Because of the sanctions, the exploitation of natural resources, including those under special protection, was intensified; natural and cultural goods were under a great threat.

Capacity-Building, Education, Training and Awareness-Raising: In the area of Capacity-Building, Education, Training and Awareness-Raising the relevant institutions and faculties are: The Faculty of Geography (Department of Spatial Planning); the Faculty of Forestry; the Faculty of Agriculture; the Faculty of Veterinary Medicine; the

Faculty of Natural Science and Mathematics; the Institute for Geography and Tourism; the Institute of Forestry. The relevant magazines and publications are: Forestry, Wood Herald, and Trace.

There are several NGOs, namely: the Forestry Movement of Serbia; the Yugoslav Association of Hunters (consists of Montenegro and Serbian Association of Hunters); and Ecolibri – Bionet, one of the main associations for biodiversity conservation in FR Yugoslavia is (www.ecolibribionet.org.yu).

Information: Information on mountain ecosystems was not available separately, since mountain ecosystems were observed in a much wider context (regions). That kind of information was available through the Federal Institute for Statistics (bulletins and yearbooks) and through the Institutes for Nature Protection in Belgrade and Podgorica (www.natureprotection.org.yu). Nowadays, it is possible to get more information through the Ecolibri – Bionet (www.ecolibribionet.org.yu) (first association in FRY for biodiversity conservation).

Research and Technologies: The greatest part of research is financed by the Ministry of Science, Technology and Development (Serbia, Montenegro and Yugoslavia). Its realization is supported by the following institutions: the Institute of Forestry – “Planning of Exploitation and Revitalization of Forest Resources in Mountain Regions of Serbia”; the Faculty of Veterinary Medicine – “Biomonitoring in the Function of the Authentic Gene Pool of Animal Species Conservation, Health Protection of Domestic Animals and Ecosystems Protection”; and the Faculty of Biology – “New Biotechnologies for the Protection of Plant Gene Pool”.

Financing: The financing comes from the State and Republic budgets; SE Srbijasume, SE Crna Gora Sume, through the Ministries of Science, Technologies and Development, the ministries of Agriculture and Water Resources and the ministries for Protection of Nature Resources and Environment.

Cooperation: The following organizations have cooperation with FRY and its institutions: UNESCO - biosphere reserve Golija; EUFORGEN (European Forestry Genetic Resource program); the Faculty of Forestry with the Institute of Freiburg (Germany); the ministries of Economy and Internal Trade with BFH Institute in Hamburg (Germany); and IUCN (International Union for Conservation of Nature). Conventions covering the issue are: the Convention on Biological Diversity; Ramsar Convention; CITES Convention; and Bern Convention.

* * *

CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

Decision-Making: At the federal level, responsible bodies are: the Federal Ministry of Economy and Internal Trade (the economic system and economic development, economic transition of FRY, position and working status of enterprises, restitution of geodetic network and geodetic mapping); and the Federal Secretariat of Labor, Health and Social Care - Environmental Department (environment and in accordance with some aspects of agriculture). At the federal level, there is also the Federal Institute for Plant and Animal Genetic Resources (expert activities regarding the collection, processing, conservation and exchange of plant and animal genes of FR Yugoslavia and data on these resources in plant gene banks as well as limited usage, production and turnover of GMO). At the republic level, responsible bodies are: the Ministry of Agriculture and Water Management; the Ministry of Urbanization and Structure; the Ministry for Protection of Nature Resources and Environment; and the Ministry for Science, Technology and Development. Respectable institutions at the local level are: the Agricultural Research Institute "Srbija"; the Maize Research Institute "Zemun Polje"; the Crop and Vegetable Scientific Institute; and other institutes dealing with agriculture and rural development and Institute for Nature Protection.

This field is legally regulated by laws and resolutions, such as: the Resolution on the Environmental Policy in FR Yugoslavia (1993); the Federal Law on the Basis of Environmental Protection (1998); the Federal Law on Water Regime (1998); the Federal Law on Admission of Agricultural and Forest Plant Varieties (1998); the Federal Law on Protection of Agricultural and Forest Plant Varieties (2000); and the Federal Law on GMO (2001). The laws at the republic level are: the Law on Conditions and Mode of Land Restitution According to Agricultural Land Fund (1991); the Law on Hunting (1993); the Law on Expropriation (1995); the Law on Environmental Protection (1991); the Law on Agricultural Land (1992); the Law on Mining (1995); the Law on Planning and Organization of Space and Settlements (1995); the Law on National Parks (1993); the Forest Law (1996); and the Law on Waters (1991).

Strategic documents for creating national policy are: the Spatial Plans of Serbia and Montenegro (1996, 1988); the Long-term Policy of Agricultural Development in FRY (1999); and also establishment of the Federal Institute for Plant and Animal Genetic Resources, with the FRY Gene Bank (1995).

Programmes and Projects: The Faculty of Agriculture in the University of Belgrade is taking part in the Ministry of Science and Technology projects "Family Farm, Reconstruction And Development of Rural Areas in Serbia" and "Development And Promotion of Sustainable Agriculture in Serbia". With the cooperation of the Federal Ministry of Development, Science and Environment and the Federal Ministry for Agriculture the gene bank was established in 1995.

Status: The territory of Yugoslavia comprises 102,173 km², of which 36% represents arable land, 13% pastures and 22% forests. Among agricultural areas, the largest sections are arable fields and gardens. Yugoslav agricultural land and its quality make it a country with substantial agricultural potential. According to 2000 data, agricultural land of FRY totaled 5,627 km², of which 44,450 km² is cultivable. The best soils (first class with or without slight limitations for intensive crop farming) cover more than three million hectares, while more than 5.3 million hectares of land are suitable for grazing and forests.

Agriculture has always been an important component of FRY economy. The main cereal production in Yugoslavia is maize production, but data from 2000 also shows the decrease in the production compared to 1985 (298,000 ha less). All the areas under some kind of field crop (excluding soy and clover) showed decrease in the past few years, as well as the production and yield of cereals.

Agro-industry within the rural development, as a territory-related FRY economy component, should become the national priority. Approximately 18% of the population in Serbia lives on the income from agriculture, where only 8% of rural households earn all their income from agriculture. Agroindustrial sector on the whole accounts for approximately 33% of GDP. Agriculture of Serbia has a negative foreign trade balance, but coverage of imports by exports is higher in agriculture compared to the whole economy. Yugoslavia has had no consistent agriculture or rural development strategy for years. During the recent decades in Yugoslavia, the system-related institutions

linked with agriculture and villages, but there were no new solutions to follow. On the other hand, farmers are not capable of organizing themselves as an interest group.

Bearing in mind the mentioned facts, it is obvious that the establishment of rural economy concept, based on long-term development programs, becomes urgent. That is why multi-disciplinary, long-term and systematic researches, which Yugoslavia has not had for decades, would help to get more precise insight into socio-economic characteristics of the rural population, as well as to foresee the development possibilities and preferences and to define the development models applicable for relatively homogenous areas.

The NATO bombing of Yugoslavia caused pollution of numerous agricultural resources, such as arable fields and gardens, meadows, orchards, vineyards and also livestock. Increased exploitation of natural resources during the period of international economic and political sanctions threatened the sustainable use of agricultural goods. Poor quality inputs were used in the agricultural sector, because of deteriorated living standards; substandard products were often in use.

Capacity-Building, Education, Training and Awareness-Raising: There are five Faculties of Agriculture, relevant for the area of education and training, as well as the Faculty of Veterinary Medicine and 35 vocational agriculture and animal science schools. Two largest agricultural Faculties, in Novi Sad and Belgrade (the Institute for agricultural economics), have long-standing experience especially in theoretical education in the field of rural development, rural economy, farm management, and etc. In Montenegro, agricultural research is carried out by the Biotechnology Institute of Podgorica, which is part of the University of Montenegro. For years, there has been a lack of applicable and systematic researches in this field. For the public awareness raising, there are magazines called *Moc Prirode* (“Natural power”), and *Erozija* (“Erosion”), and the site about natural food www.serbiafood.co.yu. There is also a television show called “Znanje na poklon” (“Knowledge as a gift”).

Information: The Federal Institute of Statistics and National Meteorological Bureau publish valuable information in bulletins and yearbooks.

Research and Technologies: The Faculty of Agriculture of the University of Belgrade is an active member of the Ministry of Science, Technology and Development in the projects “Family Farm, Reconstruction And Development Rural Areas in Serbia” and “Development And Promotion of Sustainable Agriculture in Serbia”. The Faculty of Technology in Novi Sad, in turn, works for the project “Evaluation of Quality And Products of Grains According to International Quality Model by ISO Standards”

Financing: The financing comes from the state and republic budgets.

Cooperation: There is cooperation with FAO through two pilot projects “Alimentary Safety” donated by Norwegian government and “Integration of Refugees Population”. In addition, there is cooperation between different international organizations and Federal Institute for Plant and Animal Genetic Resources, such as: UPOV (Union for the Protection of New Varieties of Plants); FAO (Food and Agriculture Organization); IPGRI (International Plant Genetic Resources Institutes); and ECP/GR (European Cooperative Program for Crop Genetic Resources Networks). The main conventions ratified by FR Yugoslavia are: the Convention of Biodiversity; Ramsar Convention; CITES Convention; and Bern Convention.

* * *

CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY

Decision - Making: The Federal Secretariat for Labor, Health and Social Care (Environment Department) is the body primarily responsible for decision-making on biodiversity and coordination of the work on the implementation of the Convention on Biological Diversity signed in 1992 and ratified in 2001 by FR Yugoslavia. At republic level, competent authorities in this field are the Ministry for Nature Resources and Environmental Protection of Serbia and the Ministry for Town Planning and Ecology of Montenegro. Responsibility for the sustainable use and conservation of biological diversity lies with: the Federal Ministry of Economy and International Trade, through its Departments for Forest Conservation, for Water Resources, etc.; and the ministries of Agriculture, Water Resources and Forestry of Serbia and Montenegro. The government undertakes decision - making in consultation with scientific institutions and scientific authorities.

The legal frameworks that address environmental protection and rational protection of biological diversity at federal level include: the Constitution of FRY (1992); the Environmental Protection Policy in FRY - Resolution (1993); the Resolution of Biodiversity Conservation Policy (1994); the Law on the Trade of Substances for Plant Protection (1993); and the Environmental Law (1998). Two new laws on Hunting and Forest Reproductive Material are now being drafted and should be passed in 2002. Legislation on wildlife and biological resources at the republic level include: the Constitution of Republic of Serbia (1990) and the Constitution of Republic of Montenegro (1990); the Environmental Law of Republic of Serbia (1991) and of Republic of Montenegro (1996); the Ecological State Declaration of Republic of Montenegro (1991); the Protection of Natural Rarities in Republic of Serbia Act (1992); the Law on Seeds and Seedlings of Republic of Serbia (1993); the Spatial Plan (1996); the Act on National Parks of Republic of Serbia (1993); the Law of Hunting of Republic of Serbia (1993) and Republic of Montenegro (1999); and the Forest Law of Republic of Serbia (1991, updated 1996) and Forest Law of Republic of Montenegro (2000).

Programmes and Projects: Federal Government has initiated several projects on biodiversity in FR Yugoslavia, which resulted in publishing the reference books, namely: "Biodiversity of Yugoslavia with the survey of internationally important species"; "Identification and Categorization of Fragile Ecosystems in Yugoslavia"; and "Red Book of Fauna of FR Yugoslavia". Another study is being done on "Criteria for Evaluation of Applicable Potentials of Biodiversity of FRY". Projects that should help making the red book of endangered species of Yugoslav flora are also being prepared.

Status: The territory of Yugoslavia represents one of the six European centers and one of the over 200 world centers of flora diversity. Yugoslavia is the home to 38.93% of Europe's vascular plant species, 51.16% of its fauna, 74.03% of its bird fauna, and 67.61% of its mammalian fauna. There are about 1 700 items, covering over 400 000 ha or some 4% of the state territory that are under different types of protection in FR Yugoslavia. Specially valuable objects of environmental and biodiversity protection are: nine national parks (Durmitor, Biogradska Gora, Lovcen, Fruska Gora, Djerdap, Tara, Kopaonik, Skadarsko Jezero, Sarplanina); 20 natural parks and 122 nature reserves covering over 80% of the protected areas or some 3% of the state territory; and four Ramsar sites (the Skadarsko Jezero, the Obedska Bara, the Ludasko Jezero and the Carska Bara. The Kotor - Risan bay that is registered in UNESCO list of World Nature Heritage). Golija and the river Tara canyon are also protected areas (MAB protection). Within the national parks there are about 40 strict nature reserves. National parks include almost all of the most important and best conserved ecosystems in Yugoslavia, starting from the Pannonian Lowlands and its flooded forests, marshes, steppes and continental sands, hill and mountain regions of Serbia and Montenegro, to the Mediterranean littoral and sub-littoral parts. The protection of natural heritage in Yugoslavia covers 31 caves, primarily as specific geomorphologic features in the Carpatho-Balkan and Dinaric carst of northeastern Serbia, i.e. Montenegro. The caves are well known by their many endemic and steno-endemic species of fauna that are, at the same time, of international importance.

Capacity-Building, Education, Training and Awareness-Raising: There is a broad academic network working in the field of biological diversity conservation, namely: the Republic Institutes for Nature Conservation of Serbia (Belgrade and Novi Sad), and Montenegro (Podgorica); the University centers (Belgrade, Novi Sad, Kragujevac, Pristina, Podgorica); the scientific institutes (Belgrade, Novi Sad, Podgorica, Kotor, Bar); and the Natural History Museums (Belgrade, Podgorica); botanical gardens (Belgrade, Goc, Kolasin); local authorities; and professional NGOs including those specialized in biodiversity such as Ecolibri - Bionet, Belgrade (www.ecolibribionet.org.yu), Ecological Societies of Serbia and Montenegro, and Birds of Prey Protection Fund (www.vulture.org.yu).

Information: Information on biological diversity is available through the National Reports of statements on natural habitats, wild flora and fauna and protected area network.

Research and Technologies: See under **Capacity-Building, Education, Training and Awareness-Raising**.

Financing: Financing for biodiversity conservation is mainly provided by the national budget.

Cooperation: FRY is the signatory of the Convention on Biological Diversity (Rio de Janeiro, 1992) and Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, 1973). Both Conventions were ratified in 2001. FRY has signed and ratified many related conventions and agreements, such as: the Convention concerning the Protection of the World Cultural and Natural Heritage (UNESCO 1975) that stipulates lists of natural heritage (the Durmitor mountain with the river Tara Canyon, the Kotor and Risan Bays in Boka Kotorska were proclaimed "UNESCO sites" in Yugoslavia); and the Ramsar Convention on Wetlands of International Importance, Waterfowl Habitat and other documents referring to UN and especially Mediterranean countries, thus obliging itself to protect and control its part of the sea.

FRY is still in the process of acceding to certain conventions and incentives important for biodiversity control. One should stress the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979) and the Bonn Convention on the Conservation of Migratory Species of Wild Animals. Yugoslavia also participates in some international programmes and incentives important for biodiversity conservation (Man and Biosphere Programme MAB - 1970, UNESCO; and International Programme for Gene Pool and Biosphere Reserves Conservation Development, Incentive for Conservation of the Mediterranean Wetlands, MedWet; The Mountains of Central and Eastern Europe, IUCN European Programme, 1995). In the meantime, the Belgrade Bureau of the Federation of National and Nature Parks of Europe (FNNPE - 1996) was founded. Yugoslav experts make efforts to integrate the mentioned projects in the policy and practice of biological and landscape diversity conservation. For example, the IUCN criteria are used in the national red list projects, in evaluating the biological diversity for assessment of environmental impacts (EIA), as well as in other studies and documents important for the landscape and biological diversity conservation.

* * *

**CHAPTER 16 AND 34: ENVIRONMENTALLY SOUND MANAGEMENT OF
BIOTECHNOLOGY AND TRANSFER OF ENVIRONMENTALLY
SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING**

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 17: PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS, AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES

Decision-Making: Responsible bodies for the integrated coastal zone management and sustainable development are: the Federal Secretariat for Labor, Health and Social, (the competencies in these areas are transboundary pollution of the sea) and the Federal Hydro-Meteorological Institute (responsible for MED-POL programmes). In the Republic of Montenegro, competent environmental authority is the Ministry of Physical Planning and Ecology (MoPPE) and its Agency for Coastal Zone Management. The Ministry for Agriculture sets the framework for fisheries and aquaculture. These republic authorities receive scientific advice in marine ecosystem management from the Institute for Marine Biology in Kotor. The Institute for Nature Protection; the Hydro-Meteorological Institute; the public enterprise for the management of national parks in Montenegro; and the Center for Ecotoxicological Research are subordinate to the MoPPE.

The main environmental legislation at federal level comprises: the Law on the Basis of Environmental Protection (1998); the Law on Water Regime (1998); the Law on Hydro-meteorological Affairs of Interest of the Country (1988); the Law of the Territorial Sea and Epicontinental Shelf (1996); the Law of Maritime and Inland Navigation (2000); the Law on waters (1995); the Decree of classifying inter-republic waterway and inter-governmental inland waters and sea water of Yugoslavia; as well as the Resolution on the Environmental Policy in FRY and the Resolution on Biodiversity Protection in FRY. Legislation in the Republic of Montenegro comprises: the Law on Environment (1996); the Law on Waters (1995); the Law on the Sea Goods (1992); the Law on the Nature Protection (1989); the Regulations on Measuring Methods and Monitoring of Quality of Sea Water for Bathing and Recreation (1991); and etc.

Yugoslavia has ratified 25 international agreements related to marine environment protection. In the framework Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, Yugoslavia has been active in the MED-POL programme as well involved in Mediterranean Action Plan (MAP).

Programmes and Projects: There is no National Strategic Plan of Actions for the Protection of the Yugoslav part of Adriatic Coast. Major programmes and projects include: *the International programme* MED-POL project (Researches were officiating during 1994, 1996, 1997 and 1998. NATO bombing interrupted the research); *the Federal programme* about researches quality Adriatic Coast; and *the Republic programme* "Montenegro Coastal Emergency Municipal Environmental Infrastructure", which includes two components (a) rehabilitation of the environmental infrastructure in the coastal cities, and (b) repair of the submarine wastewater outfall at Kotor and repair of the on-land secondary sewerage system; and *the Republic programme* "Investigation of Sea Water Quality Beaches on the Adriatic Coast", established by the Ministry of Physical Planning and Ecology (MoPPE) and its body Agency for Coastal Zone Management.

In the near-term, FRY should develop programs for protection of the coastal landscape, seawater and sensitive groundwater sources. In the medium-term, there is a need to balance development, landscape and conservation of the coastline through an integrated coastal zone management program. Measures are also needed to address inadequate management of hazardous waste from enterprises and municipal solid waste.

Status: Coastal resources in Montenegro are threatened by untreated sewage and solid waste and oil spills, especially in tourist areas such as Gulf of Kotor. The investigation reveals that water, sediments, flora and fauna of the Adriatic Sea are severely polluted. The early efforts of the 1990s towards the protection of the Gulf of Kotor were hampered by lack of funds. Last investigation in this framework was finished in 1998. Given that tourism is considered to have the greatest potential in the economy of Montenegro, there is a need to reduce coastline pollution.

Capacity-Building, Education, Training and Awareness-Raising: Because of financial shortages in this field the activities have been very limited.

Information: Information on management of fishery resources is available through Federal and Republic Statistic Reports and regarding the state of the marine fishery resources. The following World Wide Web Sites are available for issues related to oceans and seas: <http://www.biokotor.org>; and <http://www.meteo.yu>. Indicators are being developed through scientific research in oceanography, fishing, pollution control, marine technology, ecological reconstruction in marine coastal zones.

Research and Technologies: No information available.

Financing: There is no earmarked funding for the programme related to the sea. Monitoring of shoreline dynamics and coastal landscapes has been moderately financed since 1991 by the national environmental monitoring program based on the federal and republic budget. Sustainable management of fishery resources is financed by the fund of the Ministry of Agriculture of the Republic Montenegro.

Cooperation: Yugoslavia participates in the programmes promoted by Intergovernmental Oceanographic Commission (IOC) and the EU. The main programme in 2002 is "Mediterranean Network to Assess and Upgrade Monitoring and Forecasting Activity in the Region" and support for research infrastructures in the field of operational oceanography.

* * *

**CHAPTER 18: PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER
RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE
DEVELOPMENT, MANAGEMENT AND THE USE OF WATER RESOURCES**

Decision-Making: The Federal Ministry of Economy and Internal Trade through its Department of Water Resources is in charge of authorization and inspection of the use of international waters, as well as of the monitoring of transboundary impacts. The Department of Water Resources issues permits for the construction of new and reconstruction of existing facilities that cause changes in the surface water and groundwater of interest to the country, and in international waters. The Federal Hydro-Meteorological Institute carries out regime of the atmosphere, monitoring of air, radioactivity, surface and waste waters. The Federal Health Institute is mostly responsible for monitoring and control of potable water, and partly for surface water and waste waters. The Serbian Ministry of Agriculture, Forestry and Water Resources is in charge of the protection of soil and water resources, and it is responsible for the management of water resources and forests. At the republic level, there are three Public Enterprises for Water Resources (JVP Dunav in Novi Sad, JVP Sava in Belgrade and JVP Morava in Nis) for the management of water resources and facilities in Serbia. Activities carried out by the JVPs include: monitoring and maintenance of water regime; maintenance of dams and other water resource facilities; organization and flood control; and measures for water protection and preparation of plans and programs in the area of water management. The JVPs are also authorized to issue permits for the extraction of materials from riverbeds. The Ministry of Health is connected to environmental issues through sanitary regulations concerning waters. The Ministry of Agriculture, Forestry and Water Resources in Montenegro is responsible for the protection of soil and water and the Ministry of Health has responsibilities regarding the protection of public health against environmental impacts. The City Public Institutes for Health (Belgrade, Novi Sad) are responsible for monitoring air, noise, water and groundwater.

The Law on Water regime (1999) regulates the regime of watercourses of international interest and international waters, water quality, monitoring, inspection and penalties. The Law on Hydrometeorological Affairs of Interest to the Country (1990) regulates hydrometeorological affairs and water pollution, as well. The Law on Waters (Republic of Serbia, 1996) regulates water regime, plan of water management, water management licensing, water resources conditions, compliance and permit, water protection, use of waters, financing, public enterprises, inspection, and penalties. This law also established the three Public Enterprises for Water Resources. The Republic of Montenegro adopted the Law on Waters (1995) that regulates the alteration of waters and watercourses, flood protection and protection against other harmful effects, protection of waters from pollution, and the supply of water for various uses.

Programmes and Projects: In the period between 1997 and 2000, FRY participated in the realization of the Regional UNDP/GEF project: "Pollution Reduction in Danube River Basin". From 2002 to 2005, FRY will participate in Regional UNDP/GEF project: "Strengthening the Implementation Capacities for Nutrient Reduction and Transboundary Cooperation in Danube River Basin". There is on-going project for Danube river "ICPDR" (International Commission for Protection of Danube River). "ICPDR" is an executive body of Convention on Cooperation for the Protection and Sustainable Use of Danube River (Danube River Protection Convention, DRPC). It is interesting to notice that among other projects, "Water Balance in the Danube River Basin" is initiated by cooperation with UNESCO/ICPDR, and project "Assessment of Climate Change Impacts on the Hydrological Cycle in the Danube Basin", within regional cooperation of Danube river basin countries under auspices of IHP/UNESCO.

Status: Total amount of surface waters in FRY is 5972 m³/s, but 85% are international waters. They are the rivers of Danube, Tisa, Sava, Drina, Bojana, Moraca and two lakes Skadarsko and Bilecko. Two rivers (Ibar, Lim) are of interest to the country; they are transboundary rivers between Serbia and Montenegro. The quality of watercourses is considered unsatisfactory. High level of pollution threatens drinking water sources, fishery and aquatic life. According to classification of international watercourses (four classes), the percentages of dissolved oxygen, biological oxygen demand, suspended matters, color and most probable number of Coli bacillus, are higher than

expected. Among dangerous substances, the concentrations of Cr^{6+} , as well as Fe, Hg and phenols are in the range of the III or IV classes of water.

Capacity of groundwater is estimated on $2.57 \cdot 10^9 \text{ m}^3$ per annum. These resources are mostly used for providing potable water (about 70%), so great attention has to be paid to their quality. Some 86.6% of FRY population is supplied from public water supply systems, but the quality of this water does not meet hygienic standards. The test results during last decade revealed that about 15% of water samples did not meet physical/chemical standards and about 10% did not meet microbiological standards. Out of total waste waters from industry, only around 12% is treated before being discharged into watercourses. The same situation is with municipal waste water. It should be noted that the consequences of NATO bombing in 1999 still exist and they are related to groundwater pollution and destroyed wastewater treatment plants, especially in Pancevo and Novi Sad.

Capacity-Building, Education, Training and Awareness-Raising: At federal and republic levels, there is continuous work on capacity-building, education, training and awareness-raising. Programmes related to this issue (basic studies, postgraduate studies) are financed by national budget and carried out in cooperation with other specific organizations.

Information: Information related to water, like the quality of surface waters and amount of industrial, municipal, treated waste waters, can be found for every year in Statistical Yearbook of Yugoslavia. The Federal Hydro-Meteorological Institute and the republican hydro-meteorological institutes regulate the collection and exchange of data, and hydro-meteorological information system. It should be pointed out that surface waters in Kosovo have not been monitored since 1998, due to political reasons.

Research and Technologies: The Federal Hydro-Meteorological Institute and the Institute for Public Health, Belgrade, are engaged in research projects with other international laboratories. The Federal Secretariat for Science and Development has sponsored a lot of research projects. Some of them, related to this subject are: "Geological And Hydrological Basis of Management of Groundwater Resources in Vojvodina"; "Pesticides in Water"; "Contemporary Methods in Hydro-engineering"; and etc.

Financing: The sources of financing of the control and protection of surface water quality are: the national budget; and the Republican Ministry for Protection of Natural Resources and Environment; as well as the international projects (ICPDR).

Cooperation: One of the key conventions is the "Convention on Cooperation for the Protection and Sustainable Use of Danube River (Danube River Protection Convention, DRPC)". FR Yugoslavia is in process of ratification of this convention. An international agreement regulates the protection of Tisa river and its tributaries from pollution. At this moment, the negotiations on the Convention for the River Sava Basin include FRY, Slovenia, Bosnia and Herzegovina and Croatia. In 2001, FRY was involved in activities on the project "Joint Danube Survey". There is also an interest to continue this project considering the Tisa river (Investigation of the Tisa River). This Programme has been carried out with support of European Union and the Republican Ministry for Protection of Nature Resources and Environment.

* * *

CHAPTER 19: ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS

Decision-Making: The Federal Secretariat for Labor, Health and Social Care through its Department for Health is in charge of trade and transport in medicaments, poisons and other hazardous substances and sanitary inspection on borders. The Secretariat is also responsible for the exchange of EIA information in transboundary context and for issuance of permits for the export and transit of radioactive materials and poisonous substances; and export and transit of substances that deplete ozone layer. The Federal Ministry of Interior Affairs is the competent authority for sales and transport of toxic, inflammable, explosive and other hazardous substances. The Serbian Ministry for Protection of Natural Resources and Environment is responsible for sale and disposal of hazardous substances. The Montenegro Ministry of Town Planning and Ecology is in charge of production, sale and disposal of hazardous substances, inspection and international Cooperation.

The Law on Transportation of Hazardous Substances (1999) stipulates: conditions of transport in hazardous substances; transport safety measures; permits for export, import and transit; and inspection on borders. The Law on Production and Trade of Poisonous Substances (1995): regulates conditions for production and trade of poisonous substances; categories of poisons; their packing, trading and use; removal of residues of poisons; and inspection on borders.

Programmes and Projects: No information available.

Status: According to statistical data, in FRY, cca 10 industrial accidents happen every year, and they are equally related to transport and facilities. At republic level, initial register was published "Dangerous Substances in the Republic of Serbia". This register was prepared for the year 2000 and it includes quantities of 390 dangerous substances generated in the production process, use, transport, storage or conservation.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: FRY has signed Stockholm Convention on Persistent Organic Pollutants in May this year. Also it cooperates with WHO organization "Intergovernmental Forum on Chemical Safety", and preparatory process is going on signing Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. FRY has ratified the Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer.

* * *

CHAPTERS 20 TO 22: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS, SOLID AND RADIOACTIVE WASTES

Decision-Making:

Hazardous waste: The Federal Secretariat for Labor, Health and Social Care is competent for the authorization and inspection of transboundary movement of hazardous and other wastes. Also as a party of the Basel Convention (Control of Transboundary Movements of Hazardous Waste and their Disposal) FR Yugoslavia issues permits for import, export and transit of wastes. The Federal Secretariat, Department for Environment, controls the movement of wastes across the territory of FRY. Competent authority for the designation of the national label for waste and list of wastes is the Laboratory for Waste Characterization, Institute for Public Health Belgrade. The main legislation includes the Rules on the Import, Export and Transit of Waste in FRY (1999).

Solid Waste: The most important law at republic level is the Law on Waste Handling (Republic of Serbia, 1996). It regulates the handling of waste materials that can be used as secondary raw materials, including handling waste materials that have no utilization value and cannot be used as secondary raw materials. The municipal waste is managed at municipal level, i.e. city level. Waste material must meet certain conditions concerning its location. Final decision on the location of the waste deposit site is made by the municipality that grants the construction permission. Relevant regulations are: the Regulation on Criteria for Determining Location and Disposition of Waste Materials (Republic of Serbia, 1992) and the Regulation on Conditions and Ways for Grouping, Packing and Keeping of Secondary Raw Materials (Republic of Serbia, 2001).

Radioactive waste: The Federal Secretariat for Labor, Health and Social Care is competent for the protection against ionizing radiation. The Federal Ministry of Economy and Internal Trade is responsible for: nuclear safety and security; production and use of radioactive materials; and it is also a government organization in charge of the implementation of bilateral cooperation between Yugoslavia and IAEA (International Atomic Energy Agency). The Federal Ministry of Interior Affairs and Federal Hydro-Meteorological Institute are in charge of the monitoring. The Basic Laws at federal level are: the Law on Protection Against Ionizing Radiation (1996) and the Law on Prohibition of Construction of Nuclear Plants in Yugoslavia (1995). The Serbian Ministry for Protection of Nature Resources and Environment has responsibilities for the protection against ionizing and non-ionizing radiation. The Montenegro Ministry for Town Planning and Ecology is responsible for environmental protection of production and use of radioactive materials and their disposal, ionizing and non-ionizing radiation, excluding in medical use.

Programmes and Projects:

Hazardous Waste: In cooperation with UNEP/UNOPS realization of projects (KR.1 and KR.2) related to PCB contaminated concrete floor and water pits has started in 2001.

Solid Waste: No information available.

Radioactive Waste: There is on going Yugoslav proposal for the 2003-2004 cycle under the IAEA Regular Programme of Technical Cooperation. Completed project request forms have passed technical assessment, and they are mostly related to the storage of radioactive waste in "Vinca" Institute.

Status:

Hazardous waste: In 1998, the first preliminary register of hazardous waste was made and according to it, every year FRY generates 225,280 tonnes of hazardous waste. Only 22% of this type of waste is completely treated; the rest is either disposed without treatment or partially treated. In 2001, 15,682.96 tonnes of non-hazardous waste was imported, and 96,290.00 tonnes of non-hazardous waste was exported as well as 36.96 tonnes of hazardous waste. The environmental legislation bans the import of hazardous waste into FRY. The Laboratory for Waste Characterization, Institute for Public Health, Belgrade, uses international standards and methods for waste characterization (ISO, California EPA, QNORM, DIN), because FRY does not have national standards and methods for waste. In addition, as a consequence of NATO bombing, FRY is having problem with PCBs and mercury released from transformer stations and chemical reactors that were destroyed or damaged in 1999.

Solid waste: Amount of solid municipal waste ranges from 0.7 to 2.7 kg/capita/day depending on the area. It is estimated that 3.5 million m³ per year of municipal waste is disposed in Serbia. The municipal waste, often

containing hazardous materials, threatens the quality of groundwater sources. A large volume of waste is disposed in open and uncontrolled dumps. Concerning industrial waste, most of it is generated in chemical industry (37.6%) and in metallurgy (29.1%).

Radioactive waste: Amount of collected radioactive waste per capita is about 2 cm³. At present, it is temporarily stored by the Institute of Nuclear Sciences at “Vinca” site into two storage facilities, reactors “RA” and “RB”. In 2000, about 4.15 m³ of liquid and 12.8 m³ of solid radioactive waste were disposed there. Serious concerns about the safety of the pool used to store spent fuel from the research reactor “RA” have been raised. There is also a problem of depleted uranium contaminated soil and ammunition (depleted uranium penetrators) used during the NATO bombing, which is considered as radioactive waste and is also temporarily stored also at “Vinca” site.

Capacity-Building, Education, Training and Awareness Raising:

Hazardous waste and Solid waste: In Cooperation with Basel Convention Secretariat, FRY participated in 20 technical working group meetings; five legal working group meetings; and eight meetings of ad hoc legal and technical experts. In the period 1997-2001, Yugoslav experts also participated in nine training seminars on the implementation of Basel Convention under auspices of Regional Centre BC in Bratislava.

Radioactive waste: No information available.

Information:

Hazardous waste: According to the Basel Convention, the Laboratory for Waste Characterization is sending every year (since 1999) to the Focal Point of Basel Convention a report about the amounts and characteristics of the waste that is being controlled.

Solid waste: Data related to the amount of generated municipal waste, number and locations of dump sites, types of treatment of solid waste, etc. are available at the Federal Institute for Statistics. The Recycling Agency has the main responsibility for industrial waste management, monitoring and controlling of the use of secondary raw materials and keeping respective records.

Radioactive waste: The Institute for Radiation Protection “Dr Dragomir Karajovic” is in charge of monitoring the radioactivity level in FRY. They submit their report annually to the Federal Secretariat for Labor, Health and Social Care. At this moment database is being created by the Secretariat.

Research and Technologies:

Hazardous waste: No information available.

Solid waste: Research project “Research of recycling resources of non-ferrous metals” as been done by ITNMS (the Institute for Technology of Nuclear and Other Mineral Resources).

Radioactive waste: The Federal Secretariat for Science and Development has sponsored for example the programmes “Nuclear Radiation Protection Technology” and “Dynamics of nuclear processes”, carried out by the Institute for Nuclear Sciences “Vinca”.

Financing:

Hazardous waste: No information available.

Solid waste: No information available.

Radioactive waste: The Federal Secretariat for Labor, Health and Social Care finance the monitoring of the level of radioactivity. Other related activities are financed by the Federal Ministry of Economy and Internal Trade.

Cooperation:

Hazardous waste and Solid waste: As a party of Basel Convention, FRY cooperates with other countries in the areas of import, export and transit of waste.

Radioactive waste: FRY became a member of the IAEA in 1958. In 1970, it signed the Treaty on the Non-proliferation of Nuclear Weapons and the agreement between FRY and IAEA on the application of safeguards in connection with Treaty on Non-proliferation of Nuclear Weapons in 1973. After that, it signed the following conventions: Vienna Convention on Civil Liability for Nuclear Damage, 1977; and Conventions on the Physical

Protection on Nuclear Material, 1985; on Early Notification of a Nuclear Accident, 1989; and on Assistance in the Case of a Nuclear Accident or Radiological Emergency, 1991.

* * *

CHAPTER 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS

Women: Decision Making: The creation of Government policies, strategies and legislation for establishing the equality of all segments and groups of society have speeded up during the last two years, since the time of the crucial political, social and economical changes. That will strengthen the role of each major group in creating and implementation of the concept of sustainable development, including women. Programmes and Projects: The most important is the campaign started in October 2001, by non-governmental organization of the Woman Political Net (WPN). The most important goal of the campaign is to increase the participation of women in political life. The WPN involves about 800 active members, women from more than 40 cities in Yugoslavia. Status: Despite the active role of women NGOs and, especially, the WPN, there are only 11% of women posted in decision making bodies and institutions up to now. Women are still exposed to mostly hidden type of discrimination related to public, economic, social and private life. Capacity-Building, Education, Training and Awareness Raising: The main role in these activities is played by NGOs, specially WPN, that have organized the numerous Round tables in many local municipalities to promote the significance of strengthening the role of women in political, social and economic development. WPN recently has carried out the survey including 40,000 women. The survey will show the actual state in this field and serve as a basis for future action.

Children and Youth: Decision Making: Various federal and republic authorities are included in the creation of policies, strategies and legal acts related to social, cultural, economic and health status of youth. On the other hand, there are about 140 registered Youth NGOs, and some of them are actively involved in dialogue with government devoted to the mentioned issues. The Ministry for Social Policy of the Republic of Serbia is especially active in preparing adequate regulation that will improve the social status and wellbeing of children. Programmes and Projects: The Government undertakes different measures to mitigate causes of unemployment of youth. Those actions are specially focused on finding a job for highly educated young people. Several fairs were organized on employment, in the aim to connect unemployed young people and employers representing different companies and institutions. In the field of preventing youth from taking drugs, serious actions are also undertaken, which are supported by a number of NGOs and media. Capacity-Building, Education, Training and Awareness-Raising: The ministries for Education of the Republic of Serbia and the Republic of Montenegro have initiated the complex process of reforms in the field of education and curricula. In this context, a number of expert teams have been formed. Apart from programmes of reforming the system of primary, secondary and university education, special importance has been put on priorities, methods and suggestions for creating National Youth Strategy and Policy. The Regional Center for Environment in CEE countries/Office in Yugoslavia and various NGOs (Alternative Academic Net, etc.) have an active role in education activities for sustainability.

Indigenous People : Decision Making: In FRY, as well as in the former SFRY, the problem of ethnic groups has been very important, representing often the cause of conflicts and crises during the last decade. The Federal law of ethnical communities adopted at the beginning of 2002 will significantly contribute to solving this problem. This legal act has passed positive verification by the Council of Europe and OSCE. In the 1990s, indigenous people participated on ad hoc basis in National policies and programmes. Their activities were suppressed by the centralized system of government. However, the Law of Local Authorities, adopted by the Assembly of the Republic of Serbia in 2002, is a valid base for more active involvement of indigenous people in preparing National and local strategies and plans. There are no formal barriers for involvement of indigenous people in creating local sustainable development, but the process of organizing local societies will be a long-lasting one. It is promising that local people are actively involved in preparing local Agenda 21 in several Yugoslav municipalities.

Non-governmental organizations: Decision Making: The legislation that allows NGOs to play their partnership role in sustainable development effectively and efficiently is in the final phase. NGOs have an important role in fostering the value of a clean environment and protection of natural resources. In some localities, NGOs have representation in municipal councils, and as a result they are influencing the environmental decision-making process at the local level. Status: According to available statistics, in 1998 there were about 110 NGOs in the

Republic of Serbia (about 25% of the total number of NGOs) operating in the environment field. Some local NGOs have established good international cooperation. The crucial problem of Yugoslav NGOs is related to the lack of financial resources and equipment for regular work. Apart from financial problems, NGOs are faced with misunderstanding and neglect of the surroundings in which they work, and, often, insufficient expert support. The media, also, does not pay enough attention to NGOs work. Cooperation: Yugoslav NGOs should be better organized and connected in some kinds of associations. A step towards creating an association of NGOs occurred in 1994, when "YU-ECO NET" was formed. Important support for work of Yugoslav NGOs was given by the Regional Center for Environment in CEE countries/Office in Yugoslavia. REC has financed a lot of small projects realized by local NGOs.

Local Authorities: Decision Making: The Government plans to support local Agenda 21 initiatives. In the course of the last couple of years, some activities have been undertaken to promote the ideal of preparing Local Agendas 21. Status: Bearing in mind the proportion and complexity of socio-economic and political problems with which Yugoslavia has been encountered during the last decade, significant initial steps towards strengthening the role of local authorities in the implementation of Agenda 21 have been made. They can be summarized as follows: initiating the process of consultation between local authorities and local people that can result in consensus about necessity of creating local Agendas 21; improvement of cooperation between international institutions and local authorities; and changing experiences and information between local authorities. Projects: REC has undertaken important activities towards promotion and implementation of local environmental action plans (LEAP), presenting integral component of complex process of preparing local Agenda 21. REC focused its activities on organization of seminars-conferences, giving financial support and publication activity. These activities have been intensified during the last two years, after a radical change of attitude of international institutions towards our country. REC has organized number of seminars discussing the topic "The First Step towards Implementation of LEAP" and published "The Guidelines for Implementation of Local Action Plan for Environment". To date, the Assembly of Municipality of Nis has adopted LEAP. The Assembly of Municipality of Subotica and Assembly of Municipality of Kotor will discuss the drafts of LEAPs in the course of 2002.

Workers and trade unions : Decision Making: The total legislation regulating the rights and status of workers, as well as establishing and activity of trade unions are in the final phase of adoption. Different forms of equal social dialogue between trade unions, government and employers in the process of social and economic decision-making (process of privatization of social ownership, for example) are becoming more common after 2000, but that was not typical in the previous period. In the framework of these consultations, decisions related to work environment, workers training, social services and environment protection are being made. However, workers do not yet participate in the preparation of the National Strategy of Sustainable Development and similar documents. Status: In 1990s, the questions of environmental protection were not the priority for workers and trade unions, because the top priorities were focused on socio-economic issues and problems. The situation has been changed in the last two years, because trade unions pay more attention to environmental conditions in which workers live and work. Evidently, this topic will have more and more importance for trade unions in the future period. Cooperation: Some of the trade unions have good cooperation with international associations of trade unions, or trade unions from foreign countries. Assuming that FRY has become the member of majority of international organizations and will soon become an equal member of some more important institutions (for instance, Council of Europe), it is realistic to expect that all important international conventions related to rights and activities of workers and trade unions will be signed and ratified by Yugoslav Authorities.

Business and Industry: Decision Making: There are governmental policies and programmes which encourage the efficiency of resource use, including reuse, recycling and reduction of waste per unit of economic output. In 1995, the Government of Republic of Serbia adopted the Programme of Eco-Management, and in 1997 the Government of Republic of Montenegro, also, adopted the Programme of Eco-Management. The Federal Law on Bases of Environmental Protection was adopted by the Federal Parliament in 1998. The mentioned acts represented the base for the implementation of Yugoslav standards in the field of environmental protection - YUS ISO 14000 and set the principles and criteria for eco-labeling. They are identical with international standards of the International

Standards Organization - ISO 14000. Status: According to data from 1998, ten Yugoslav business or industry companies, which started to introduce YUS ISO 14001, were in the final phase of getting official certification. Capacity-Building, Education, Training and Awareness-Raising: In the course of 1998, there were several seminars and meetings devoted to implementation of ISO 14000 in various sectors of industrial and economic activity. YUAT (Yugoslav Credential Body) established by the act of Yugoslav Government, has a role of establishing domestic system of certification and accreditation in the field of eco-management, according to YUS ISO 14000.

Scientific and Technical Community: Status: The lagging of scientific-technological development during the last decade is obvious. Part of the existing technologies and products fall short of current environmental protection requirements. The protagonists of development are insufficiently motivated to improve the performance of technologies, products and services and to promote scientific-technological innovations, particularly in terms of environmental protection. Programmes and Projects: The projects and programmes of the Federal and Republic Funds for promoting scientific-technological development of FRY do not cover all fields of environmental protection. The information database for the intensive use of scientific, technological and business data under research projects on environmental protection and promotion is not adequately developed. The multi-disciplinary approach and cooperation in elaborating major research projects, feasibility studies, general designs, expert studies and evaluation reports of specific research activities are unsatisfactory. Capacity-Building, Education, Training and Awareness-Raising: Despite the above-mentioned problems, scientific community, during the last decade, played an important role in the formal and informal education of society. It is important to stress that during rigorous sanctions, when official contacts with other countries stopped, our scientific experts managed to participate in many international meetings.

Farmers: Decision Making: Inside the Yugoslav Chamber of Commerce and Industry there is an Association for agriculture. This board coordinates: growth and development of companies within this branch market conditions in the country and the world; securing of intermediates for the needs of unhindered production of its members; development programmes in this field; laws and by-laws referring to this branch; organizes promotions and presentations of its members and products; and etc. In addition, the Association also performs public authorization activities (issuing of certificates confirming that the country does not produce certain goods or that it does not produce these goods in sufficient quantities).

* * *

CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS

Decision-Making: The Law on the Basis of Environmental Protection (1998) stipulates financing of environmental protection at the Federal level in Articles 33, 34 and 35. It says that Federal budget is the main source of financing. The Federal Secretariat for Labor, Health and Social Care is the main institution responsible for allocation of funds in the field of environmental protection at the federal level and the same is for the Ministry for the Protection of Natural Resources And Environment of the Republic of Serbia at the republican level. Other ministries, relevant institutions and organizations are responsible for environmental financing according to their competencies. A significant amount of resources is earmarked from budgets at the local level as well as from companies' funds.

Programmes and Projects: The amount of available resources for environmental financing in the Federal budget is defined according to programmes and action plans in the field of environmental protection adopted by the Federal Government.

There are a lot of environmental problems in FR Yugoslavia. Some of them are the result of previous unsustainable development and some are the result of recent NATO bombing and sanctions. UNEP/Balkan Task Force confirmed in its report that there is a serious contamination of environment at four so-called "hot spots" in FR Yugoslavia – areas of Novi Sad, Pancevo, Kragujevac and Bor. Potentially contaminated areas are also Smederevo, Prahovo, Valjevo, etc. UNEP/BTF report on the environmental consequences of NATO bombing of FR Yugoslavia was followed by a feasibility study that identified 27 clean-up projects to address the post conflict environmental and humanitarian problems. Estimated project costs are around \$20 million and 15 of these projects are in their preparatory phase. Around \$11.2 million has been collected through donations so far.

The Ramsar Standing Committee approved a grant in support of the project "Rehabilitation and Restoration of Wet Meadows at Lake Ludas", which will be realized in 2002 and supervised by Federal Secretariat for Labor, Health and Social Care.

More information about Programmes and Projects could be found under this heading in the various chapters of this Profile.

Status: The need for investments in environmental protection is enormous. The draft of the new Law on the System of Environmental Protection of Republic of Serbia anticipates that financial resources for environmental protection shall be provided from: 1) charges for the use of natural resources; 2) resources collected through privatization; 3) charges for environmental pollution; 4) charges on investments; 5) fines (penalties) determined by this Law and related regulations; and 6) other sources. Local self-government entities are entitled to impose specific charge for environmental protection. This Law also anticipates the establishment of the Fund for the System of Environmental Protection.

Federal Budget
(in dinars)

Year	Total expenditures	Expenditures for Environment	%
1998	9,693,000,000	1,200,000	0.012
1999	15,848,000,000	3,100,000	0.019
2000	22,522,000,000	8,600,000	0.038
2001	45,873,536,000	15,860,000	0.034
2002	65,936,000,000	150,000,000	0.23

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: Information on public financial sources devoted to financing environmental protection is published in the approved state budget for respective year.

Research and Technologies: The Federal Secretariat for Development and Science finances research projects concerning environmental protection.

Cooperation: Cooperation with a great number of international organizations in the field of environmental protection has been intensified in the last few years. UNEP, UNDP, GEF, World Bank, European Investment Bank, European Bank for Reconstruction and Development (EBRD), UNIDO, UN ECE, FAO, UNCHS – Habitat, and etc. are some of them. A number of clean-up projects have been realized by international organizations, in the first place by SDR/SDC (Swiss Disaster Relief Unit/Swiss Agency for Development and Cooperation). Donations for environmental protection in FRY amounting to \$95 million till 2004 were announced at the Donation Conference in Brussels (June, 2001). Good cooperation is also going on in the region (“Environment for Europe” – UN ECE, Adriatic-Ionian Initiative, Mediterranean and Balkan Cooperation, and REReP).

* * *

CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT

Decision-Making: The Federal Secretariat for Science and Development provides the framework for the strategic economic development and growth of the country. The Federal Secretariat encourages the introduction and development of new technologies; it provides support for research and higher education; and it promotes the use of information technologies at all levels. It also judges about the need to set up a public scientific research legal entity as well as proposes and initiates the adoption of measures for the promotion of scientific research activity.

The legislation includes: the Resolution on Scientific Research and Technological Development Policy (1993); the Law on Financing Scientific Research and Technological Development (1993); and the Scientific Research and Technological Development Financing Law and Conclusions of Federal Government (2001).

Programmes and Projects: Projects that have entered the register of Federal Secretariat for Science and Development include various fields: Natural Sciences, Technical Sciences (mining, metallurgy, applied geology, electrotechnics, computer sciences, electronics and regulation, engineering, ship construction and building, traffic and transport, civil engineering, surveying, architecture and urbanism, textile technology, chemical technology and engineering), Medical Sciences, Biotechnical Sciences, Agriculture (fruit growing, wine growing, forestry & horticulture, cattle breeding, fishing trade), Biotechnology and Nutrition Technology, Social Sciences, and Humanities.

Status: Research activities have been monitored and implemented within six fields: natural, technical, biomedical, biotechnical, social sciences and humanities. The current situation in specific scientific fields results from the approach and conditions under which science and technology have been developing for decades.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: Currently in FRY, 17,300 scientists are engaged in various research projects; 16,480 in the Republic of Serbia, and 820 in the Republic of Montenegro. The number of registered research-scientific organizations is 111, among them 98 are in Serbia, and 13 in Montenegro. In FRY there are seven Universities with 97 Faculties.

Research and Technologies: Innovation and new technologies present key factors of economic and social development at the beginning of the third millenium. Therefore, the aim is to create conditions for fast and effective transformation of research results, encouraging international transfer of technology and development of technology in small and medium enterprises. At the moment, activity has been focused on the implementation of two basic programmes: 1) the establishment of the national network of institutions engaged in development, transfer, application, and financing of new technologies; and 2) the development of the system of measures of government support to technological development. An incentive measure of the Government will be an adoption of the "Programme for Promotion and Start-up of Production Based on New Technologies".

Financing: At present, the system of science and technology has been financed through three basic modalities: direct (targeted) financing of agreed programmes implemented by public institutes and projects implemented by faculties and other legal entities with a mechanism of annual monitoring of results; financing of young researches engaged in a specific program or project with long-term monitoring of their progress (attaining M.Sc./Ph.D., publishing); and stimulation of publishing activities through financing and co-financing of scientific and professional journals as well as other publications.

Cooperation: In all fields, particularly in science and technology, FRY depends on an explicit and expansive stimulation of international cooperation. It can be seen through a range of multilateral and bilateral links (projects, activities, etc.) and introduction of internationally recognized categories, methodologies and standards. In June 2001 Yugoslavia became a member of European Cooperation Programme in the Field of Scientific and Technical Research (COST).

* * *

CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

Decision-Making: The competence in the field of education and educational system completely belongs to Republic Ministries for Education, but various activities related to environmental education, public awareness and training are, also, carried out by federal and republic authorities responsible for environmental protection. There is not, yet, National Strategy for Environmental Education, but the Federal Government adopted the Resolution on Environmental Policy, which strongly emphasized the importance of environmental education aimed at changing society's attitude towards the environment and raising public awareness.

Programmes and Projects: There are various informal innovative educational programmes for local communities, which make attempts to actively involve target social groups. Those activities have been realized mostly by NGOs, but with support of authorities for environmental protection. The Regional Center for Environment in CEE countries/Office in Yugoslavia (REC) and the various NGOs have a very active role in environmental education for sustainability. Among them, special significance is on the Alternative Academic Net. The REC has initiated the following projects: Strategic Framework for Waste Management; Training for LEAP Trainers; Environmental Protection for Teachers in Primary Schools (a Manual); Promotion of Cooperation between Environmental NGOs; Establishment of Electronic Computer Net on National and Local Level; Local Environmental Action Plans; and etc. There are also preparatory processes for signing the Agreement between Yugoslav Government and USA Government about GLOBE Programme, whose realization will enable our children and youth to approach to different sources of information related to environment via Internet, as well as changing experiences and information with youth from all over the world.

Status: In general, environmental education is inadequately organized and the syllabi insufficiently focused, and no awareness raising plans are available in respect of the need for conserving the environment. Training of professionals in integral environmental protection and promotion is unsatisfactory. There is an acute shortage of qualified educators in the field of environmental protection and promotion. However, subjects about ecology and environmental protection are included in the curricula of primary and secondary schools in significant proportions. As regards University education, programmes of environmental education and sustainable development are present in the curricula at many faculties, namely: Geographical Faculty and Biological Faculty in Belgrade as well as Faculties for Mathematics and Natural Sciences in cities of Novi Sad, Nis and Pristina.

The Ministry for Education of the Republic of Serbia has recently initiated the complete reform of formal system of education. Number of expert teams are formed for the preparation and realization of the reform. The reform includes several phases and segments, namely: the System of Monitoring and Evaluating of Quality of Education - Suggestions for Changes and Innovations; Education and Professional Development of Educators; Reform of Higher Education; Reform of System of Underschool Education; Strategic Guidelines for Development of Education of Adults; Framework for Strategy for Development of Professional Education; Decentralization of Education in Serbia; Democratization of Education and Education for Democracy and Civil Society; and Improvement of Pupil and Student Standards.

Celebration of important dates related to environmental protection (Earth Planet Day, World Environment Day, World Biodiversity Day, Ozone Layer Protection Day, etc.) are used each year for organizing different educational activities, manifestations and campaigns at national, republic and local levels, involving media: television, radio and press. Organizers and promoters of such activities are NGOs, the federal and the republic ministries responsible for environmental protection, as well as the ministries for education. Having in mind the general state in the field of environmental education for sustainable development, priorities for the future period are: to carry out the complete analysis of all curricula within the official system of education; to supplement the existing curricula with new subjects and programmes related to concept of sustainable development; and to incorporate new programmes related to sustainable development into educational segments that have not included elements of environmental education in the former period.

Information: The Official web sites of authorities responsible for environmental protection and education are under preparation. At present, information related to environmental education can be found on web sites of public service institutions, for example, “The Institute for Protection of Nature of the Republic of Serbia”: www.natureprotection.org.yu, and “The Institute for Protection of Health of the Republic of Serbia”: www.batut.org.yu. Some NGOs, like “The Society of Ecologists of Serbia”: www.des.org.yu and “The Young Researchers of Serbia”: www.mis.org.yu, also, have web sites presenting information on environmental education, programmes and projects. The Web site of the Regional Environmental Centre for CEE/Office in Yugoslavia: www.rec.co.yu, includes valuable information in the field of environmental protection, too.

The Federal Authorities responsible for environmental protection have published and financed numerous publications and manuals containing valuable information on environmental protection. Among them, the following publications deserve special significance: “The Efforts of UN for Better Environment”; “Environment and Development - Concept of Sustainable Development”; and “Biodiversity of FR Yugoslavia”.

Research and Technologies: No information available.

Financing: Education within public system of education is free of charge and accessible at all levels (primary, secondary and university) for the entire population, and financed by the State Budget. There are, also, growing numbers of private faculties, universities, and secondary schools, at which students and pupils pay scholarships. Many of newly established private universities and faculties pay special attention and have curricula and programmes devoted to environmental education for sustainable development.

Cooperation: No information available.

* * *

CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES

The past decade in FR Yugoslavia, fulfilled with conflicts and economic hardship, resulted in negative impacts on the sustainable development. FRY is now one of the countries in transition. Due to the current economic situation FRY is not in position to devote significant domestic resources to international cooperation for capacity-building in developing countries. Other issues concerning international cooperation have been covered in details either under **Chapter 2** or under the heading **Cooperation**, in the various chapters of this Profile.

* * *

CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

This issue deals mainly with activities undertaken by the UN system.

Over the past few years, the UN system has been providing assistance to FR Yugoslavia through its various agencies, including: UNDP, UNEP, UNICEF, OCHA and FAO. The programmes of these agencies have aimed at supporting development projects and have had significant impacts on the social and economic development process.

In the area of protection of environment the two most active agencies so far have been UNEP and UNDP. The most important project of the UNEP in FR Yugoslavia is "Clean-up of the Environmental Hotspots". This programme was established in August 2000 with a goal to address environmental damage identified in FRY as a consequence of military actions in 1999. In the Feasibility Study released in April 2000 27 clean-up projects were identified at four heavily polluted environmental "hot spots" (Pancevo, Kragujevac, Novi Sad and Bor). The required sum for implementation of the programme was estimated at 20 million US\$. So far the programme has 11.2 million US\$ at its disposal, however this amount does not allow for the implementation of all identified projects.

UNEP is also involved in capacity-building activities in FR Yugoslavia. A workshop on UNEP and UNECE Environmental Conventions in FRY was held in Belgrade on 14-16 November 2001. Subsequently, a workshop on Sustainable Consumption Opportunities was organized on 21-22 March 2002, and a workshop on Foreign Direct Investments - Financing Sustainability was held on 19-20 June 2002.

UNEP sent a field mission in FRY in late 2001 in order to investigate presence of depleted uranium (DU) at the sites that had been struck with DU ordnance during the military actions in 1999. The study of the DU contamination was released by UNEP in March 2002.

UNECE undertook a mission in April 2002 for the preparation of the Environmental Performance Review (EPR). EPR report is expected to be finalized by the end of 2002.

UNDP's programme in FRY also focuses on the environment. UNDP will assist the government to implement GEF-funded projects, such as Climate Change Enabling Activities, National Capacity Self-Assessment and protection of Biodiversity. UNDP is also trying to strengthen environmental management capacity by helping government to prepare for WSSD in Johannesburg. Furthermore, the establishment of an air pollution monitoring system in Pancevo (Serbia) is funded in cooperation with the Italian Government. Through its Civil Society Development Programme, UNDP is trying to build capacity of NGOs, including environmental ones. UNDP's Rapid Employment Programme (REP), funded by the European Agency for Reconstruction, creates job opportunities in Southern Serbia through labor intensive public works. Many of these public works directly contribute to the improvement of the environment (such as removal and disposal of solid waste from uncontrolled dumpsites and from river bed, water courses and river banks, rehabilitation of waste dump sites, cleaning of sewage drains, and etc.). UNDP's environmental activities in Montenegro are aimed at the facilitation of Montenegro's involvement in GEF projects, and at the promotion of eco-tourism. Besides that, through its Thematic Trust Fund on Energy and Environment, UNDP has applied for a project to examine the potential for use of Renewable Energy Sources in Montenegro, as well as to harmonize energy and environment related policies in FRY.

* * *

CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

FR Yugoslavia so far ratified 64 international agreements, conventions and treaties that are directly or indirectly connected with environmental matters. Ratified treaties, conventions and agreements are part of positive legislation of FRY, and according to their compulsory strength they are right under constitutional provisions. With ratifying each of the mentioned treaties FRY, as a sovereign state, took over certain commitments towards international community, together with the commitment to implement into the internal legal system provisions of the ratified treaties. International commitments, including some financial obligations, in environmental matters have not been performed in past few years. Because of the frequent changes of competencies introduced with federal or republican regulations, this legal incertitude becomes even greater. Division of competencies between FR Yugoslavia and Republics of Serbia and Montenegro is not always clear, and same obscurity occurs when it comes to the division of competencies between different ministries at the same level.

In order to be totally included in the system of the international law concerning protection of environment, it is necessary for FRY to ratify very quickly some international conventions that have been adopted in the last decade. Priority international conventions that should be ratified are: Convention on Environmental Impact Assessment in a Transboundary Context; Convention on the Transboundary Effects of Industrial Accidents; Convention on the Protection and Use of Transboundary Watercourses and International Lakes; Convention on the Cooperation for the Protection and Sustainable Use of the Danube River; Convention on the Conservation of Migratory of Wild Animals; Convention on the Conservation of European Wildlife and their Natural Habitats; Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters; and Stockholm Convention on Persistent Organic Pollutants.

The following is the list of environmental conventions ratified by FRY:

Convention Concerning the Use of the White Lead in Painting (1921)(Official Gazette 44.XVI/30); Agreement for the Establishment of a General Fisheries Council for the Mediterranean (1949) (Official Gazette 25/51); International Convention for the Protection of Birds (1950) (Official Gazette 6/73); Convention for the Establishment of the European and Mediterranean Plant Protection Organization (1951) (Official Gazette 12/57); International Plant Protection Convention (1952) (Official Gazette 7/55); International Convention for the Prevention of Pollution of the Sea by Oil (1954) (Official Gazette 60/73); Convention on Protection of Cultural Goods in Case of Armed Disputes (1954) (Official Gazette 4/56); Agreement Regarding Financial Support of the North Atlantic Ice Patrol (1956) (Official Gazette 3/59); European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) (1957) (Official Gazette 59/72); Treaty on Fishery in the Danube River Waters between Government of FPRY, Peoples Republic of Bulgaria, Romanian People's Republic, and USSR (1958) (Official Gazette 8/58); Convention on the High Seas (1958) (Official Gazette 4/65); Convention on Fishing and Conservation of the Living Resources of the High Seas (1958) (Official Gazette 4/65); Convention on the Territorial Sea and Contiguous Zone (1958) (Official Gazette 4/65); Convention on the Continental Shelf (1958) (Official Gazette 4/65); International Convention for the Safety of Life at Sea (1960) (Official Gazette 5/65); Vienna Convention on Civil Liability for Nuclear Damage (1963) (Official Gazette 5/77); Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water (1963) (Official Gazette 11/63); European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR); Annex A - Provisions Concerning Dangerous Substances and Articles; Annex B - Provisions Concerning Transport Equipment and Transport Operations (1967) (Official Gazette 61/70); European Convention for the Protection of Animals During International Transport (1968) (Official Gazette 1/92); European Convention on the Protection of Archaeological Heritage (1969) (Official Gazette 9/90); International Convention on Civil Liability for Oil Pollution Damage (1969) (Official Gazette 7/77); International Convention Relating to Intervention on the High Seas in Case of Oil Pollution Casualties (1969) (Official Gazette 2/77); Convention on Measures for Banning and Preventing Illegal Import, Export and Transfer of Properties of Cultural Goods (1970) (Official Gazette 50/73); Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971) (Official Gazette

9/77); Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-Bed and Ocean Floor and in the Subsoil Therefor (1971) (Official Gazette 33/73); Convention Concerning Protection Against Hazards of Poisoning Arising from Benzene (1971) (Official Gazette 16/76); International Convention for Compensation for Oil Pollution Damage (1971) (Official Gazette 3/77); Convention and Stockpiling of Bacteriological (Biological) and Toxin Weapons, and on their Destruction (1972) (Official Gazette 43/74); International Convention on the International Regulations for Preventing Collision at Sea (1972) (Official Gazette 60/75); Convention Concerning the Protection of the World Cultural and Natural Heritage (1972) (Official Gazette 56/74); Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972) (Official Gazette 13/77); International Convention for the Prevention of Pollution from Ships (1973) (Official Gazette 2/85); Protocol Relating to Intervention on the High Season Cases of Marine Pollution by Substances other than Oil (1973) (Official Gazette 12/81); Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973) (Official Gazette 11/01); Yugoslav-Italian Treaty on Cooperation on Pollution Protection of the Adriatic Sea Waters and Coastal Areas (1974) (Official Gazette 2/77); Convention Concerning Prevention and Control of Occupational Hazards Caused by Carcinogenic Substances and Agents (1974) (Official Gazette 3/77); European Convention for the Protection of Animals Kept for Farming Purposes (1976) (Official Gazette 6/96); Convention for the Protection of the Mediterranean Sea Against Pollution (1976) (Official Gazette 12/77); Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircrafts (1976) (Official Gazette 12/77); Protocol Concerning Cooperation in Combating Pollution of Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency (1976) (Official Gazette 12/77); Convention Concerning the Protection of Workers Against Occupational Hazards in the Working Environment due to Air pollution, Noise and Vibration (1977) (Official Gazette 14/82); Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships (1978) (Official Gazette 2/85); European Convention for the Protection of Animals for Slaughter (1979) (Official Gazette 6/96); Convention on Long-range Transboundary Air Pollution (1979) (Official Gazette 11/86); Convention on the Physical Protection of Nuclear Material (1979) (Official Gazette 9/85); Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources (1980) (Official Gazette 1/90); Convention Concerning Occupational Safety and Health and the Working Environment (1981) (Official Gazette 7/87); Protocol Concerning Mediterranean Specially Protected Areas (1982) (Official Gazette 9/85); United Nations Convention on the Law of the Sea (1982) (Official Gazette 1/86); Protocol to the 1979 Convention on Long Range Transboundary Air Pollution on Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) (1984) (Official Gazette 2/87); Vienna Convention for the Protection of the Ozone Layer (1985) (Official Gazette 1/90); Convention Concerning Occupational Health Services (1985) (Official Gazette 14/89); Convention for the Protection of the Architectural Heritage of Europe (1985) (Official Gazette 4/91); Treaty on Pollution Protection of the Tisa River Waters and its Tributaries (1986) (Official Gazette 1/90); Convention Concerning Safety in Use of Asbestos (1986) (Official Gazette 4/89); Convention on Early Notification of a Nuclear Accident (1986) (Official Gazette 15/89); Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (1986) (Official Gazette 4/91); Montreal Protocol on Substances that Deplete the Ozone Layer (1987) (Official Gazette 16/90); The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989) (Official Gazette 2/99); UN Framework Convention on Climate Change (1992) (Official Gazette 2/97); Convention on Biological Diversity (1992) (Official Gazette 11/01); Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (1993) (Official Gazette 2/00); Treaty between the Federal Government of FRY and Government of the Russian Federation on Cooperation on Environmental Protection (1996) (Official Gazette 6/96); Treaty between the Federal Government of FRY and Government of the Russian Federation on Cooperation on Preventing Industrial Hazards, Natural Disasters and Remediation of their Consequences (1996) (Official Gazette 5/96).

* * *

CHAPTER 40: INFORMATION FOR DECISION-MAKING

Decision-Making: Environmental information management, at the Federal level is coordinated by the Federal Secretariat of Labor, Health and Social Care (Environmental Department). Other authorities, namely: the Federal Ministry for Economy and Domestic Trade; the Federal Hydrometeorological Institute; the Federal Statistics Office; the Federal Secretariat for Information; and etc. are responsible for the collection, analysis, management, and dissemination of information and data according to their competence. At Republican levels, the ministries responsible for environment management, for health protection, for statistics, for hydrometeorological concern, etc. coordinate these activities. At municipal level, these activities are coordinated by the Secretariats for environmental and health protection. However, there is no clearly established system of coordination and responsibility for information in the field of environmental protection, as well as clear process of making decisions in the mentioned field.

There are only general acts regulating the issue of access to information related to the environment. The reform of legislation is in the process. The main environmental legislation at federal level comprises: the Resolution on the Environmental Policy in FR Yugoslavia (1993); the Law on the Basis of Environmental Protection (1998); the Law on Hydrometeorological Affairs of Interest of the Country (1990); the Law on the Statistical System (1996); the Law on Information System for Federal institutions of FRY (1998); and etc. The main environmental legislation at the Republic levels includes the Laws on Environmental Protection.

Programmes and Projects: Various activities towards projecting information systems for the environment have been initiated at various levels. Currently, there is a process of establishing: Information Subsystem Register of Organizations and Experts in the Field of Environmental Protection; Incorporation of information on the relevant subjects in the field of environmental protection, efficiency of information; and establishing of contacts and connections, as well as decision-making in the field of environment. The objective of the information subsystem is evidence of scientific, productive and technological potentials of organizations and experts in environmental protection. Also, there is a preparatory process for the realization of the project on establishing national indicators of sustainable development.

The Federal Secretariat for Development and Research is responsible for financing of science and technological development of FRY, besides that, the Secretariat finances the projects on development of informatic systems of environmental protection, as well as the application of GIS technologies. There are some projects aimed, inter alia, at carrying out research in the fields of access to information. A project, financed by the Finnish Government is related to harmonization of Yugoslav legislation with EU legislation (including the Directive on Access to Information). One project, financed by the Dutch Government, within the Pact of Stability for Southeast Europe, is related to building capacities for Aarhus Convention. It should be stressed that some NGOs are very active in the processes of preparing and realization of some projects in this field.

Status: Although the state of the environment has been monitored during the past decades, the lack of harmonized methods prevents the full insight into the current status of the environment. Some of the major weaknesses are: the lack of integral national information system for the environment, and appropriate monitoring equipment and laboratory facilities; the lack of system vertical and/or horizontal dissemination data and information; and the coalition of information with purpose of public information. However, some subsystems have been developed, as follows: Systems statistical research; Hydrometeorological monitoring of surface water quality and air quality; and monitoring of radio-activity in the environment, etc.

There exists Federal Computer Network as an Intranet network connecting 15 LANs of various Federal organizations (Ministries, secretariats, Bureaus, etc.). Administrative bodies responsible for public access to environmental information publish all valuable information in yearbooks and periodical bulletins. Web location www.gov.yu is entry portal to web presentations of Federal organs. Web locations for another relevant institutions are: www.meteo.yu (Federal Hydrometeorological Institute); www.recyu.org (REC); and www.erc.org.yu (Ecological Resource Center - ERC).

Capacity-Building, Education, Training and Awareness-Raising: In the field of dissemination of information and popularization of environmental protection, activities were aimed at exhibitions/conferences in the country and

abroad, contacts with representatives of the media, sponsoring certain periodicals and other publications, etc. However, there is a strong need for permanent training of experts in the field of environmental protection.

Research and Technologies: At the moment there is initiation of the Geographic Information System for analysis of conditions and trends in environmental management at the Federal level. Projects about the development of information systems in environmental protection and application of GIS technologies are financed through the Federal and Republic budgets. Significant research should be aimed at establishing the system that will enable access to information and more serious involvement of the public in the process of decision-making related to the environment.

Financing: Competent authorities have at disposal some financial assets from the State Budget, to satisfy, among others, needs for information. Complete development of system of information in this field requires assets surpassing the amount of the Budget. Foreign financial support in this field does not represent a significant part of assets assigned for these purposes.

Cooperation: During last decade, FRY was excluded from the work of many international organizations, for instance INFOTERRA. It is likely that our country will be involved again in work of this, as well of other systems. FRY has plan for ratification the UN ECE Aarhus Convention, which sets the rules for open information to the public, public participation in decision-making and access to justice in this regard. In the scope of activities of the Regional Environmental Center for Central and Eastern Europe (REC), Regional Environmental Reconstruction Programme for South Eastern Europe (REReP) projects are in the process of realization (4 projects).

* * *

CHAPTER: INDUSTRY

Decision-Making: At the end of each year, Federal government adopts a document about the basics of the economic policy for the following year. At the Federal level responsible bodies for the decision-making are: the Federal Ministry of Economy and Internal Trade; the Federal Secretariat for Development and Science; and the Chamber of the Economy of FRY.

Sectorial policies, industrial policy being one of them, are developed separately, by the Republic of Serbia and Republic of Montenegro at the republic level. Federal government makes its contributions to the implementations of the sectorial policies in the field of international cooperation. In the Republic of Serbia, the Ministry of Economy and Privatization is in charge of industrial issues and SMEs. Under this Ministry, there are two Agencies. The Privatization Agency is engaged in implementation of the privatization process and the Agency for SME development is in charge of activities on the implementation of the SME policy. The Recently founded Ministry of Ecology will also take an important role in facilitating sustainable industrial development. In the Republic of Montenegro, the Ministry of Economy is in charge of promoting economic development through ownership, production and management restructuring. The Agency for economic restructuring and foreign investments is actively involved in troubleshooting concrete problems that occur in restructuring.

Programmes and Projects: In the field of management of environmental protection (eco-management), five basic Yugoslav standards, YUS ISO 14000, have been published (14001, 14004, 14010, 14011, 14012). They are identical with international standards of the International Standards Organization - ISO 14000. Besides, two new standards will be published (YUS ISO 14040 and YUS ISO Guidelines 64) very soon. Drafts of the five standards within a series YUS ISO 14000 have also been prepared.

In 1995, the Government of the Republic of Serbia adopted the Programme of Eco-Management, and in 1997 the Government of the Republic of Montenegro adopted the Programme of Eco-Management too. The Federal Law on Bases of Environmental Protection was adopted by the Federal Parliament in 1998. These acts represent the base for the implementation of Yugoslav standards in the field of environmental protection - YUS ISO 14000.

Status: Economy of the former Yugoslavia was open for cooperation to all countries. Joint-venture arrangements with companies from developed Western European countries helped Yugoslav economy to prosper and it was ranked at that time as medium developed.

The collapse of the former Yugoslavia and economic sanctions imposed to FRY had a dramatic impact on the Yugoslav economy. From an economy that is open to cooperation, it became almost completely closed. All business arrangements with other countries were cancelled and industrial production was limited only to local resources. Data that copper, steel and food dominated Yugoslav export in that period demonstrates the level of the industrial activities at that time. In the condition of limited local market, the capacity utilization was 30-70%. In this period, technologies and equipment were becoming out-dated and Yugoslav products were losing in the market competition both on the domestic and foreign market. In the NATO 'campaign' in 1999, many industrial capacities which were still in function during sanctions were destroyed.

The use of industrial capacities in the last 10 years was at a very low level (37% of projected potentials, according to data from 1998). During the same period, capacities were reduced at a higher extent than the production process. The significant indicator of the state in the field of industrial production is the figure that, in the period 1990-1998, the amount of investments was only 29% of depreciated value of fixed assets. Because of limited economic resources, the possibilities of private and public sector to invest in protection of environment were low. Although almost all economic branches used decreased percentage of their capacities for the production process, a trend of emission of pollutants was not decreased at the expected level. Besides, exploitation of natural values was intensified.

The sector of industry and mining is the biggest consumer of energy (about 40%) and water resources (more than 90%). The comparison between index of production and expenditure of energetic sources shows that energetic

intensity within industry raised, and this trend is expected if we have in mind old age and worn out energetic facilities, obsolescence of technology, etc.

Recycling within the sector of industry seriously lags behind the volume realized in the former Yugoslavia. In FRY, up to now, only about 10 companies (metal working industry, pharmacy, electric-power industry companies) got certificates for using the system of environmental protection management according to ISO 14001. All certificates are foreign, because there is no national system of certification yet.

Capacity-Building, Education, Training and Awareness-Raising: Investments in human resources are one of the priorities of FRY. Yugoslavia has significant potential in highly educated workforce, but qualification structure has to be adjusted with the market demand.

Information: Draft Strategy of the industrial development of the Republic of Serbia is available at www.nauka.ac.yu.

Research and Technologies: The government is concerned to promote partnership of universities, research institutions and industry in the R&D field oriented towards market requirements. Another important activity is work on legislative framework on industrial and intellectual propriety protection, especially regarding patents, trademarks etc.

Financing: Federal and republic budgets, private sector partnership and international donations provide financing for the activities of industrial development.

Cooperation: Industrial cooperation development involves further activities on identification and removal of legislative, financial and tax barriers. Macroeconomic measures and specific instruments and means of support are planned aiming at foreign investments, marked growth, economic restructuring and SME support. Further government measures, therefore, will focus mainly on creating more stimulating economic environment for investment and industrial growth with additional specific measures in priority areas. Federal government is also active in negotiating bilateral foreign trade agreements (agreements with all neighboring countries will be signed by the end of 2002).

* * *

CHAPTER: SUSTAINABLE TOURISM

Decision-Making: The competence in the domain of tourism belongs to republic authorities (republic ministries for tourism). At the federal level, concerning tourism, the only competence is related to information and propaganda activities abroad. At the local level, there are local tourist organizations constituted as public enterprises for information and propaganda activities in the domain of tourism. The Assembly of the Republic of Serbia and the Assembly of the Republic of Montenegro have adopted the Republic Laws on Tourism, regulating conditions for running tourist and catering activities and defining activities for promotion and enhancement of the tourist business. The following regulations for direct implementing the laws have also been adopted. Among them, the Regulation on Categorization of Tourist Places defines the criteria for categorization of tourist places and the procedure for determining these categories. But this regulation does not set aside specific areas for eco-tourism and nature-based tourism. Only in the Republic Spatial Plans some regions, zones and centers are assigned as areas where eco-tourism should be developed, because of favorable natural predisposition. Among several regulations for implementing the Republic Laws on Tourism, the most important is the Regulation on Classification, Minimal Conditions and Categorization of Catering Facilities. According to this Act, classification of catering facilities is carried out by kind, assortment and way of providing catering and accommodation services to guests in related facilities, including their organizational and technical characteristics. This regulation, for the first time in our country, introduced standardization of equipment in catering facilities in technical and technological meaning, and services being given in these facilities.

Programmes and Projects: There is no National Strategy on Sustainable Tourism, but there are strategies on tourism development adopted by the governments of Serbia and Montenegro. Sustainable tourism is also included as an identifiable part of other strategies. Some of them have been adopted, and some are in the process of being prepared. The significance of tourism for the development of FR Yugoslavia is especially stressed in the recently adopted Spatial Plan of the Republic of Serbia and the Spatial Plan of the Republic of Montenegro. The Spatial Plans of Serbia and Montenegro, inter alia, emphasize the following goals: natural, cultural, historical and other built values and resources; The plans represent the base of tourism development; organizational arrangement and protection of tourist areas that need to be based on the application of criteria and standards of environmental protection and conservation of natural and cultural heritage. In the spatial plans, eco-tourism and nature-based tourism are marked as important factors of integral development of protected areas (primarily NP Durmitor, NP Kopaonik, NP Tara, NP Djerdap, NP Biogradska Gora) and their close surroundings, medium-altitude mountainous zones (Zlatibor, Zlatar, Divcibare, Golija, etc.) and attractive rivers and their valleys (Danube, Tara, Piva). The Spatial Plans of Serbia and Montenegro concerning tourism represent global goals as well as aims and directions of tourism development. Their implementation requires the adoption of relevant strategies on sustainable tourism; regional and local plans, norms and standards; action plans and projects having applicable character.

Status: Because of a variety of natural resources, cultural values, favourable geographic position, tourism, together with agriculture and transport, is an activity of strategic importance for economic development of FR Yugoslavia, including employment. It is especially related to Montenegro, because of its marvelous seaside resorts, beautiful beaches and the warm sea. Such conditions are stimulating for development of summer recreation tourism. At the end of the 1980's, tourism accounted for approximately seventy percent of all employment in the Republic. During the past ten years, tourism decreased sharply. In 1988, tourist nights numbered 22,903,000; in 1997, 12,082,000. In 1988, tourist arrivals were 5,696,000; and in 1999, only 1,742,000. This rapid decrease of about fifty percent is seen as a result of very unfavorable political, economic, and social conditions in this country and in neighboring countries. It is hoped that internal and external conditions for tourism development will be much better in the next decade, so that this sector will grow, but it is difficult to project the possible extent of growth. Tourism also has the effect of stimulating the development of complementary activities, such as trade, agriculture, handicrafts, fishery, and forestry, among others. It means that in the country, tourism has an integral role, in spatial and function domains. Sustainable tourism can advance the country in general, and especially the local communities through:

cultural interaction, infusion of money, transfer of technology, environmental education, improved land use, improved infrastructure, jobs and business development.

In the reports on the Adriatic coast, there are serious problems regarding provision of freshwater in summer season. The lack of freshwater in the summer is a common problem for almost all resorts at the Adriatic coast. The building of the regional aqueduct for the Montenegro seaside is the only way to solve this problem efficiently, but such project has not been finalized yet. Also, the consumption of fresh water in the summer is not rational, the existing pipes are old and with many technical defects. In the same region, treatment of waste waters and disposal of solid waste are, also, problems requesting urgent actions. In many resorts, waste waters are discharged to the Sea without any previous treatment. Legally regulated waste tips for the disposal of solid waste, fulfilling modern environmental standards do not exist. In the continental part of our country, the problems of sewage and solid waste disposal are topical, too. The problems are especially present in protected areas in mountainous regions, such as national parks, and spas at the foots of the mountains. The state and quality of transport infrastructure in tourist areas is not satisfactory: roads and railway lines in tourist areas are generally old, with technical and technological defects, disabling speedy and comfortable transport. Very often highways pass through the centers of tourist places.

Capacity-Building, Education, Training and Awareness-Raising: Tourismology is studied at the Faculty for Natural Sciences and Mathematics - the Institute for Geography and Tourism, in the city Novi Sad (Serbia). Such studies are organized in accordance with the foreign experiences, focusing an integrated approach to tourism. The curricula involve all aspects of sustainable tourism development - geographical, environmental, economic, social, and cultural. As the Yugoslav Section of the Federation of Nature and National Parks of Europe (FNNPE) was established in 1997, FRY hopes that this organization will help in preparing the programme for education of the National park Authorities and other people responsible for managing tourism in protected areas.

Information: Information of interest to sustainable tourism is available on the following topics: existing legislation and regulation in the fields of tourism and the environment; the tourism planning process; the tourist facility quality standards; the programmes of raising awareness and education of tourists; tourism industry; and tourism personnel. Information is made available through publications such as those noted above, television, Radio, newspapers, expert and scientific meetings and seminars, eco-camps, schools in nature, and via Internet. There is no national Web Site containing data on sustainable tourism. Very few data are collected on a regular and coordinated basis in tourism areas, other than tourism arrivals, nights and spending. Therefore, few indicators are officially used as the criteria for determining the real significance of certain places and centers for tourism development in FRY. They are: the ratio of overnights to tourist arrivals, the ratio of overnights to residents, the annual value of trade in catering per resident. We have not achieved much progress concerning environmental indicators that will show real impact of tourism on the environment. Tourism is, usually, only one of many activities in the same area, and all activities have impacts on the environment. It is difficult to identify precisely the real impact following from each of them. Therefore, it is difficult to identify widely applicable environmental indicators related to sustainable tourism. However, our future activities will focus on setting valid indicators describing interactions between tourism and environment.

Research and Technologies: In solving the technology-related issues, described under **Status**, more consistent application of the standards established by domestic regulation, as well as technical support from abroad, are needed.

Financing: Some of the activities are financed by the federal and republic budgets - tourist information and propaganda activities abroad, building main infrastructure facilities needed for tourism development. The building and arrangement of tourist centers, including tourist infra- and superstructure is financed by local community budgets, private sector partnerships, and bank credits. FRY hopes that in future the country will benefit from financial aid provided by international financial institutions.

Cooperation: FRY has not had “model sustainable tourism destinations”. In establishing “model sustainable tourism destinations” in Yugoslavia, FRY intends to use successful foreign experiences; technical support is anticipated from WTO, FNNPE and other organizations to help develop model destinations. FRY is resolute to strengthen and improve cooperation with Local Authorities and the private sector, knowing that this is a key factor in achieving sustainable tourism. Besides the Cooperation with FNNPE, our country has signed or ratified a number of bilateral agreements of cooperation in the domain of tourism with other countries. These are mostly countries of Central and Eastern Europe, such as Slovakia, Belarus, Russia, Ukraine, Romania, and etc. In the near future, FR Yugoslavia intends to strengthen cooperation with the countries of the Danube region, knowing that the Danube transport corridor is one of the greatest potentials for tourism development in Yugoslavia, but insufficiently valorized up to now.

* * *