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COUNTRY PROFILE



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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 COMSUMPTION PATTERNS.....	5
CHAPTER 4: CHANGING CONSUMPTION PATTERNS - ENERGY.....	6
CHAPTER 4: CHANGING CONSUMPTION PATTERNS - TRANSPORT.....	7
CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY.....	8
CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH.....	10
CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT.....	12
CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING.....	13
CHAPTER 9: PROTECTION OF THE ATMOSPHERE.....	14
CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES.....	16
CHAPTER 11: COMBATING DEFORESTATION.....	18
CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT.....	20
CHAPTER 13: MANAGING FRA GILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT.....	22
CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT.....	23
CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY.....	25
CHAPTER 16 AND 34: ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTHECHNOLOGY AND TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING.....	27
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.....	30
CHAPTER 18: PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES.....	31
CHAPTER 19: ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS.....	33
CHAPTER 20 TO 22: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS, SOLID AND RADIOACTIVE WASTES.....	35

CHAPTER 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS.....	37
CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS.....	40
CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT.....	41
CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING.....	43
CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES.....	44
CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS.....	45
CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS.....	46
CHAPTER 40: INFORMATION FOR DECISION-MAKING.....	47
CHAPTER: INDUSTRY.....	48
CHAPTER: SUSTAINABLE TOURISM.....	50

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: The governmental decision making process for international cooperation and trade is based on the ministries and authorities taking into account the role and views of the Parliament, business sector, various non-governmental organizations.

Programmes and Projects: No specific activity for the period considered.

Status: In the previous years of the transitional period, there was no extra budget or special state fund for promoting sustainable development activities in developing countries. Nevertheless, Hungary is interested in various international cooperative mechanisms, in particular those offered by the UN system. Hungary took active part in the "Rio process", was member of the CSD since 1993. Hungary became a full member of the OECD in 1996. Pan-European cooperation is also regarded as important. (See also under **Cooperation**)

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

Information: No information available.

Research and Technologies: No information available.

Financing: See under **Status**.

Cooperation: The issue of European integration is one of the most important priorities at the governmental level and Hungary aims to join the European Union (EU) as soon as possible. Hungary signed a trade agreement with the EC in 1988. The Phare Environmental Sector Programme launched in 1990 was a significant step in bilateral cooperation. An Association Agreement with the Commission of the European Communities was signed in 1991 and enacted in 1994. Participation in international cooperation primarily contributed to overcome critical problems of the transitional period of the country.

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

Decision-Making: The process of privatization, new management restrictions, and the development of new enterprises all function together to develop a more environmentally sound business sector. This kind of operation is involved increasingly in international trade activity of Hungary. A significant part of the exports contain products and technologies of the industrial and agricultural industry sectors. A significant reorientation of the trade relations has taken place for the last decade: especially, the volume of trade has increased with the Western European countries, in particular, with the member states of the European Union. These developments were in the focus of the decision-making process for the recent years.

Programmes and Projects: See under **Status**.

Status: The national economy went through a period of substantial transition to a market economy characterized by features of deep recession from the mid 1980s. Large-scale structural and ownership changes have taken place for the recent decade, which were expected to lead to a more efficient economy. As part of the recession, industrial production has fallen back to the level of the 1970s. As a consequence, emissions caused by industries have fallen, and the quality of environment in certain regions has improved. The first stage of the economic changes was characterized by increasing unemployment, a relatively high inflation rate, an increasing poverty gap, and a worsening standard of living for large groups of people. At present, there are already significant positive signs in terms of economic development, balancing the state budget, meeting foreign debts, a decreasing inflation rate, and increased efficiency of key economic sectors. During the 1960s and 1970s, the country conducted an active policy to foster the acceleration of development in various developing countries. These activities have essentially been reduced for the present transition stage as a consequence of the substantial domestic socioeconomic changes and the corresponding national priorities, the scarcity of various resources, and the changing orientation in international trade and collaboration.

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

Information: No information available.

Research and Technologies: No information available.

Financing: See under **Status**.

Cooperation: Hungary has good connections with various developing countries in terms of trade. A remarkable part of this trade is completed by taking into account the particular economic circumstances, production/trading conditions of the relevant developing country partners.

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CHAPTER 3: COMBATING POVERTY

Decision-Making: In Hungary, at the government level, the Ministry of Social and Family Affairs, the Ministry of Health and the Ministry of Economic Affairs are responsible for national poverty alleviation programmes, the development of legal instruments, programme implementation and international obligations. The national Economic Council (a comprehensive forum of consultation on economic matters) involves representatives of the Government, employers, and employees along with those of the banking sector, the stock market, and a variety of chambers. The central consultative forum of employment and labour issues is the National Labour Council. A significant forum from the point of view of the social field is the Social Council and its so-called social group sub-councils. Trade unions, NGOs, municipalities, religious communities representing different interests also help to solve social problems by organizing various programmes and mobilizing/providing financial resources.

Programmes and Projects: The central (state) budget ensures direct assistance primarily to the local governments, but also to churches and NGOs so as to enable them to provide social services. (In 2000 the sum total was about EUR 1600 million).

In addition, there is a set of special programmes in order to mitigate poverty related problems. Those include, for example, community work programmes, whereby long term unemployed persons can have access to employment (1998: EUR 16 million; 1999: EUR 8.8 million; 2000: EUR 8 million); the social “land use” programme, assisting the living conditions of unemployed families in backward rural regions by promoting small-scale agricultural production (1992-2000: EUR 5.2 million; 2000: EUR 0.9 million); the programme of promoting the social integration of young, primarily roma persons with multiple disadvantages (through Phare assistance totaling to EUR 9.6 million).

Further Phare Programmes: (i) *Social Assistance Programme* (HU9504-01) aimed at strengthening the co-operation amongst local authorities and NGOs’ local welfare initiatives on regional level; and enhancing the capacity of local governments to provide cost and quality effective social services (Budget: EUR 729 000); (ii) *Employability and long-term employment of multiply disadvantaged groups - ESF type pilot project* (HU0008-03). The first immediate objective of the project is the improvement of employability and the reduction of the long-term unemployment amongst disadvantaged youth, people living with disabilities and other marginalized groups of the population with special emphasis on the Roma. The second immediate objective is a Hungarian institutional system well prepared to participate in European structural policies of the kind carried out with the support of the European Social Fund. (Total budget: EUR 8 million); (iii) *Tackling the gender gap in the labour market* (HU0104-02) The main objective of the project is to transfer EU best practices in developing and implementing positive measures in employment action plans transferred to respond to the fourth pillar of the European Employment Strategy 1997-2002. In the framework of the project self-employment among women absent from the labour market will be supported through training, assured services for trained self-employed women and implementation of innovative pilot grant projects. (Total budget: EUR 4.1 million); (iv) *Promoting access of people with disabilities to the labour market* (HU0105-02) The project aims at development of human resources and personal services in the field of vocational rehabilitation, through support to rehabilitation institutions and labour centres, as well as complex programmes of civil organizations; expansion of modern vocational and re-training opportunities for the disabled and for people with decreased working abilities; establishing conditions for therapeutic occupational programmes in rehabilitation/social care institutes for the disabled; establishing conditions for transit and integrated employment of disabled and people with decreased working ability through supporting so called target organizations and economic organizations. (Total budget: EUR 6 million).

Status: The population living below the poverty level in Hungary is about 15%. This high rate is mainly due to the deep recession that has characterized the first stage of the transition process. Although the nearly 15% of unemployment prevailing prior to the economic upswing is now significantly lower at 6%, yet the chances of employment of the group of elderly unskilled persons with low education have not improved. The groups being most affected by poverty are the long term unemployed; those with low salary; those who suffer from chronic sickness; Roma population (a significant minority with higher than average rates of unemployment due to low education and lack of professional skills); those living in small settlements.

Capacity-Building, Education, Training and Awareness-Raising: For capacity building see **Programmes and Projects**; education related programmes also address the above-mentioned problems.

Information: Information about the tendencies of these social problems, the programmes and measures are regularly published.

Research and Technologies: Monitoring and assessment of the relevant social processes are conducted by the researchers; the programmes, policies and measures are elaborated by taking into account these assessments and the proposals of various research groups.

Financing: Funds from the Phare programme contributes both to social sector reform and the softening of the social consequences of the economic transformation. For the period 1995-1999, reform of the social sector remained a Phare priority. Special assistance funds have been established for the poorest social strata. These cover, for example, compensation funds for certain highly increased services costs, and vocational training courses. Parts of environment-related funds are spent for pollution abatement programmes, projects, and investments; which contribute to local capacity building, and increased working opportunities.

Cooperation: Hungary takes part in the related international cooperation, activities of the various international organizations and international meetings (CSD, ILO, Social Summit, INW etc.).

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CHAPTER 4: CHANGING CONSUMPTION PATTERNS

Decision-Making: In relation to the regulations, consumer protection, tax policies and other key issues for influencing the consumption patterns, at government level, there are various ministries and authorities with specific areas of responsibility. Non-governmental organizations are monitoring and influencing the decision-making process in some areas (protection of the consumers' interests, prices, health and environmental aspects etc.). The Act on Public Procurement enacted in 1995 is regarded as an important legislative measure to influence public consumption patterns. Environmental taxation, product charges and other financial mechanisms have been introduced as instruments to influence consumer behavior. A system of eco-labeling is also applied.

Programmes and Projects: There are several sector-oriented programmes which directly address specific problems of consumption being directly related to natural resources, e.g., in field of energy and water consumption, land use or forest management (for instance, by facilitating energy efficiency or conservation policies in terms of water consumption). The ongoing National Environmental Programme covers also some of such policies and measures. In broader aspects, the comprehensive restructuring and modernization programmes and processes of the economy (that characterized the period covered by this report) resulted in substantial changes of the consumption patterns.

Status: Economic development is a key national target. Its sustainability, however, is generally not considered to mean a limitation of the economic growth and the consumption in the country, but rather to maintain the stability of the economy, to improve the standards of living, lessen the environmental pressure and to conduct economic/efficient utilization of natural resources. This interpretation is partially the consequence of the still low awareness and understanding of the principles and approaches of sustainability. Along these lines, measures are taken for economic development with more efficient material and energy use, and with less environmentally hazardous wastes and emissions. The changes in production and consumption patterns have been basically determined by economic recession and the transition to a market economy for the most part of past decade. Following an extended period of stagnation, industrial production decreased at an even higher pace from 1990 onward, falling to the level of the 1970s. In general, industrial and agricultural production has decreased, as well as, energy use. Industrial structures have also changed: metallurgy, the construction materials industry, and the machine industry, for example, have declined. This can be considered unambiguously positive for the environment. The general decrease of industrial production reduced direct emissions and, in certain regions, resulted in an improved state of environment. Both structural changes and the large-scale liquidation of industrial companies significantly reduced emissions of air pollutants. The volume of industrial wastewater effluents requiring treatment was also significantly reduced. Now the economy is already on a rapidly increasing path for several years with growing consumption demands, which is becoming heavily differentiated for the various layers of the society.

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

Information: No information available.

Research and Technologies: Research activities are conducted on the changing consumption patterns, especially from social and environmental points of view.

Financing: Some financial instruments are directly motivating the consumption of valuable natural resources. For example, specific fees (charges) are introduced for certain products (fuels, tires, refrigerators, packaging materials, accumulators) which are collected (Central Environmental Fund) and utilized, upon application, to finance environmental protection activities; fees on water volume used and the financial resources from these fees are also important instruments for facilitating water conservation.

Cooperation: No information available.

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CHAPTER 4: CHANGING CONSUMPTION PATTERNS - ENERGY

Decision-Making: The Ministry of Economic Affairs has the key responsibility for national energy policy and regulations in cooperation with other ministries (e.g., Ministry of Finance) and authorities (specifically, the Hungarian Energy Agency). The sector has been privatized to a large extent that makes even more important the role of the conciliation mechanisms with various stakeholders.

Programmes and Projects: There are such government programmes and the relevant regulatory frameworks, which address the national energy strategy, price regulation, energy reserves, energy efficiency and use of renewables.

Status: Consumption of coal has been reduced considerably due to the increased use of natural gas and introduction of nuclear energy. The single nuclear power plant provides about half the electric energy for the country. Since 1990, total energy use has increased, especially within the residential sector. General consumption of goods has declined in recent years. This trend does not result from more environmentally conscious consumers, but from lowered income levels.

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.

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CHAPTER 4: CHANGING CONSUMPTION PATTERNS-TRANSPORT

Decision-Making: At government level, the Ministry of Transport and Water Management has the key policy planning and coordinating role in this sector. The local governments have essential decision making mandates and they can also apply for financial assistance for transport infrastructure development from central budgetary resources. Social and environment related aspects of the decision making have an increasing role (partially because of the requirements stemming from the EU-accession process).

Programmes and Projects: For instance, a City Bus Greening Programme has been introduced to focus on the replacement of old bus motors with environmentally sound ones, which meet European Union (EU) emission standards.

Status: Businesses are becoming “green” enterprises, such as the Hungarian State Railways Co., which is expanding its services in an environmentally sound way. Despite various financing problems, the ratio of the public transport is still relatively high. The private vehicle fleet has been significantly increased for the recent decade and basically due to that trend, the emissions from the transport sector became the major (and increasing) source of air pollution, while those from industry have decreased over that period.

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.

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CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

Decision-Making: The government agencies primarily responsible for the coordination of decisions related to demographic issues are the Hungarian Prime Minister's Office and the Ministry of Social and Family Affairs. The Constitution of the Hungarian Republic, the Health Act, and the law on contraception and abortion (passed by the Parliament in December 1992) form a regulatory framework for population policies.

Programmes and Projects: The national programme for the improvement and development of the health status of the population is called For a Healthier Nation, 2001-2010. The programme strives first for primary prevention, but also pays attention to specific treatment fields of health-care. The programme is intended to gain legitimacy based on a wide consensus by Government Decision and by Parliamentary Resolution. Other sectors such as volunteer organizations, local self-government, and management in the work place could also find it possible to join this programme. As concerns the economic instruments, those are widely used to encourage families to bring up children. These are divided into two categories: benefits that ensure the living of the parents while they take care of the child: child-care allowance (proportionate to the parents' earnings), pregnancy/confinement benefit, maternity allowance, child-care benefit, and, in the case of families with several children, child-care support is equally available. More concretely, allowances related to the child's needs, and covering part of their subsistence: family allowance, supplementary means tested family allowance, progressive tax relief adjusted to the number of children, benefits related to the parents' work, children's institutions. The benefits as well as the allowances are available to either parent, depending solely on their decision. These include: maternity allowance, childbirth leave, child-care leave, family allowance, tax benefits, work-related benefits, children's institutions, and maternal- and child health-care services. The most important target of population policy is to stop the decreasing trend and to achieve a modest population growth. The Government views both the fertility and population growth rates as too low. Increasing fertility, decreasing mortality, and strengthening the material and social conditions of families are regarded as important priorities. Hungarian Population Policy has followed the recommendations of the World Population Plan of Action, taking into consideration specific features of the Hungarian population situation and interests. The Government has defined the long-term basic principles of the population policy for the next decades. In particular, some basic actions to increase fertility have been adopted. These measures include: preparing the population to increase the readiness to have children; supporting parents to fulfill both their working and parental roles; improving the housing situation; ensuring the financial and institutional conditions for child-care; and improving working conditions and creating a better division of work between parents. The basic instrument of financial support for families will be the family allowance, a system which the Government intends to develop further with respect to the increasingly differentiated incomes and the costs of childbearing. When designing the long-term health policy, an increase in the number of planned and desired pregnancies and a decrease in unplanned and undesired pregnancies must be the basic principle supported by all possible means. The conditions of pre-natal care, delivery, and newborn care must be improved. Moreover the long-term health policy include several actions in order to reach that the most of the Hungarian population will regard the health as a major human value, that the decision makers will attribute a favored importance to the improvement of the health status of the population. The conditions of the healthy development must be insured for the young generation. The number of life years in health must be increase for the both sexes. The life expectancy at birth must be increased up to 70 for men and 78 for women. The social inequity and the differences in the life expectancy at birth must be decrease.

Status: Groups dealing with family issues can be divided into four basic types: organizations engaged in child- and youth-welfare; organizations supporting handicapped people; religious organizations; and women's organizations. Such organizations include: the Association of Hungarian Women, the Association for the Protection of the Fetus, and the Association of Large Families. Under the 1998 fertility and mortality conditions, the population decrease is projected to continue. By 2020, the population is expected to be 7.1 percent less than in 1999, and 12.5 percent less than in 1980 when the decline started. In addition, the aging process is projected to continue further. A specific characteristic of the Hungarian population is that mortality is unusually high for a country of its socioeconomic and cultural level. The mortality level had been gradually improving until the mid-1960s but, since then, has significantly deteriorated. However in the 90's the mortality level is rather stagnating, and since the beginning of 2000 a definite improvement has been detected.

Capacity-Building, Education, Training and Awareness-Raising: The National Population Health Programme is based on one hand on the awareness-raising in the population regarding nutrition, sport, the

harmful effects of smoking and heavy drinking of alcoholic beverages, as well as drug consumption. On the other hand the awareness-raising of decision makers regarding the health related effects of the actions out of the health is emphasized. A special sub-programme aims at the health promotion in public education. The framework and content of the education and the way of training the personnel working in the health promotion will be developed in 2002.

Information: The Hungarian Central Statistical Office is responsible for the regular demographic, health and welfare statistical data. The numbers of marriages, births, and deaths are published monthly, and the detailed data are issued in several annual publications (Statistical Yearbook, Demographic Yearbook, Health Statistics Yearbook, Welfare Statistics Yearbook etc.) The Hungarian Prime Minister's Office, the HCSO, the respective ministries, research institutes publish analyzes related to demographic situation, health, social services, social situation of the different parts of the population. The Demographic Research Institute of the HCSO is responsible for population projections. The National Population Health Programme is available via Internet. The effectiveness of the health programme will be monitored in each quarter of a year. The system of the monitor is included in the health programme.

Research and Technologies: Hungarian Central Statistical Office collects the demographic data. The vital statistical data are collected via individual records. Migration data come from the different registers of the Ministry of Home Affairs. The HCSO in common with the Ministries in charge are responsible for health and welfare statistics. Health and social institutions and local governments provide the major part of data, others derive from registers and population surveys.

Financing: The overwhelming part of social support costs is covered by the state budget, while a smaller part is provided for by Social Insurance. The local self-governments play a significant role in social support and in supporting children's institutions. The most important elements of the institutional system available in the near past and at present are the following: maternity allowance, childbirth leave, child-care leave, family allowance, tax benefits, work-related benefits, children's institutions, and maternal- and child health-care services. Due to the decreased resources it has been rather complicated to maintain necessary resource provisions for the above instruments and facilities. Apparently, more financial resources are needed to ensure effective implementation of the current population policy.

Cooperation: Hungary has a long history of cooperation with the UN and its specialized agencies. Hungary participated in the 1974 World Population Conference, in the 1984 International Conference on Population, and in the ICPD, Cairo, 1994. Cairo+5, Regional Conference was held in Budapest, 1998. Cooperation with the United Nations High Commission for Refugees (UNHCR) started in 1987. Thus, Hungary became the first former socialist country to join the international organization dealing with refugee problems.

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CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH

Decision-Making: In Hungary, the primary responsibility for protecting human health lies with the Ministry of Health. Since protection of health requires multi-sectoral approach, the ministry of health is instrumental to provide this multi-sectoral effort. The National Public Health Service is operational to deliver all services to prevent diseases and protect public from hazardous inputs. The country undergoes a transition period recently, in which state responsibility, public participation and individual initiatives are going on parallel.

Programmes and Projects: The health system, including the prevention, health care, finance, insurance etc., is going to be reformed. Several of these initiatives are directed towards improving health care system, reforming the insurance policy further transformation of the public health services in general. A new National Public Health Action Programme has recently been launched to address major issues affecting mortality and life expectancy. As for environment and health, the National Environmental Health Action Plan (NEHAP), initiated in 1996 by the World Health Organization was launched and actually proved to be effective in identification of priority environmental health issues and focus on remediation and prevention of adverse health effects. Much effort is being exerted on health promotion. Nationwide programmes for Healthy Cities, Healthy Schools further Healthy Regions are being conducted.

Status: The health of the Hungarian population is poor. Low life expectancy both in men (66.3 years) and women (74.2), high mortality, relatively short disease-free, healthy life years are the main indicators of the bad health status. Cardiovascular diseases, cancer, violent causes of death and disability further diseases of the digestive systems are the main causes the high mortality. As regards communicable diseases, Hungary has excellent record – due to extended vaccination programmes and high epidemiological alert and sophisticated surveillance system, the incidence of communicable diseases is very low. This is valid to the incidence of HIV/AIDS positive patients as well. Age-related vaccination coverage varies between 97-99% and this age-related mandatory vaccination will be maintained. The health of the nation will be more and more in the center of major political decisions, since the low birth rate, the high mortality and disability is a central social issue. Environmental factor has clear impact on the health of the population. Air pollution – mainly due to traffic - is one of the major factors behind respiratory diseases, asthma and allergic disorders. About 11.5% of the country can be regarded as polluted where about 43% of the population lives. Water-related diseases are relatively low but pollution of surface waters, further arsenic of geological origin pose hazards to health. The main causes behind the poor health status are life style factors (unhealthy diet, smoking and excessive alcohol consumption). The past ten years, with all political and socio-economic changes were unfavourable to economic and social status (poverty, high unemployment, homelessness, etc) and although improvement can be recorded in the past few years, these facts remain the principal causes of ill-health. For the past three years, favorable changes have been observed. Increasing birth rate, decreasing mortality, especially as the cardiovascular diseases are concerned, indicate the positive changes. Economic situation is improving, relatively low rate of unemployment and increasing social security contribute the improving health of the nation.

Capacity-Building, Education, Training and Awareness-Raising: The health education system for specific graduates is traditionally excellent in Hungary. Due to economic difficulties and the underpayment of the medical staff, however, decreasing number of medical doctors, nurses, etc. With the transformation of the postgraduate education, system, one could expect profound changes in the next 8-10 years. Introduction of the residency system, expanded postgraduate training, specialized courses will contribute to better education. The health education system in primary and secondary schools is not well developed – in the framework of the new National Public Health Programme, much emphasis will be put on better health education. More and more emphasis is put increasing the awareness of the population on health matters. Recently, a nation-wide survey has been conducted for assessing the situation. NEHAP has a separate chapter on pedagogy, but also, the cross curriculum contains the specific content for health-education.

Information: There is a comprehensive reporting system for health care system, statistical analysis of the basic population and health data. For monitoring of environmental effects, a network of monitoring air quality, water quality, soil quality, further for assessment waste management exist. Geographic information system (GIS) is widely applied for better assessment of regional distribution of adverse health effects.

Research and Technologies: Health research in Hungary is being conducted in prevention, health care and rehabilitation. Basic research is directed to understanding molecular mechanisms of genetic background of some diseases, cancer and cardiovascular diseases.

Financing: No information available.

Cooperation: Hungary has extensive collaboration with different countries and international organizations. As regards health, the primary counterpart is the European Office of the World Health Organization (WHO). The collaboration concerns with the prevention of infectious disease by applying the extended vaccination system, the prevention of non-infectious diseases, like cardiovascular disease and cancer by participating in the CINDI programme. Environmental health is in the forefront both in multinational and bilateral, further in international collaboration. The fact, that Hungary has received the right to organize the 4th Ministerial Conference on Environment and Health in 2004, clearly exemplifies the excellent working relationship between Hungarian health authorities and the international communities. There are several other areas of collaboration with WHO: health promotion, reforms of health services, education, further action programmes, like children, poverty, alcohol etc. Accession to European Union represent a challenge to the health sector as well. Hungary will have the possibility to join to the Public Health Programme of the European Union, which could lead considerable improvement of the health status. Bilateral and multilateral agreements exists between Hungary and other European countries. These agreements cover wider range of activities, from prevention, health care, health technology, economic aspects, etc.

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CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

Decision-Making: The government bodies mainly responsible for sustainable human settlement development policies in Hungary are the Ministry of Interior, the Ministry of Economic Affairs, the Ministry for Environment and the Ministry of Agriculture and Rural Development. The Act on Regional Development emphasizes both short- and long-term planning, in particular, at the level of the settlements and introduces institutional mechanisms for this task. Development and modernization of human settlements and infrastructure are considered important in Hungary. The national development policy directs that special attention be paid to the underdeveloped regions and rural areas of the country, as well as to the remarkable differences between the western and eastern halves of the country. The aim is to strengthen regional planning, strengthen the relevant capacities and mandates for the coordination and cooperation between local governments, and to enhance information collection. The Act on the Local Governments includes the basic obligations for the local authorities in terms of the development of “their” settlements (financial sources, basic services, infrastructure development, environment protection and nature conservation etc.). Besides the natural environment, protection of the built or environment (for example, the architectural cultural heritage and historical monuments) is regarded as significant.

Programmes and Projects: A comprehensive regional development programme was adopted that includes the identification of priorities, formulation of basic policy directions, and measures for regional development and sustainable human settlement development. In addition, a legal instrument on the “built environment” has also been adopted and contains important provisions in this regard. The National Environmental Programme also includes a chapter on built environment and highlights the environment related goals and tasks.

Status: See under **Decision-Making**.

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: Hungary is a Party to the following international conventions related to human settlements: the Convention on the Protection of World Cultural and Natural Heritage (1985), the Convention on the Protection of European Architectural Heritage (1990), and the Convention on the Protection of European Archaeological Heritage (1992). Hungary takes part in the UN programme on human settlements (HABITAT). A regional information center of HABITAT is located in Budapest. Hungary also actively cooperates with the Organization for Economic Co-operation and Development (OECD) on regional policy and human settlements.

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CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

Decision-Making: As a regular mechanism, integrated decision-making takes place at government level (inter-ministerial conciliation mechanism in course of preparation of all new pieces of regulation), however, it still differs from taking into account the comprehensive principles and approaches of sustainability. As an additional institutional element, the Hungarian Commission on Sustainable Development was established by government resolution in 1993 as a permanent inter-ministerial body responsible for the coordination of analysis, planning, and implementation of national programmes for sustainable development and for participation in relevant international programmes. The Commission includes representatives from all relevant ministries and government authorities: Prime Minister's Office, Ministry for Environment, Ministry for Agriculture and Rural Development, Ministry for Education, Ministry for National Cultural Heritage, Ministry of Finance, Ministry of Foreign Affairs, Ministry of Economic Affairs, Ministry of Justice, Ministry of Transport and Water Management, Ministry of Social and Family Affairs and Ministry of Health (Institute of Public Health) etc. The para-statal bodies, institutions and NGOs are associated with the Commission. In addition the National Environmental Council was established in 1996 as an advisory body to the government in accordance with the provisions of the 1995 Environmental Act. The main non-government constituencies are represented in the Council (environmental groups, academic institutes and business organizations).

Programmes and Projects: One of the most significant steps has been the approval of Act No. LIII (1995) on the General Regulations Concerning Environmental Protection. This law is actually a code comprised of significant environmental legislation and general provisions of environmental integration, but without detailed regulations. The obligation to prepare the National Environmental Programme is a significant element of this act. The act also introduced fees for the use of the environment and gave added impetus to environmental impact assessment.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: Training in the field of environmental science is carried out in 3 universities. The number of students involved in this training is approximately 300.

Information: See under **Decision-Making**.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: The basic elements of the environmental action programmes (EAPs) were developed within the framework of pan-European cooperation coordinated by the United Nations Economic Commission for Europe (UN ECE). The Sofia ministerial meeting reinforced the importance of national EAPs. Hungary actively took part in this collaboration, as well as in the World Health Organization's (WHO) initiative for the preparation of environmental health action programmes. These international mechanisms of cooperation substantially contributed to strengthening national level integrated decision-making with an increased focus on social and environmental aspects. The obligations set forth in various international environmental conventions are also significant in this context. Their fulfillment has necessitated the integration of specific objectives into national decision-making (for example, emission reduction).

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CHAPTER 9: PROTECTION OF THE ATMOSPHERE

Decision-Making: The Ministry for Environment is responsible for national programmes, the development of legal instruments, and facilitating the implementation of these programmes and international obligations. The environmental aspects (specifically, the control of atmospheric pollution) of key sectors are also taken into account in the regulations and programmes of the relevant ministries, for instance, in case of the energy sector by such the Ministry of Economic Affairs or in case of the transport issues by the Ministry of Transport and Water Management. Concerning the energy efficiency and the reduction of the air-borne pollutants, an Energy Conservation Plan was adopted in early 1994; subsequently, an Action Plan for Energy Conservation was launched in January 1995. On the basis of the Action Plan, the Energy Saving Soft Loan Programme was established in 1996. In 1999 the Government approved a “National Energy Efficiency Programme by 2010”. This programme allocates additional financial sources (HUF 2-5Bn). The public participation in the decision making process is provided, inter alia, within the framework of the National Environmental Council or the Commission on Sustainable Development where various stakeholders, environmental NGOs are also represented and which deal with the air pollution issues according to their mandates.

Programmes and Projects: A national initiative called the Cross-sectoral Air Pollution Control Programme was launched in 1993 and updated later. The Programme, scheduled to be implemented between 1994 and 1998, gives special attention to improving information systems to ensure real-time data evaluation on air quality and creating an integrated approach to all aspects of local and trans-boundary air pollution problems. A national Volatile Organic Compound (VOC) Emission Reduction Programme was also elaborated. It is based on the obligations and recommendations of the relevant international agreement (VOC-Protocol to the UNECE Convention). The local governments have also been urged to prepare traffic control measures, which contribute to emission reduction. A City Bus Greening Programme has been introduced to focus on the replacement of old bus motors with environmentally sound ones, which meet European Union (EU) emission standards. Protection of the atmosphere, improving air quality, and promoting the reduction of harmful atmospheric emissions are high priority areas of the National Environmental Programme. This programme lists key sectoral policies and indicates the most essential regulatory tasks. A general climate change strategy was also approved in 2000. Within the domain of environmental education, several schools got involved in the international programme Science Across Europe in which students examined air-pollution. The database of this research has been exchanged between the schools. Hungarian high schools - in the framework of the GLOBE programme - collected data on environment as well.

Status: In Hungary, all ozone-depleting substances (ODS) are imported, as the country has no facilities for their production. The National Programme for ODS Phase-out was prepared by the Ministry for Environment. The quantity of ODS used as propellants have rapidly decreased, partly due to governmental regulations and partly due to fundamental changes in the Hungarian economy. Product fees for chlorofluorocarbons (CFC), refrigerants and refrigeration appliances were introduced in 1995. They served as economic incentives for recovery, reclamation, and recycling of refrigerants. Firms were aware of the regulations under the Montreal Protocol and the introduction of the necessary technologies was facilitated by a Global Environmental Facility (GEF) project. There is also progress in terms of decreasing greenhouse gas emissions. The changes in greenhouse gas emissions are primarily taking place due to the substantial structural changes in the economy. Emissions of sulphur, nitrogen compounds, and other air pollutants cause significant environmental problems in Hungary. Emissions from traffic are now the major source of air pollution, while those from industry have decreased over the recent decade. Approximately 13% of Hungary's land area is polluted, and nearly 29% of the population lives in highly polluted areas. Mortality related to air pollution is slightly increasing, and the incidence of lung cancer, and allergic and respiratory diseases (chronic bronchitis, pneumonia) has also increased.

Capacity-Building, Education, Training and Awareness-Raising: There are a number of training courses available to engineers in the field of the protection of the atmosphere. The length of the course is 2 years. The students who are participating in the training are part-time students.

Information: Information on the air quality is regularly provided for the public, as well. Hungary submits the required source and emission data under the international conventions.

Research and Technologies: The Hungarian Government has taken a decision in 2000 on launching the National Research and Development Programme. In the cadre of Programme, the Ministry of Education in 2000 published a call for proposals for R&D actions in five thematic fields. One of the most important scientific priorities was the "Protection of the Atmosphere". Total support of the project was 300 million HUF. This programme also continues in 2001 and 2002.

Financing: The national Central Environmental Fund provides considerable financial resources for projects, which directly or indirectly serve to protect the atmosphere and improve local air quality. Nevertheless, Hungary has not had adequate financial resources to support investment in the new ODS-free technologies. Therefore, the country has applied for a GEF grant to help its ODS phase-out activities. In the energy sector, a number of rationalization (energy conservation, energy efficiency) programmes have been supported by World Bank loans. The main objective of these programmes is to increase energy savings and introduce modern technologies in the energy sector. Costs of the Cross-Sectoral Air Pollution Control Programme are estimated to be approximately US\$500-750 million (at 1992 rates). In the field of energy efficiency there is a significant financial supporting system for households, public sector and industry.

Cooperation: Hungary participates in a number of international efforts to protect the Earth's atmosphere. With respect to ozone depleting substances, the Montreal Protocol (1987) was signed in 1989 and enacted by Ministerial Decree No. 13/1992; the London Amendment (1990) was signed in 1993 and enacted by Ministerial Decree No. 22/1993; and the Copenhagen Amendment (1992) was signed in 1994 and enacted by Governmental Decree No. 13/1994. The latest report to the Montreal Protocol Secretariat was prepared in 1996. The United Nations Framework Convention on Climate Change (UNFCCC) was signed in 1992 and enacted by Act LXXXII in 1994. The first report to the UNFCCC Secretariat was submitted in 1994, the second in 1997. The United Nations Economic Commission for Europe (UN ECE) Convention on Long-range Trans-boundary Air Pollution (LRTAP) was signed in 1979 and ratified in 1980. Subsequently, various protocols were signed and ratified.

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

Decision-Making: Responsibility for legislation and the coordination of land management programmes rests primarily with the Ministry for Agriculture and Rural Development. In addition, the role of local authorities (municipalities) in the regulation, management and control of land use practices has substantially increased in recent years. The legislative framework for the management of land use is provided by the Act I and Act II on Cooperatives (1992), the Act on Land (1994), the Act on Environmental Protection (1995), the Act on Nature Conservation (1996), the Act on Forests (1996). The elimination of the subsidy on pesticides has resulted in their decreased use. Maximum limits for the toxic content of fertilizers were introduced in 1992 to encourage only high quality fertilizers and yield increasing compounds and to ensure the reasonable, environmentally safe use of these inputs. A law on land tax, introduced in 1992, allows a 50% reduction of this tax if a farmer adopts environmentally sustainable technology. As a result of the re-privatization process, one of the most important new interest groups consists of the many landowners or associations of forest owners who have received back their land ownership. Their members and interest group representatives also play an important role in negotiations on elaboration and/or amendment of land use and agricultural production regulations, or on the principles/terms of allocation of the relevant funds.

Programmes and Projects: For legislation and financial programmes see under **Decision-Making**.

Status: Extensive changes in land use have occurred during years of the transition to a market economy and the massive compensation and re-privatization processes. The total land area of Hungary is 93,000 km². About 70% of this area is agricultural land, an extraordinarily high percentage by international comparison. Of this, 73% (4.7 million ha) is arable land, 20% are pastures and meadows, and about 7% gardens, orchards, and vineyards. Eighteen percent of the total area is covered by forest. The country enjoys relatively favorable geographical and climatic conditions for agricultural cultivation. Seventy-three percent of the territory is flatland with highly fertile chernozem and brown earth soils. A large part of the arable area is sown with grain (wheat and maize) and industrial plants (sunflower, sugar beet). Long-term records also confirm Hungary's ability to grow high-grade fruit and vegetables, sowing-seeds, and propagating plant materials. Before the recent socio-economic changes (during the 1960s, 1970s and 1980s), the Hungarian cooperative and state farming system was uniquely efficient within the Central-Eastern-European regional context. Agricultural production was mainly concentrated on large farms, but small-scale private production on household plots also played an extremely important role. Due to this integrated production structure, Hungary did not simply achieve self-sufficiency in all basic plant species for domestic consumption and forage needs, but gained 25% of its total exports from agriculture. The agricultural sector accounted for 20% of Hungary's gross national product and employed 17% of the active earners. This situation has dramatically changed due to the economic restructuring, the recession in agriculture, and the loss of a large share of the market for agricultural products in the Central European region.

Capacity-Building, Education, Training and Awareness-Raising: There are trainings available in the field of agricultural engineering and related courses at 4 Hungarian universities and 9 colleges. The total number of students is about 20 000.

Information: A new Soil Information and Monitoring System was established in 1992. It contains 1,400 observation points, 1,000 of them on agricultural land, 200 in forests, and 200 in environmentally threatened areas. Important soil parameters are measured regularly in cycles of one, three, or six years. There are further requirements and measures on information collection and processing (on land ownership, land use change etc.) in relation to substantial changes in the ownership structure, EU accession preparations, reforms and use of the subsidy systems etc.)

Research and Technologies: Environmentally friendly technologies which use fewer inputs (for example, low input sustainable agriculture [LISA] systems) are being encouraged. Research activities are devoted, inter alia, to social and environmental implications/tendencies of the land use changes, and to the expected implications of the EU-membership.

Financing: Agricultural Funds were adopted by Parliament in 1992 to create an entrepreneurial type of agriculture. The regulations on these funds were extremely important for the transformation of agriculture; forest development; and the protection of arable land, biological bases, and game. In particular, the Agricultural Development Fund was aimed at upgrading the material-technical base of agricultural production, broadening its infrastructure, ensuring the qualitative development of its biological bases, and operating a new system of agricultural counseling. The Land Protection Fund was established to assist production in high-quality land areas withdrawn from farming, and to ensure proper use and protection of arable areas. The National Forestry Fund ensured protection and sustainable management on large areas of woodland. The Regional Development Fund helps to create employment opportunities for the unemployed in agriculture and thus preserve rural capacities. The Credit Guarantee Fund supports farmers having difficulties providing the property guarantees demanded by the banks. Financing systems are also being refined to build an effective rural network of banks. Nevertheless, there are serious problems in restructuring and reorienting agriculture, and in strengthening the conditions for ecologically and economically effective land use practices. This is due partially to the limited availability of financial resources.

Cooperation: Hungary participates in the relevant programmes of the United Nations Food and Agriculture Organization (FAO). Land use policies are also subject to harmonization with European Union regulations. These legal instruments and policies, for example, those in the framework of the Common Agricultural Programme contain essential requirements for sustainable land use, as well.

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CHAPTER 11: COMBATING DEFORESTATION

Decision-Making: The Hungarian Ministry of Agriculture and Rural Development has a leading responsibility for forest policy and legislation at government level. The Department of Forestry of the Ministry Development, the State Forest Service (the “background” institute of the ministry) and the ten regional State Forest Inspectorates supervise the sustainable management of forests on the basis of the forest management plans (previously compiled by the planning units of the State Forest Service for the forest managers). The Ministry for Environment is responsible for nature-protected forests (20%). The legal and institutional framework was adjusted to the new and changing demands. The Law on Forests came into force in 1997. The Act LIV of 1996 on the Forest and the Protection of Forest and the related regulations issued in 1997 were seen as the legal background for implementing the results of the international cooperation and agreements to that date. Owners, scientists and NGOs represent the major groups involved in forest issues and decision-making. The new as private owners of forested areas represent an important interest group. Scientists engaged in special monitoring, analytic studies, and forest science provide essential information to decision makers.

Programmes and Projects: The National Strategy on Agriculture and the National Agri-environment Programme devoted an independent chapter to forestry. These documents recognized forestry’s multifunctional role in sustainable development. Afforestation remained a priority for the coming decades and is seen as a tool for implementing rational land use policies. Forestry is also recognized in course of accession to the European Union with specific regard to the implementation of the EU’s Common Agricultural Policy and Forestry Strategy. The state forestry authority initiated a project co-sponsored by the Phare programme on developing proposals for the use of independent forest certification schemes and quality assurance systems. The project is expected to be completed later. The private sector also shows interest in this field and a newly established association of private forest owners and managers announced its readiness to join the PEFC (Pan-European Forest Certification). A government programme of afforestation has been adopted and supported. Reproductive materials the field of the forest reproductive materials is under the supervision of the National Institute for Agriculture Quality Control (Department of Forestry and Horticulture). Provenance, selection, products and trade are checked, qualified and certified based on forest genetic resources. As a result, 71 forest reserves had been established by 1995. Scientific research programmes are conducted in these natural forest reserves. In the framework of forest engineering, the environmental and nature protection has become a separate subject, which strengthens environmental awareness-raising.

Status: As a result of regulations aimed at achieving sustained yield, the age structure of Hungarian forests has been improving. The post-UNCED period coincided with several important steps of the overall political, economic and social transition in Hungary. The changes gave way to the newly emerging private sector and the share of the former dominant public ownership decreased to 60% while private ownership was established on 40% of the 1.8 million ha of forest resources of the country. The steady increase of the forest resources observed in the previous decades continued in the period 1992-2000, as a result of an ongoing afforestation programme. Annual felling have never exceeded of the annual possibilities produced of natural increments. The accumulation of growing stock permanently was increasing during the nineties.

Capacity-Building, Education, Training and Awareness-Raising: New actions are needed in the private forest sector, in particular in improving forestry extension services and encouraging more sustainable forms of forest management through different joint tenure systems. Additional financial resources are also needed to increase efficiency and competitiveness of the private forestry. Training in forest engineering is available at one university of Hungary (Sopron) with 500 students.

Information: Indicators for sustainable forest management have been used since the early seventies in Hungary for continuous monitoring through forest inventory and periodic reporting on the state of the country’s forests. These indicators were analyzed on an annual and a five years basis. The results of the annual analysis were used when developing professional and financial regulations for the respective years while longer-term analysis helped the evaluation of the relevant policy and strategy.

Research and Technology: There are two basic institutes, which deal with research activities. One of them is the Hungarian Forest Research Institute, member of European Forest Institute (EFI). The other one is the

Faculty of Forestry at the University of West-Hungary (Sopron), which has active role in International Union of Forestry Research Organizations (IUFRO).

Financing: Financial instruments were introduced to promote sustainable forest management. The state budget in the chapter of agriculture and rural development referred also to different financial subsidies. Within this frame there is a specific forest maintenance contribution to a separate account, which is year by year re-accumulated by each forest managers' payment after every exploited cubic meter wood as an eco-tax. The natural regeneration and artificial reforestation are subsidized only from this specific source. Furthermore, all elements of the forestry activity and investments can be supported based on applications for such support. With regard to private forestry, new financial instruments were introduced to promote sustainable forest management, and formation of new organizations was encouraged by different means. Dissemination of forest related knowledge was intensified through publishing written material and organizing training courses and seminars. The system of forestry subsidies includes a special financial tool, which was designed to encourage the social functions of forests and their welfare-oriented services. Forest owners should apply for subsidies, the applications are evaluated by an independent committee. Special budgetary funds were allocated by the Ministry of Agriculture and Rural Development for the implementation of the large-scale afforestation programme. During the privatisation process, certain protected nature forested areas were removed from state forestry control. Following the intervention by the Ministry for Environment, the land privatization regulation has been amended and a special fund established to repurchase these areas with compensation to the private owners.

Cooperation: Hungary plays active role in the field of international efforts and cooperation. The most important part of these cooperation activities is related to different organizations of the United Nations: CSD-IPF and IFF, UNFF, FAO Committee on Forestry, World Forestry Congress, ECE Timber Committee, International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests. Besides these activities, our institutions and experts also participate in the programmes of the OECD (Forest Reproductive Material Scheme), OSCE (Montreal Process) and the EU (in the framework of the accession process), Ministerial Conferences on the Protection of Forests in Europe (Hungary signed and implemented all 12 resolutions).

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CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT

Decision-Making: The main government agencies responsible for coordinating desertification and drought management policies in Hungary are the Ministry of Agriculture and Rural Development, and the Ministry for Environment. These ministries and also the Ministry of Transport and Water Management work closely together on the implementation of the UN Convention to Combat Desertification in Countries Experiencing Drought and/or Desertification, Particularly in Africa (UNCCD). This Convention has been ratified by Hungary in 1999. The inter-ministerial coordination in this regard is also facilitated by the Hungarian Commission on Sustainable Development.

Programmes and Projects: The Hungarian Academy of Sciences coordinated a multidisciplinary research project addressing the problems of droughts. This project was continued in the framework of a broad agricultural strategy programme called Agro-21, which provided a scientific basis for the further development of the Hungarian. The programme took into consideration the variability and probable changes in natural conditions. The Academy has also established a special subcommittee to coordinate these research activities and to provide decision-makers with necessary scientific information. Farmers, agricultural cooperatives and their organizations also play an important role in this process. The Ministry of Agriculture and Rural Development has recently decided to work out a National Drought Mitigation Strategy on the basis of which the national action programme will be elaborated.

Status: The country is located in a climate zone predisposed to drought, and dry periods have always occurred. Large parts of the country are semi-arid or dry sub-humid. The Great Plain, and especially the area between the Danube and Tisza Rivers is the most threatened region where certain symptoms of desertification can be detected. The problem of droughts is compounded in some areas by soil erosion. Analysis of long-term observations shows a decreasing tendency in precipitation amounts and average soil moisture content. Winter and spring precipitation amounts show a significantly decreasing trend. Severe or moderate droughts occur in Hungary nearly every year. Drought frequency has increased, primarily in the last two decades. It is expected that one of the possible consequences of anticipated global climate change will be an average decrease of precipitation levels in the Hungarian region by approximately 50-100 mm/C annually. This could cause severe water supply problems in semiarid areas and dry lands.

Capacity-Building, Education, Training and Awareness-Raising: In Hungary water management is an important topic in education, both at engineering and agronomic faculties, therefore human resources are generally available in the country to undertake main activities concerning drought mitigation. But further professional adult training (especially among new land owners and/or users) is necessary for getting acquainted with means and measures of drought mitigation. The present level of awareness-raising is not adequate, much more should be done for proper public information on drought events, possible impacts and mitigation possibilities. The importance of drought preparedness, mitigation and the role of the related water resources planning and operation is underestimated.

Information: A new and comprehensive information system should be established including mapping of drought prone areas, specific database of relevant meteorological, hydrological, agrotechnical, social and other data, with the help of which a better forecast can be given on drought occurrence, as well as, on estimation of drought impacts.

Research and Technologies: The results of the country-wide research work on drought problems has been compiled by the Hungarian Academy of Sciences. Based on these results adequate drought mitigation technologies – both for dry and irrigated farming – have been developed and are available for farmers. In the national drought strategy, a separate chapter will be devoted to the further research tasks, cooperation possibilities in the field of research and development, and financial resources for solving research priorities.

Financing: Financing of drought mitigation actions from national budget is not adequately provided and not properly coordinated among responsible organizations. The coherent system of governmental and/or local authority level regulation and support is to be elaborated, the sources and means of compensation or disaster aid should be more clearly determined. Besides the individual drought protection, the insurance system has an

important role for those who are suffering the most from drought damages. Moreover, central or regional relief funds and guarantee funds are necessary to establish for those who have great losses due to drought impacts. These financing aspects will also be taken into account in the planned strategy.

Cooperation: Hungary actively participates in international collaboration on various agricultural, breeding and monitoring issues, some of which are closely related to drought and desertification management. Hungary is interested to take part in international cooperation devoted to drought mitigation, especially, in preparation of the European drought sensitivity map, elaboration of a common regional drought strategy against harmful drought effects, in the development of a regional drought preparedness network. Hungary plays active role in the ICID (International Commission on Irrigation and Drainage), especially in the work of the European Regional Work Team on Drought.

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CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT

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.

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CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

Decision-Making: The Ministry of Agriculture and Rural Development (MARD) is the agency primarily responsible for agriculture, regional and rural development policies. Under the Regional Development Act, central and regional (county) development councils have been established as the principal coordinating and decision making organizations responsible for regional planning, priority setting and allocation of financial resources for various regional development projects. Preparation of an agri-environment programme in Hungary was launched in 1996: an "EU Harmonization Team" of the Ministry of Agriculture was set up to deal with Agri-Environmental, Organic Farming, Forestry and Game issues in relation to EU accession preparation tasks in the field of agriculture-environment. The team represented experts of competent professional offices of relevant ministries, NGO-s, agricultural universities, research institutes and agricultural farmers union. The working group was renewed in 2000 as the integrated Rural Development and Agri-environment Working Group was established. In future, the development and strengthening of the agri-environmental institutional system is expected. The group has focused on various aspects of sustainable agriculture and rural development and prepared various proposals for decision-makers.

Programmes and Projects: The framework for the accomplishment of a sustainable, ecology-based land use in Hungary is established in the National Agri-Environmental Programme (NAEP), though its detailed elaboration, the creation of its institutional system and budgetary sources are still essential tasks to be completed. The team is directed and the implementation of the work is coordinated by the Department of Plant Protection and Agri-Environment Management of MARD in close cooperation of other organizations and experts. After studying the related legislation and experiences in EU member states and analyzing the potential domestic application, the Hungarian agrarian-environmental programme was elaborated. In the proposition submitted to the Government, the aim was to introduce the programme in the year 2000, together with all target projects for a target area of 670 thousand hectares, which accounts for 10,8% of the agricultural area of the country. The elaboration of NAEP and the designation of the target areas were greatly supported by the study entitled "The elaboration of the land use zone system of Hungary" and other studies elaborated by the experts of MARD, Gödöllő University's Environment and Landscape Management Institute, Soil and Agrochemistry Research Institute of the Hungarian Academy of Sciences, the Hungarian Ornithological and Environmental Association and other institutions. For the operation of the programme, the necessary institutional framework will be gradually established between 2001 and 2003. The NAEP will be fully operational in 2002. The present National Environmental Programme (1997-2002) also refers to certain tasks and means in relation to sustainable agriculture.

Status: Increasing consumption and consequent economic activities exploit the available land faster than ever, expanding social pressure and placing an ever-increasing stress on the environment. This is especially true in the case of agriculture, which is associated with 85.5% of the total area of Hungary (agricultural lands) and an important player in further socio-economic development of the country. As a consequence, on the one hand, sustainable agriculture is vital from the point of view environmental protection and nature conservation. The performance and efficiency of agriculture, on the other hand, depends mainly on the state and quality of the environment and natural resources. The interdependence of environmental protection, agriculture and the rural development makes the co-ordination of these three areas, the establishment of an integrated land use system inevitable.

Capacity-Building, Education, Training and Awareness-Raising: For the successful implementation of the NAEP, one of the aims of the programme is to establish an improved research, education, model-farm and counseling network on the basis of the present agricultural and environmental institution system to support the operation of the programme. This is a basic requirement of the EU agri-environment programmes. The network should deal with research, education, planning, counseling and demonstration tasks of the agrarian-environmental programmes. It seems expedient that the agrarian-environmental related institution system shall be effectuated by the higher agricultural-environmental education and research institutes and controlling and counseling agricultural and environmental organizations. In order to inform the public, including those wishing to participate, the programme, a wide-ranging information campaign was launched prior to the introduction of the programme, in November- December 1999. For the successful implementation of the programme this information-communication campaign shall be followed by educational, counseling and demonstration-economical programmes. In the framework of education projects, personal background is being developed in 3

steps. The duties falling on institutions imply a coordinated and synchronized work for many organizations. Agricultural authorities, environmental organizations and higher agricultural-environmental education and research institutes shall work together in this field.

Information: No information available.

Research and Technologies: No information available.

Financing: The Government decided that in order to create the financial resources for the National Agri-Environmental Programme and considering the co-financing demand of the EU pre-accession subsidies (SAPARD), a source of HUF 6.5 billion should be allocated within the agricultural budget as an agri-environmental target subsidy from the central budget for the year 2000. In order to expand the financial resources of the National Agri-Environmental Programme and to meet the requirements of the above mentioned co-financing, the Government appointed the Minister of Agriculture and Rural Development to provide the necessary funds during the planning of the central budget for the years 2001 and 2002. The basic objective is to introduce NAEP early, so that the highest possible level of the agri-environmental EU support is potentially made available in the post-accession years. In order to achieve this, the programme could be introduced in the year 2000 and gradually increase the subsidy support from 2001 onwards.

Cooperation: Hungary participates in various international agricultural development programmes coordinated by the United Nations Food and Agriculture Organization (FAO). European Union regional and rural development programmes are increasingly important for Hungary as an associated country.

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CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY

Decision-Making: The cross-sectoral tasks related to the conservation and sustainable use of biodiversity have been coordinated under the auspices of the Hungarian Commission on Sustainable Development (CSD). The Ministry for Environment, Authority for Nature Conservation has the prime responsibility for regulatory tasks and programmes, including the implementation of the Convention on Biological Diversity (CBD). The CBD was signed in 1992 and ratified in 1994 by Hungary. In 1994, a conceptual approach to set the general requirements, principles, and objectives of conservation and sustainable use of biodiversity was formulated as part the national concept for environmental protection and nature conservation. In the same year, a new environmental and nature conservation policy, introduced by the Ministry of Environment and Regional Policy reflected both the recommendations of Agenda 21 and the objectives of the CBD. New legislation on wildlife and biological resources adopted during the 1990s puts also emphasis on biodiversity. This legislation includes the Act on Mining, Act on Animal Breeding, Act on Arable Land, Act on Water Management, Act on Nature Conservation, Act on Forests and Forest Protection, Act on Game Protection, Game Management and Hunting, Act on Fishing and Angling, Act on Plant Protection and appropriate laws on environmental impact assessment. The Basic Plan on Nature Conservation was adopted in 1997 as part of the National Environmental Programme.

Programmes and Projects: The National Biodiversity Strategy and Action Plan, NBSAP (which preparation/finalization is in progress) includes applicable measures to promote the conservation and sustainable use of biodiversity by the most relevant sectors of the Hungarian economy, such as agriculture, biotechnology, fishery, forestry, hunting, land use, mining, regional development and tourism, water management. As part of the NBSAP, the First National Report on the implementation of the CBD was prepared in 1997 and submitted to the CBD Secretariat. The establishment of the Hungarian Clearing House Mechanism to the CBD is also in preparation within the NBSAP project. Its launching is impeded by lack of human capacity. The Agri-environmental Programme approved by the Government in 2000 also facilitates the realization of recommendations of the Agenda 21 and the objectives of the CBD. Establishment of a network of Environmentally Sensitive Areas, as well as, ecological corridors is also planned in order to create a more harmonious relationship between agriculture and nature conservation.

Status: The territory of Hungary is considered as the juncture of several elements and as a gene-bank of the Eurasian fauna and flora. The resulting biodiversity has survived in a relatively good state in spite of the fact that it is basically determined by the density of human population (115 capita per square kilometres) and primarily by the agriculture, forestry and water management. Most part of the territory is used by the agriculture, 19 % is now covered by forests, about 2 % by natural waters and 10 % by settlements, roads and other establishment. The network of various types of nature conservation areas including *ex lege* protected sites (e.g. mires, natron lakes) covers 9.9 % of the territory. The existing *in situ* and *ex situ* gene bank network maintains valuable elements of biodiversity including domestic animal and plant species, cultivars and breeds. Further support and development of capacity of gene banks should be improved to be able to extend collections for still neglected elements, such as traditional and local variants of fruits and certain old breeds of animals. Apart from the global and regional environmental changes threatening biodiversity the transition to the market economy may involve grave consequences to biodiversity. The growth of settlements and increasing construction on “green field sites” and road-building result unavoidable in fragmentation of habitats for wildlife and in destruction of many elements of biodiversity.

Capacity-Building, Education, Training and Awareness-Raising: In the framework of Environmental Education Programme, education and training centres have been established in the Hungarian national parks. Museums and zoos have elaborated educational programmes in order to help the conservation of biodiversity. In formal education, the knowledge and conservation of elements of biological diversity has also become an important topic.

Information: A Biodiversity Monitoring Programme providing data on the status of biological resources has been developed. Threatened species and habitats receive particular emphasis. The objective of creating such a biomonitoring network is to identify and assess the changes of biodiversity, both from the influence of various human activities and natural processes, and from the measures initiated under the planned biodiversity strategy and action plan and other conservation programmes. The main elements of the biodiversity monitoring are a

biodiversity data recording system and network for Hungary, and a general survey and inventory of main habitat types.

Research and Technologies: The Government passed a decision in 2000 on launching the National Research and Development Programme. In the frame of the Programme, the Ministry of Education in 2000 published a call for proposals for R&D actions in five thematic fields. One of the most important scientific priorities of the Programme is "Conservation of Biological Diversity". The budget available is about HUF 500 million for such projects.

Financing: Not more than 2 % of direct environmental protection expenses (see: Chapter 16 & 34) can directly be related to biodiversity conservation. For financial sources for R&D activities see under **Research and Technologies**.

Cooperation: The country is an active participant in other relevant international agreements, such as the Ramsar Convention on Wetlands of International Importance Especially as Wildlife Habitat, the Convention on International Trade in Endangered Species (CITES), the Bonn Convention on the Conservation of Migratory Species of Wild Animals, and the Bern Convention on the Conservation of European Wildlife and Natural Habitats. Besides international actions and cooperation in order to implement these conventions, several bilateral cooperation agreements have been initiated and are in progress which are devoted in particular to the establishment and management of transboundary protected areas.

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

Decision-Making:

Biotechnologies: The Act LIII of 1996 on Nature Conservation included a moratorium on release of genetically modified organisms (GMOs) until appropriate jurisdiction on GMOs. The Act XXVII of 1998 on Gene Technology entered into force in 1999. The scope of the Hungarian regulation covers all kind of GMOs except potential applications of transgenic techniques on humans. Protected and wild (game) species are prohibited to be modified by gene technology. The biotechnological R&D programmes are conducted in academic, private (industrial) and university research institutes. The regulatory tasks, policy development and programmes are under the aegis of the Ministry of Agriculture and Rural Development, the Ministry for Environment, Ministry of Health and the Ministry of Economic Affairs.

Technologies: A traditional and ramifying legislation exists on authorization and introduction of technologies in various sectors, which includes standardization as well. No separate law has been approved yet on transfer of technologies to assist the least developed countries.

Programmes and Projects:

Biotechnologies: Biotechnology including cloning, fermentation and other techniques plays important role in the Hungarian agriculture and industry. Dynamic research activities have recently been initiated on gene technology by a programme of the National Committee of Technological Development (NCTD) including the potential environmental and ecological impacts of GMOs. Programme on raising public awareness has been implemented and an international (sub regional) training programme is in progress on administrative responsibilities and implementation of legislation.

Technologies: In accordance with the Act LIII of 1995 on Environment Protection, the National Environmental Programme was adopted in 1997: the Programme underlines the importance of eco-efficiency and indicates the key directions for the promotion and implementation of this concept. Training and public awareness issues are also considered by the Programme. The National Programme for Environmental Research and Development is being formulated jointly by the Ministry for Environment and the NCTD. The programmes place special emphasis on improving the technical and technological conditions for environmental protection. Elements of these programmes include: development of environmentally sound public utilities; technologies for healthy drinking water supply; environmentally-sound technologies integrated into production; material, energy and water saving technologies; and environmental sanitation. A special eco-labeling system was recently introduced under the initiative of the Ministry for Environment. (No information is provided on specific programmes on technology transfer.)

Status:

Biotechnologies: Biotechnology is considered as one of the most dynamic disciplines of the last few decades. It is applied not only for technologies using genetically modified microorganisms and cultivated plants, but in a much wider sense, including the production and application of enzymes, and hormones. The use of biotechnology or rather gene technology is still at an early stage in Hungary. Main fields of development and potential application of this technology are the following: agriculture and forestry, plant protection, soils, water pollution treatment, degradation by biotechnological means; production and processing of biomass, industrial production, and recycling processes. The Act XXVII of 1998 is implemented by some decrees of the competent ministries. An advisory Committee for Evaluating Genetechnology Procedures has been established and it operates since 1999. The Committee gives advice to the ministries on authorisation of GMOs and genetechnology activities including research laboratories. The Committee consists of 17 representatives of the competent ministries, the Hungarian Academy of Sciences, the NCTD and non-governmental organizations. Authorities responsible for the implementation are: Ministry of Agriculture and Rural Development, Ministry for Environment, Ministry of Health, Ministry of Economic Affairs.

Technologies: No information available.

Capacity-Building, Education, Training and Awareness-Raising:

Biotechnologies: The Agricultural Biotechnology Center (Gödöllő) has been appointed as the registering institution according to the Act XXVII of 1998 for genetic engineering activities and GMOs for agricultural

use. The homepage of the ABC (http://biosafety.abc.hu/biosafe_eng.html) includes database on GMO releases and genetechnology laboratories registered in Hungary. Further capacity development is necessary for the implementation of existing rules and additional objectives to effectively control the handling, use and transfer of GMOs. Further decrees on the implementation of the Act XXVII of 1998 should also be approved concerning other sectors of the economy. The Ministry for Environment has also to develop its labour and institutional capacity to be able to meet all requirements of its responsibility. (See also under **Programmes and Projects** and **Status** above.)

Technologies: No information available.

Information: A specific database has been developed by the Ministry for Environment that covers all scientific applications approved, studies completed during the period of 1978-2000.

Research and Technologies: As of 2001 no GMO plants are licensed for agricultural production. Some releases of GMO plants have been authorised for scientific research under restrictions (e.g. isolation) in experimental plots of research institutes. There are important research activities on the following subjects areas within the National Environmental Research and Development Programme: *in framework of the Environmental Programme of National Research and Development Programmes managed by the Ministry for Education, inter alia:* Research on environmentally clean technologies and products, The use of natural raw-materials; *in framework of National Research System for Environmental Protection and Nature Conservation managed by the Ministry for Environment containing applied research-tasks inter alia with the following priorities:* Scientific basis for specification of environmental requirements, target-conditions, Exploration of the relationship between environmental pollution and human health, The conservation of biological and landscape diversity, the protection of living and inanimate natural values; *in framework of Environmental Protection Development Application System jointly operated by the Ministry for Environment and Ministry for Education, inter alia:* Development of “clean products”, Effective and modern equipments of sewage cleaning primarily for small settlements; *in framework of the Cooperation Programme of Ministry for Environment and Hungarian Academy of Sciences focusing on the environmental basic researches and applied ones, inter alia:* Coordination of agricultural, silvicultural technologies and conservation of biodiversity in the regions of Hungary, Study on pollutants in the environment (filtering effects of soils, environmental risks of pesticides), Use of “best available techniques” (BAT) in the Hungarian industry, Ecological research with special regard to the elaboration of a Central-European nature conservation network and to the EU law harmonization on the field nature conservation.

Financing:

Biotechnologies: From the budget of the Ministry of Agriculture and Rural Development about HUF 22.5 million is being invested into the operation of the Genetechnology Committee and HUF 3.0 million for development/ maintenance of the genetechnology register. The income from the management and service fees (about HUF 2.0 million in 2001) are used for supervision of licenses and on-site appraisal in experimental releases. (No information provided on the financial allocations for the above mentioned research activities within the framework of National Environmental Research and Development Programme.)

Technologies: No information available.

Cooperation:

Biotechnologies: Hungary takes part in various international programmes on biotechnology development. Hungary was also an active participant in the negotiations of the Cartagena Protocol on Biosafety to the Convention on Biological Diversity.

Technologies: Research and technological cooperation with other countries in this area is of fundamental importance for Hungary. Emphasis is on the development of technologies for the use of new and renewable energy resources and environmentally sound vehicles, agriculture, waste management, etc. Hungary supports the development of an international information network on clean technologies at regional and global scales. To enhance environmentally sound production processes, governmental and international collaboration and support for the private sector is necessary. Hungary participates in the following areas of international cooperation: bilateral agreements with various countries; R&D programmes of the European Union; 72 COST programmes (European Cooperation in the Field of Scientific and Technical Research); as a member of EUREKA (a Europe-wide Network for Industrial R&D) since 1992, and is currently participating in 35 projects; as a member of the

European Laboratory for Particle Physics (CERN) and through a cooperation agreement with the European Space Agency (ESA); cooperation with the scientific programme of the North Atlantic Treaty Organization (NATO); and cooperation with the Commission of Scientific and Technological Policy of the OECD.

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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: 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: Regarding the subject area, the following multilateral international instruments were ratified by Hungary: the UN Convention on the Law of the Sea (ratified in 1985); the Convention on the High Seas (1961); the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1976); and, the International Convention for the Prevention of Pollution from Ships (1983).

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

Decision-Making: The government agencies primarily responsible for the policies on protection of freshwater resources are the Ministry of Transport and Water Management, and the Ministry for Environment. The basic regulatory framework consists of the Water Act of 1995, and the legal instruments on environmental impact assessments. In addition, there are important general provisions on freshwater resources under the Act on Environmental Protection (1995).

Programmes and Projects: The National Environmental Programme (1997-2002) includes substantial provisions and measures for the conservation and management of surface and subsurface water resources. Some of the key targets and approved policy directions are: regulation development to encourage sustainable and economical water use; improvement of water quality for the main watercourses/waterbodies (Danube and Tisza Rivers, Lake Balaton); gradual increase (to a level of 65%) of the number of settlements with sewers; at least biological treatment of wastewater from sewers; nitrate and phosphorous load reductions for highly protected and sensitive waters. On the basis of European Union guidelines, wastewater drainage and cleaning should be resolved for all settlements of over 15,000 inhabitants by 2000. The government has passed a programme to improve water quality management. The objective of the programme is to develop waste-water treatment and drainage systems and improve technical monitoring systems to meet EU standards. The principal implementation problems of the programme were based on the transitional state of legislation, difficulties in collaboration between various governmental agencies and local/regional authorities, and the availability of financial resources.

Status: Landowners are responsible for the protection of subsurface drinking water resources to the extent specified in their licenses. Waterworks and local governments also take responsibility for providing healthy drinking water. Scientists traditionally play an important role in Hungary in facilitating decision making related to the conservation and environmentally sound utilization of freshwater resources. Freshwater resources are also of special concern to various environmental NGOs. Nearly 90% of the total drinking water demand in Hungary is satisfied from subsurface resources. Signs of excessive use of these resources have appeared in some regions. Approximately 92% of the dwellings are connected to public drinking water network. The quality of water supplied by public utilities fulfills general national health requirements. However, meeting the relevant standards is a serious problem, especially, in light of the EU-accession related requirements. Freshwater resources have been of special concern for state authorities, local governments, and citizens for reasons other than for domestic consumption. There are overwhelming drainage areas in Hungary. In fact, the annual average amounts of water flowing through the country per capita (120 billion m³/year) is the highest in the world. Furthermore, large and agriculturally important areas have a semi-arid or dry climate with low humidity, which increases the need for extra freshwater resources. This raises waste water management issues. The state of sewerage and sewage treatment is much worse than that for drinking water supply. By 2000, the ratio of dwellings connected to the public sewerage network was 51%. 90% of the wastewater collected through sewerage network is treated. 65% of this amount is treated biologically or by an advanced treatment technology. This is a very unfavorable situation, because it endangers the quality of surface and subsurface waters in many locations. Sewage water treatment capacities are increasing, but there is slow progress for various reasons including the lack of financial resources. Recently, significant policy decisions are taken and efforts launched to improve this situation, as it is also a crucial criteria in terms of the EU-accession; for that reason, EU's pre-accession funds became also available for assisting the solution of these problems.

Capacity-Building, Education, Training and Awareness-Raising: The state is also responsible for training qualified personnel for water resources management and protection. However, there is some lack of professional knowledge, hindering authorities from evaluating the degree of environmental hazards through, for example, risk analysis or environmental impact assessment. Special experts in the field of freshwater protection and of wastewater handling are trained in post-graduate education courses: these are attended by "part-time" students who have been graduated from engineering courses. Basic education is given in the environmental engineering courses. The national Environmental Education Programme deals also with the issues of protection of freshwater resources, and it includes training courses for pre- and in-service teachers on this matter, too.

From the beginning of the 1990s, the students of Hungarian schools participated in the "Riverwatch" European programme.

Information: No information available.

Research and Technologies: Both the natural and the anthropogenic impacts on freshwater resources can be adequately analyzed in the country due to the good monitoring network. The standard network was established in 1968 to allow regular water quality monitoring of surface waters. Parallel monitoring for subsurface waters and for water quality in irrigation projects is also operational. The Hungarian Government has taken a decision in 2000 on launching the National Research and Development Programmes. In the framework of that programme, the Ministry of Education in 2000 published a call for proposals for R&D actions in five thematic fields. One of the most important scientific priorities of the Programme is "Water Management" and "Quality of Water". The budget available is about HUF 200 million for these projects. This programme also continues in 2001 and 2002.

Financing: A special fund has been established for technical development purposes to increase freshwater supply and waste treatment capacities. It is financed by fees, charges, and other contributions. The fund provides grants for different activities and investments related to the protection of water resources. Further information on financial resources is under "Status" and "Research and Technologies".

Cooperation: Cooperation with neighbouring countries is a significant priority. Existing agreements on transboundary waters is harmonized to certain extent with the relevant provisions of international agreements and EU regulations. Hungary actively participates in the collaboration under the various international treaties and in the international organizations, which deal the problems of freshwater resources.

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

Decision-Making: The Act on Chemical Safety established the Inter-Ministerial Committee for the co-ordination of chemical safety. This committee operates for the purposes of coordinating the management of chemical safety, providing an integrated and efficient means for decision-support procedures and promoting active participation of stakeholders in ensuring chemical safety. The members of the inter-ministerial committee include the persons appointed by the Ministers of Health, Environment, Economic Affairs, Agriculture and Rural Development, Transport and Water Management, Education, the Interior, Finance, Defense, and Social and Family Affairs, the Chief Medical Officer or the person appointed by him and a maximum of six persons delegated by non-governmental organizations which play a role in chemical safety (i.e. representatives of the chemical industry and civil organizations of environmental protection).

Programmes and Projects: The Inter-Ministerial Committee for the co-ordination of chemical safety, established by the Act on Chemical Safety, formulates the national policy and programme of chemical safety and co-ordinates the implementation of the national programme. The National Environmental Programme (1997-2002) determined the basic tasks for sound management of toxic chemicals (e.g., training of experts on risk assessment, support for removal of asbestos, risk reduction from the use of pesticides, and remediation of contaminated sites). A variety of projects aiming at achieving high level of protection of human health and the environment from chemicals are concluded or in progress. Most of the Hungarian schools are involved in collecting used batteries into local containers.

Status: The Act on Chemical Safety offers a comprehensive legislation covering the testing and assessment of chemicals, conditions of stockpiling and transport, pre-marketing rules of classification, labeling and packaging of chemical products, basic rules for protection of human health and the environment, and a system for collection of and decision upon underlying information. Detailed regulations are provided for the assessment and management of risk from chemicals and for operation of the prior informed consent (PIC) procedure, based on the Rotterdam Convention, which was ratified by Hungary. The marketing and use of special products like pharmaceuticals, veterinary products, plant protection products, fertilizers, additives etc., are specified by separate Acts, which are in compliance with the Act on Chemical Safety. This latter serves as a regulating “umbrella”.

Capacity Building, Education, Training and Awareness-Raising: According to the Act on Chemical Safety and other related Acts, the National Core Curriculum shall include the basic principles and most important rules on chemical safety and the appropriate handling of dangerous chemicals, in particular information concerning the identification of dangerous chemicals and information on the storage and application of commonly used ones.

Information: In order to maintain nationwide record of dangerous chemicals and an inventory of products, the Medical Toxicological Information Service collects, processes and classifies relevant toxicological, public health and clinical data pertaining thereto. This body, upon request, provides information regarding the data kept about dangerous chemicals with respect to the provisions on the protection of personal data and the disclosure of data of public interest. It makes such data accessible continuously, 24 hours a day.

Research and Technologies: No information available.

Financing: Besides financial resources provided from the central budgetary for the basic regulatory, monitoring etc. tasks, there is a specific fund utilized for various measures and investments for increasing chemical safety. In the case of violations of the provisions of the Act on Chemical Safety, other relevant legal instruments and implementing regulations, the competent authorities may assess fines. The fine shall be paid to the account of the Ministry of Health managed by the Hungarian State Treasury. The proceeds from the fines levied may only be used for providing budgetary subsidies for investment projects or other measures initiated by the central government or local government authorities or other parties, for the domestic development of chemical safety and projects in the relevant fields of research, education or information technology systems.

Cooperation: Hungary participates in international cooperation on chemical safety. Facing the membership to the European Union the current Hungarian legislation complies with the EU's one in the area of chemicals management. The legislation is also compatible with the OECD guidelines. Hungary is a Party to the UNECE Rotterdam Convention, Helsinki Convention and the UN Stockholm Convention. The Central- and Eastern European region of the IFCS is coordinated by Hungary. The position of one of the vice-presidents of the IFCS is filled by the general director of the Hungarian Center of Public Health. Hungary is a member of the OECD and actively participates in its Chemicals Programme.

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

Decision-Making: From 1st January 2001 the Act XLIII of 2000 on waste management is in force. The content of this Act complies with the basic Directive 75/442/EEC of the Council of the European Community on wastes. The Act specifies the priority ranking for waste management, contains waste management principles and definitions, responsibilities of the producer and owner and importer and exporter of waste. The Act lays down the general conditions of performing various waste management procedures and activities (collection, transportation, export-import, pre-treatment, storage, recycling, neutralization), special rules for the management of municipal and hazardous wastes, and waste management planning tasks. The Act specifies the organizations of waste management administration and their powers, and the general, legal and financial responsibility conditions of players in waste management. The Act deals with the availability of waste management information to the public domain, registration and reporting obligations concerning data, sanctions for defaults, and finally it lays down governmental and ministry tasks relating to its enforcement, and completion deadlines for various concrete measures.

Programmes and Projects: According to the Act on Waste Management, a national framework programme is being prepared and will be submitted to the Parliament as part of the National Environmental Programme. In particular, a registration programme covering the quantity and treatment of hazardous wastes is being prepared. Various projects on waste management, especially on waste minimization (for reuse, recycle etc. methods, technologies, systems, investments) and waste disposal investments (under the new rigid regulations) are launched and at least partially financed from the central budget, "Central Environmental Protection Fund" and/or co-financed from international financial sources (EU's pre-accession funds).

Status:

Hazardous wastes: Hazardous wastes and their management is a substantial problem in Hungary. A programme to build a network of regional hazardous waste landfills and incinerator plants was elaborated in the mid-1980s, but has not been completed due to limited financial resources. One modern incinerator plant, one chemically secure landfill and four interim storage sites have been constructed and put into operation. This is less than half of what was planned. The establishment of new regional incinerators is planned in the near future. In addition, many large and small factories have their own storage facilities.

Solid wastes: In Hungary in the early 1990s, all state owned specialized companies organized regionally into a trust to collect and purchase waste from industry and households for re-sale. Certain trading companies selling manufacturing equipment also operated in this fashion. Around 100-110 million tons of waste are generated annually, with industry and agriculture producing 40% and 60% of that amount, respectively. The quantity of waste generated dropped by about 20% due to a reduction in output and consumption between 1985 and 1994. The introduction of waste-effective technologies and products, the restructuring of industry, and planned development and reconstruction projects brought modest changes in 1993 and 1994. Only about half the production waste is reused, which represents 3% of total material use. 85% of municipal solid waste is collected and treated in an organized way. The state of sewerage and sewage treatment is unsatisfactory. In order to improve this situation, new programmes and financial means were introduced from the mid-1990s, in particular, to meet the requirements of the EU-accession.

Radioactive wastes: The issue of radioactive waste arose when the first nuclear power station was launched in Hungary (Paks). This nuclear power plant generates most of the radioactive waste in Hungary. To promote the safe and sustainable management of radioactive wastes, a special national project has been introduced. The first phase of the project will outline the complex strategy necessary for the management and disposal of all types of radioactive wastes. The project will also elaborate criteria for site selection, select disposal technologies, suggest potential regions for high and low level waste disposal, establish the financial basis for waste management, and address public acceptance.

Capacity-Building, Education, Training and Awareness-Raising: Frame curriculum regulates the information on waste in the Hungarian public education, especially in the subjects of chemistry, physics and history. For further information on these issues see under **Status**.

Information: No information available.

Research and Technologies: No information available.

Financing: Municipalities receive standardized support from the government budget based on the annual budget in order to solve the tasks related to solid waste management. The size of the support is determined according to the number of residents. These disbursements are debited from the budget allocation to general responsibilities of local governments or from the allocations for settlement operation. The treatment and disposal of municipal liquid waste may also be supported from central government allocations. The provisions of the Act on Targeted Subsidies also allow disbursements to support waste management tasks, for example, establishing regional landfills. Municipalities may set aside 30% of the income generated by environmental fines to create municipal funds to support the implementation of their responsibilities. They may also apply through tender for subsidies from government funds set aside for capital investment and development projects. These include: Earmarked Estimates for Regional Development, the Central Environmental Protection Fund, and Earmarked Estimates for Economic Development. The Central Environmental Protection Fund may be used to extend interest-free or concessionary loans, or to issue financial guarantees for credit purposes to applicants from the business sector. See also under **Programmes and Projects**.

Cooperation: Hungary takes part in international cooperation on waste management policies and regulation; in this regard, the most significant collaboration has been developed with the European Union as Hungary prepares for accession to the EU and should fully transpose the relevant standards and rules. International cooperation is important particularly in improving the management of hazardous wastes. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was ratified in 1990. Hungary is an active participant to the Basel Convention and supports collaboration through bilateral agreements with several countries. In addition, an EU's Phare project was carried out to create a strategy on hazardous waste management for the northwest region of Hungary.

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CHAPTERS 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS

Women: Decision-making: A department for the coordination of these assessments, decision preparation, information dissemination and the relevant actions has been established in the Ministry of Social and Family Affairs. The Council for Women's Issues was set up in 1999. This Council is formed within the framework of reforms in the administrative structures for the representation of various social and public interests. The basic responsibilities of the Council are: advice on the programme for action in the matter of legislation which are concerned with gender equality, initiate new programmes and adjustments to legislation for the enhancement of equal opportunities; contribute to/take part in the implementation of programmes, in the development and announcement of research and action programme funds and the requirements for participation; review the reports and information documents concerning women's equal opportunities. The governmental side of the Council for Women's Issues functions as an inter-ministerial committee as well, its objectives are to outline and initiate the proposals for decision-making in the matters of women's advancement and to monitor and coordinate their implementation. Status: The proportion, and the actual role of women in politics, substantially decreased after the political changes in 1989/90 and during the first years of the transition period. Lately, policies and measures are being formulated and implemented to achieve equality in all aspects of society and to eliminate obstacles to full participation of women in sustainable development. Cooperation: The Convention on the Elimination of All Forms of Discrimination Against Women was signed in 1980. Hungary also participated at the Fourth World Conference on Women and takes part in other forms of international cooperation on gender issues.

Children and Youth: Decision-making: The Ministry of Youth and Sport is the main government authority responsible for policy development and coordination on youth affairs. As concerns public participation, a special youth forum was convened which work is facilitated by the Ministry; besides that, the role of the Association of Hungarian Pioneers, the Scout organizations and many other youth organizations (e.g., the Green Heart, the Hungarian Association of 4H Groups) should be mentioned which are interested in the national decision-making process and which activities linked to some extent to problems of "sustainability", basically to nature conservation, environment protection and social issues. Status: The importance of the role of youth in overcoming the crucial socioeconomic problems, to achieve recovery of the economy, and to successfully solve the problems of transition to an "ecological-social" market economy was recognized in Hungary. The goal set by Agenda 21 that more than 50% of youth on a gender-balanced basis have access to appropriate secondary education or vocational training has been reached. Capacity-Building, Education, Training and Awareness-Raising: In 1995, the Parliament approved a new National Core Curriculum with environmental education, which became an integral part of teaching and a compulsory subject in public education. Approximately 92% of the students in the compulsory education are taught the concept of sustainable development in formal education. Apart from the National Core Curriculum, the professional orientation and the professional training programme also contains the details of environmental education and other aspects of sustainable development. Financing: Various youth programmes are financed and/or financially assisted from the budget of the ministry. Registered organizations, societies can request and receive funding from the Fund for Youth and from the Parliament.

Indigenous People: No information available.

Non-Governmental Organizations: Decision-making: The role of the non-governmental organizations with respect to various environmental problems in Hungary have increased significantly for the last 10-15 years. Today there are hundreds of local, regional and "nation-wide" environmental NGOs. The economic transition and the extensive privatization process have led to a substantial growth in influence of business NGOs, their interest groups, and the various chambers and associations. The National Environmental Council, an advisory body to the government consists of representatives of three large non-governmental constituencies, namely, the environmental NGOs, the representatives of scientists, and the business organizations. The basically inter-ministerial Hungarian Commission on Sustainable Development has also several NGO representatives. Programmes and Projects: NGOs have their own initiatives at both the regional/local levels and in terms of countrywide programmes. In 1996, as part of independent preparations for the pan-European meeting of environmental ministers in Sofia, environmental NGOs produced the framework programme for the sustainable development of Hungary. Several NGOs run projects, which are devoted to more or less extent to sustainable development (e.g., introducing integrated planning at municipality level, raising public awareness, proposing

comprehensive solutions for certain sectors based on principles and methods of sustainability). Status: see under **Decision-Making**.

Local Authorities: Decision-making: The Act on Local Governments was a clear reflection of the increased role and rights of the local authorities, the acknowledgement of the principle of subsidiarity, the recognition of the importance of local initiatives. Mandates for policy implementation at the local level is one of the key features of the political and socio-economic transition and for realization of goals of sustainable development at local/regional level. The Act on Environment Protection (1995) clearly expresses the idea of integrating environmental aspects in regional planning. The establishment of various associations of the local authorities reinforced their opportunities and influence in terms of decision-making, to present their interests in the government and Parliament level preparatory processes of those decisions and regulations, which concern the municipalities. Programmes and Projects: Many local authorities have developed environmental, nature conservation, and regional/local development programmes, which incorporated the principles and methods of sustainable development to some degree. But, as a matter of fact, comprehensive local Agenda 21 programmes have not been prepared. (The basic reasons for the lack of full-scale local Agenda 21 programmes are most probably related to the extensive socioeconomic changes that have characterized Hungary in the transition period.) Since 1991, a number of regional programmes called Community Environmental Action Projects (CEAP) were initiated to promote integrated regional development. The planning process was undertaken by an interdisciplinary team, in close cooperation with the Government and the Association of Local Governments. Status: During recent years, a set of new legal instruments, decision-making structures, and financial mechanisms have been adopted. Based on these mechanisms, many more initiatives to formulate and implement comprehensive local/regional integrated development programmes with particular emphasis on environmental priorities are expected in the future. Capacity-Building, Education, Training and Awareness-Raising: Some NGOs played important role in the formation and organization of sustainable development concepts and programmes. Some capacity building projects were accomplished through series of workshops and educational programmes. Despite these activities, one of the basic problems in this regard (not only at the level of the local authorities) is the lack of awareness of the principles, essence and approaches of sustainable development. Financing: Since 2001 governmental financial sources are available for local initiatives and the implementation of new development projects. Cooperation: Some local authorities have been involved in international cooperation (Sustainable Cities, ICLEI etc.).

Workers and Trade Unions: Decision-making: In general, workers and their associations/organizations do not yet participate in national Agenda 21 discussions or implementation of the related programmes. The interests of employees are represented by trade unions on the National Conciliation Council, which nowadays deals primarily with more concrete socio-economic subjects. There is a recent initiative to involve representatives of trade unions in the work of the newly established National Commission for Sustainable Development. Programmes and projects: The country participates in various ILO programmes and conventions, in particular those, which are relevant to awareness raising and the involvement of employees in safety regulations and conditions of the work place environment. Status: Measures to facilitate the creation of new working opportunities for the unemployed are adopted and implemented. Regional development policy also focuses on unemployment. Part-time employment and an extension of the education system to help workers get into the labor market are suggested as solutions to support a sustainable employment policy. Cooperation: Hungary has ratified the Conventions of the International Labor Organization (ILO).

Business and Industry: Decision-making: Most big enterprises and an increasing number of small and medium sized enterprises have themselves adopted integrated environmental programmes, reached relevant ISO-qualifications and some of them formulated more comprehensive sustainable development policies (unfortunately, the latter approach mainly means a focus on "sustainable growth" concept with supplementing social and environmental targets, but there are already business representatives who properly understand and tend to apply the sustainability concept and strategy). The policy-makers and government authorities support this trend through policies and financial instruments. The clearest signals exist in relation to the environmental pillar of sustainable development where, for instance, business representatives have direct involvement in the decision-making process through the National Environmental Council. In more general terms, interest groups and representatives of enterprises track new regulations and comment on planned changes in all areas, which broadly are related to sustainable development. Status: Many enterprises have adopted the stewardship concept, formulated and introduced environmentally sound technological, managerial standards and practices. The Hungarian Privatization and State Holding Company which coordinating privatization, takes into account

“inherited” environmental problems and sets the environmental criteria for new owners. Quality control systems and certificates, in relation to the International Standards Organization standard ISO 9000 for example, are spreading within Hungarian industry. Businesses are becoming “green” enterprises, such as the Hungarian State Railways Company. In the banking sector, environmental concerns and responsibilities have increasingly been taken into account.

Scientific and Technological Community: Decision-making: The Hungarian Academy of Sciences has presented the views of the scientific community on the state of science in the country and recommended the long term goals of this community, inter alia, in terms of providing scientific background for decision-making on the long term perspectives of socio-economic development of the country by taking into account the national circumstances, international tendencies-relations and environmental requirements. Status: Under the changing conditions and requirements, scientists seek new goals and opportunities in relation to the new socio-economic challenges, the problems raised by the transition process, the modernization of the country, and sustainable development. Increased opportunities for the research community to participate in international programmes, especially those of developed countries, for example, are considered very important. Cooperation: The scientific institutions, researchers, representatives of technological community actively participate in many international programmes devoted to various aspects of sustainability.

Farmers: Decision-making: Major laws have been adopted for the transformation of the property pattern since 1990. This includes legislation on compensation and the change of the status of agricultural cooperatives. As a result, this sector is undergoing radical changes in ownership systems and land tenure. The active agricultural population is decreasing; its percentage of the total labor force is about 8%. The interest groups of landowners, farmers revealed its views through various associations and organizations in order to influence the decision-making process. Programmes and Projects: There are series of programmes and financial mechanisms to facilitate the comprehensive transition and restructuring of the agricultural sectors and to assist the various stakeholders to maintain and modernize their agriculture-related businesses. Status: Agriculture has always been a significant sector of the national economy in Hungary. About 70% of total land area is suitable for agriculture production. Between 1948 and 1960, an intense process of developing collective farms took place resulting in profound structural changes to land use and agriculture as a whole. As a consequence of these structural changes, an intensive, specialized, and concentrated large scale farming system was established between 1960 and 1989. The political changes in 1989/90 and the consequent transition to a market economy resulted in substantial changes in this sector. One of the key challenges for all stakeholders, in particular, the farmers associations is the preparation for the EU-membership.

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CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS

This issue has been covered under the heading **Financing** in the various chapters of this Profile.

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CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT

Decision-Making: The most senior decision making structure is provided through a scientific policy committee chaired by the Prime Minister. Another important forum is the National Environmental Council, where one third of the members represent the scientific community. This council serves as the advisory body to government and assesses all programmes and planned legal instruments from an environmental point of view.

Programmes and Projects: A comprehensive National Environmental R&D Programme and the National Environmental Programme (1997-2002) pay great attention to the scientific requirements for decision makers. These requirements include research on environmental impacts; environmentally sound policies and technologies for various sectors; the innovation programme; the development of monitoring networks and information systems for the detection of changes in the state of the environment and identification of adverse impacts; relationships between environment, economy and society; and adjustments to environmental regulations of developed countries and the European Union. These programmes already take into account the changes in the structure and mandate of the scientific community, and the provisions of legal instruments such as the Act on Environmental Protection (1995) and the Act on Nature Conservation (1996). The new R&D concept for environmental protection and nature conservation (2001) extends the scope of research activities to sustainable development aspects as research on climate-change, sustainable energy-management, sustainable urban development, sustainable agriculture, sustainable transport etc. Besides the environmental aspects, other important components of sustainable development are also investigated (societal changes, tendencies in technological innovation, interlinkages of social and economic processes etc.). The most promising framework programme coordinated by the Hungarian Academy of Sciences is devoted to the strategic investigations on further development trends, requirements and options for the country which takes into account the expected internal and international processes, as well (e.g. the demographic tendencies, changes in the international trade, the implications of the EU-integration/accession etc.)

Status: The current socioeconomic transition has affected research institutions and the scientific community considerably. The resources available for science considerably decreased for the last decade and at present those hardly exceed 1% of the GDP. With budget constraints, the network of research institutes substantially narrowed and funding has decreased for research groups and activities. Unfortunately, opportunities for R&D within the private sector are not enough yet to provide additional resources. Nevertheless, the importance of science is recognized by the policy-makers. The government has a comprehensive initiative to enhance national scientific activities, the qualitative development of the research network, and the improvement of material-technical conditions necessary for its effective operation. The primary goal is to increase funding. The identification of the high priority study areas follows the principles of sustainable development. A special cooperative agreement has been adopted between the Government and the Hungarian Academy of Sciences on the conduct of scientific analysis, the provision of scientific advice on key issues of socioeconomic development, its international conditions and tendencies, specifically, the R&D aspects of environmental requirements. The scientific contribution has been significant for particular areas. In the mid-1990s, for example, a group of experts, commissioned by the Ministry of Agriculture, completed a strategy for sustainable development in agriculture for Hungary. Another group studied the various environmental scenarios and objectives for the country. A similar analysis has been prepared for the transport sector resulting in a Transport Policy Concept that shaped the long-term policy directions of the government. Scientists have examined the future of water management policy with special emphasis on environmental protection. Other areas were investigated by various academic institutes and discussed by the specialized committees and groups of the Academy of Sciences.

Capacity-Building, Education, Training and Awareness-Raising: See some information on capacities and capacity-building needs under **Status**.

Information: No information available.

Research and Technologies: No information available.

Financing: See under **Status**.

Cooperation: The scientific institutions, researchers, representatives of technological community actively participate in many international programmes devoted to various aspects of sustainability.

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CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

Decision-Making: According to the Co-operation Agreement between the Ministry of Education and the Ministry for Environment (1999), the two ministries complete together the state duties in the field of environmental education. They co-operate in the preparation of laws, in the elaboration of curricula and in the development of an up-to-date system of requirements for the public, vocational and higher education. The Environmental Education Concept, elaborated by the Ministry of Education and the Ministry for Environment for the period of 2001-2002 aims to bring up fully informed and conscious citizens who are able to take the responsibility for their environment.

Programmes and Projects: The National Core Curriculum has a separate chapter on environmental education. It became an integral part of teaching and a compulsory subject in public education. Approximately 92% of the students in the compulsory education are taught the concept of sustainable development in formal education. For the pre-school education, the Basic Programme for Kindergartens has been elaborated with the definition of the aims, the basic elements of knowledge and the values of environmental education. The Frame Curriculum integrated the impacts of environmental education into different subjects of school education. The Ministry of Education and the Ministry for Environment undertake the creation, the supervision and the support of the Environmental Education and Communication Programme Office in equal extent, as decided in the above-mentioned Co-operation Agreement. One of the main duties is the co-ordination of the implementation of the Concept and the annual Action Plans. The Office is also responsible for the co-ordination and supervision of forest-schools. The forest school is a programme, which lasts several days, provided for elementary, and secondary schools, where the learning process is based on co-operative and interactive activities in adequate environment. As concerns the promotion of public awareness of sustainable development principles, objectives, issues and problems, unfortunately, much less progress has been achieved. In this area, again, more concrete steps can be reported only in relation to such environmental issues, as publicizing the need for better conservation of the natural heritage, natural resources, the biological diversity or prevention and mitigation of various environmental pressures and adverse effects.

Status: The National Strategy on Environmental Education was elaborated in 1994 following the initiatives of civil organizations. The second version of the Strategy is now being under revision. It analyzes the possibilities and defines the recommendations for the formal and non-formal environmental education. The most important purpose of the Strategy is to acquire the knowledge and skills in order to sustain the natural and man-made environment. For further information, see under **Programmes and Projects**.

Capacity-Building, Education, Training and Awareness Raising: The preparation of the Environmental Consciousness Action Plan (which is part of the planned second National Environmental Programme, 2003-2008) is now in progress. Monthly journals dealing with environmental education are also published.

Information: No information available.

Research and Technologies: The National Institute for Public Education is realizing most of the research in the domain of environmental education. The Institute is conducting some cognitive research on environmental attitudes and on innovation with the help of a bottom-up approach. Apart from the Institute, research activities are conducted on environmental education at the Eötvös Lorand University of Sciences and the University of Szeged.

Financing: Both the Ministry of Education and the Ministry for Environment provide financial resources for the implementation of the Environmental Education Concept (HUF 120 million by each ministry). Financing is also available for such activities from the Central Environmental Fund operated by the Ministry for Environment.

Cooperation: Hungarian schools participate in two major international programmes: GLOBE and Science Across Europe. As for the bilateral relations, the Ministry of Education and the Ministry for Environment both are members of the Hungarian-Slovakian Co-operational Commission on Environment Protection and Nature Conservation and of its Forum on Environmental Education and Attitudinal Change.

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

Hungary attributes increasing importance to the cooperation with many developing countries and these activities particularly contribute to the capacity-building process within these countries. The guiding principles and policies on participation in international cooperation have also substantially changed after the political changes of 1989/90. Some features of these policies are mentioned in Chapter 2 and under **Cooperation** in various chapters of this Profile.

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CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

This chapter of the Agenda 21 deals mainly with activities undertaken by the UN system and the goals of further development and better coordination of the international institutional system.

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CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

Hungary actively participated in elaboration of various legal instruments, which were devoted to critical problems of sustainable development. Special attention was paid to the multilateral environmental agreements, however, other subject areas (international trade, economic cooperation, security, human rights etc.) were also considered as of key importance from the point of view of sustainable development of the country and for the sake of mutually beneficial participation in international cooperation. Hungary is a Party to all relevant international legal instruments and fulfils the commitments under these agreements.

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CHAPTER 40: INFORMATION FOR DECISION-MAKING

These issues of this chapter are covered partially under Chapter 8 and under the heading **Decision-Making** in the various chapters of this Profile.

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CHAPTER: INDUSTRY

Decision-Making: One of the positive signs of the socio-economic transition in Hungary was the increased environmental awareness within the industrial sector. Most big enterprises and an increasing number of small and medium sized enterprises have themselves adopted integrated environmental programmes, reached relevant ISO-qualifications and some of them formulated more comprehensive sustainable development policies (unfortunately, the latter approach mainly means a focus on “sustainable growth” concept with supplementing social and environmental targets, but there are already business representatives who properly understand and tend to apply the sustainability concept and strategy). The policy-makers and government authorities support this trend through policies and financial instruments. These include support to encourage increasing efficiency of resource use, reuse and recycling technologies, waste reduction or more broadly to introduce complex environmental management systems. Interest groups and representatives of enterprises track new regulations and comment on projected changes, in particular those planned policies, measures, financial and tax regulations which influence the social and environmental aspects of the business activities. The terms and practices of their early involvement in decision-making (like other stakeholders) other improved during the recent decade. Their representatives take part, for example, in the conciliation bodies on general economic, energy and environment policies. In case of preparation of decisions on concrete measures, ad hoc consultations are initiated, for instance, the Ministry for Environment has consulted with the Hungarian Association of Plastic Industry on the necessity and technical possibilities of phasing out CFCs used in plastic foam production.

Programmes and Projects: Enterprises in the chemical industry, refineries, several producers of building materials, paper factories, food producers and some other enterprises have adopted, to some extent, the stewardship concept and, based on it, formulated and introduced environmentally sound technological, managerial standards and practices. This progress is reinforced by changes to international trade regulations, the increasing share of trade with the industrialized countries, and the related environmental requirements. Changes to the tax and price systems related to natural resources, energy and raw materials represent a further essential factor. Environmental product charges and fines for environmental pollution also contribute to these changes. Business ventures focusing on environmental protection have increased rapidly in Hungary. The large-scale privatization process has also contributed to changing attitudes. The Hungarian Privatization and State Holding Company which is coordinating privatization, takes into account “inherited” environmental problems and sets the environmental criteria for new owners. Quality control systems and certificates, in relation to the International Standards Organization standard ISO 9000 for example, are spreading within Hungarian industry. Businesses are becoming “green” enterprises, such as the Hungarian State Railways Company, which is expanding its services in an environmentally sound way. In the banking sector, environmental concerns and responsibilities have increasingly been taken into account. As a most recent comprehensive initiative by the government, the “Szechenyi Economic Plan” was formulated and adopted by the Parliament which addresses among its priorities some industrial sectors and activities.

Status: In general, industrial and agricultural production decreased during the late 1980s and these tendencies continued after the political changes in 1989/90 during the first half of the 1990s. As a consequence, emissions caused by industries have fallen, and the quality of environment in certain regions has improved. Industrial structures have also changed; metallurgy, the mining sector, the construction industry, the machine industry etc. declined. There were also severe social consequences of these changes with increasing unemployment statistics. Some of these industries and new “upcoming” industries are now dynamically increasing. The structural changes can be considered unambiguously positive from the point of view of the overall efficiency of the industrial sector with decreasing specific material and energy consumption, increasing production quality standards and improving environmental performance. The general decrease of “old” industrial production reduced direct emissions and, in certain regions, resulted in an improved state of environment. Both structural changes and the large-scale liquidation of industrial companies significantly reduced emissions of air pollutants. The volume of industrial wastewater effluents requiring treatment was also significantly reduced.

Capacity-Building, Education, Training and Awareness-Raising: Both the government agencies and the business representatives, organizations increased activities in area of awareness-raising, e.g., to inform the companies on the importance and benefits of the “greening process” of the industrial activities, ISO-certificates,

long-term business planning etc. The concept and the means of sustainable development for this sector are now also in the curriculum of the education. More specifically, training in the field of environmental engineering is carried out at all relevant universities and colleges of Hungary: the total number of student is approximately 2000.

Information: No information available.

Research and Technologies: The Hungarian Government has taken a decision in 2000 on launching the National Research and Development Programme. The Ministry of Education in 2000 published a call for proposals for R&D actions in five thematic fields. One of the most important scientific priorities of the Programme is “Cleaner Technologies of Industry”. The budget of these projects is about HUF 100 million.

Financing: Financial resources are available for certain industrial projects from the funds operated by the Ministry of Economic Affairs and Ministry for Environment for the above mentioned “modernizing” and investment activities. Significant budgetary resources are provided now for the projects, which meet the priorities and criteria of the “Szechenyi Economic Plan”.

Cooperation: No information available.

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CHAPTER: SUSTAINABLE TOURISM

No information available.

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