

JOHANNESBURG SUMMIT 2002

LITHUANIA



COUNTRY PROFILE



UNITED NATIONS

INTRODUCTION - 2002 COUNTRY PROFILES SERIES

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

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

The purpose of Country Profiles is to:

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

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

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

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

NOTE TO READERS

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

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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: Coordination of international cooperation responsibilities are with the Ministries of: Agriculture; Economics; Education and Science; Environment; Foreign Affairs; Health Care; Social Security and Labor; and Transport and Communications. A National Commission on Sustainable Development, representing 10 ministries, was established and approved by the Government in July 2000. The Information Center on Sustainable Development was created in Lithuania at the National office of the Regional Environmental Center for Central and Eastern Europe Countries with financial support of UNDP. Several senior officials from the ministries are included in activities of the Agenda 21 for the Baltic Sea Region - Baltic 21. Active international relations and cooperation are realized between some local governments with their foreign partners regarding local Agendas 21 programmes. Lithuania works in 8 sectors of the Baltic 21 - Agenda 21 for the Baltic Region - and is a lead party in two Sectors: Forestry and Education. Lithuania also cooperates with other countries of the Baltic Sea area as a member of Helsinki Commission, country of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, and a member of Programme Implementation Task Force (PITF) created for the implementation of Joint Comprehensive Environmental Action Programme of the Baltic Sea area. Scientific and technological experts, Individual farmers, local authorities, NGOs, business and industry are involved and participate as advisers, working group experts in preparation of some programmes and projects of the new legal acts and in discussions on some documents. The private sector is also involved into international cooperation activities and programmes. Representatives of the private sector are involved as consultants as well as partners of implementation of some programmes.

Programmes and Projects: As one of countries in transition, Lithuania is temporarily not able to develop programmes and projects regarding acceleration of sustainable development in developing countries. Lithuania's priorities now are activities related to domestic sustainable development policies.

Status: Lithuania has been cooperating at different levels (bilateral; regional; and international) in gathering and sharing information on sustainable development, for example Baltic 21. Some challenges in building multi-stakeholder partnerships are in development of a legal system for industry, waste management, energy efficiency, management of natural resources, combating against crimes, etc. Capacity building is most needed for project administration and management. Development of an integrated Environmental Management Information system is the most urgent need for Lithuania. The most immediate attention for bilateral or multilateral cooperation requires various social and some economic issues.

Capacity-Building, Education, Training and Awareness-Raising: A lot of different programmes and projects for capacity building related to improving the collection, assessment, management, and dissemination of information have been implemented in Lithuania with the assistance of the Danish Environmental Protection Agency. The Ministry of Education and Science in cooperation with the Regional Environmental Center for Central and Eastern Europe (Country Office Lithuania) implemented the Project "School Agenda 21", and the Ministry of Environment constantly provides information on the state of environment. In addition, training courses are organized by the Baltic Environmental Forum, and educational programmes for Local Agendas 21 for Lithuanian municipalities are organized by the Environmental Center for Administration and Technologies (ECAT).

Information: The Department of Statistics under the Government of the Republic of Lithuania is responsible for general statistical information management and dissemination at the national level. The Ministries of Environment, Economy, and Social Security and Labor are responsible for the collection, analysis, management, and dissemination of information and data. The integrated information network related to sustainable development is not developed in Lithuania. There are systems of information in environment, energy, transport and some other sectors. Potential users of the information and data on bilateral, sub-regional, regional, or multilateral/international cooperation can use the Internet to access each Governmental institution's website. Government documents

(decisions, other legal acts) are published in the special newspaper “The State News”. Ministries, other governmental institutions, and NGOs are publishing some newsletters and bulletins. There are also organized open discussions.

Research and Technologies: The Lithuanian budget or IFIs finance consultative companies working on promoting environmentally sound technologies. The Government is regulating technology flows in promoting environmentally sound technologies, receiving information from foreign environmental ministries and other environmental institutions (companies), and taking legal requirements regarding implementation of technologies in Lithuania. Joint research or other activities related to sustainable development between experts at ministerial level, scientific institutions, and the private sector are developed in Lithuania by organizing of working groups, national and international conferences, workshops.

Financing: In 1997 and 1999, some 60 US\$ million from public sources were invested in the environmental field, in particular water treatment facilities. The total allocation for environmental protection to be made from various sources in 2000 amounts to about 100 US\$ million. A National Environmental Financing Strategy provides for investment projects up to the year 2015. To enable Lithuania to fulfill the EU environmental requirements, yearly allocations totaling US\$ 50-60 million for investment projects in the water and waste sectors will have to be made. The biggest part of investment will be earmarked for the construction of drinking water and wastewater treatment facilities, to build distribution and collection networks and the implementation of waste management projects.

Cooperation: Lithuania has ratified many conventions important for sustainable development, including the Framework Convention on Climate Change, the Convention on Biological Diversity, the Convention for the Protection of the Ozone Layer with the Montreal Protocol, the Convention on Long-Range Transboundary Air Pollution, the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, the Convention on the Conservation of European Wildlife and Natural Habitat, the Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, the Convention on the Protection of the Marine Environment of the Baltic Sea Area, the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and the Convention on Environmental Impact Assessment in a Transboundary Context. In addition, Lithuania has signed bilateral agreements on cooperation in various fields of activities, including transfer of environmentally sound technology and know-how. Close cooperation is also with some international organizations such as UN/ECE, ENEP, UNDP, UNESCO, FAO, WHO, OECD, the Regional Environmental Center for Central and Eastern Europe, the Baltic Environmental Forum, Committees of Senior Officials of the Baltic Council of Ministers. In addition, Lithuania recently joined the WTO.

Investment grant support from the European Union through ISPA funds at about 50 million US\$ per year for 2001-2006. GEF granted 6.9 mill US\$ for Kretinga geothermal station, and 4.2 mill US\$ for implementation of new technologies decreasing ODS which were used in Lithuanian chemical and refrigerators industry. The major bilateral cooperation programmes or activities involving provision of financial resources for sustainable development are between Lithuania and EU, Denmark, and Scandinavian countries in the form of subsidies or soft loans and with some IFIs (loans). The EU PHARE programme granted 36.6 million EUR from 1993-1999. Funds were also granted for WWTP construction in three Lithuanian cities - Sweden granted 13.1 mill US\$, Finland granted 6.6 mill US\$, and Norway granted 1.5 mill US\$. Denmark assigned approximately 28 mill US\$ in form of soft loans for smaller WWTPs in Lithuania.

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

Decision-Making: The Ministry of Economy is in charge of modelling the economy development strategy and shaping the investment policy, while the Ministry of Finance is responsible for allotment of public investment from all financing sources to concrete appropriation managers and investment projects. Legal measures to promote an open, non-discriminatory and multilateral trading system are ensured by the Law on Trade adopted by Lithuanian Parliament in February 1995. Since 2001 Lithuania is a member of WTO.

Programmes and Projects: The investment process in the Republic of Lithuania is regulated by the Law on Investment of the Republic of Lithuania No VIII-1312 adopted on 7 July 1999. Since 1995, a triennial Public Investment Programme is developed every year as an instrument to realise the public investment policy. The said programme is updated annually and covers all the sources of financing with their allotment scheme to appropriation managers and concrete investment projects. Every programme is approved by the Resolution passed by the Government of the Republic of Lithuania.

Status: At present the Public Investment Programme for 2001-2003 is in force. It has been approved by the Government Resolution No 359 adopted on 30 March 2001. The Medium Term Economic Development Strategy is also under development. The basic economic development priorities will be outlined in it.

Capacity-Building, Education, Training and Awareness-Raising: Improvement of specialists' professional skills is conducted on the means of the EU PHARE and UK "Know-how" funds. At present the necessity of continuing this process persists.

Information: All the information on issues of investment policy or the economic development strategy is entered onto the Internet home page of the Ministry of Economy. Adopted laws, amendments thereof, Government Resolutions and amendments thereof regarding issues of investment and the economic development strategy are made public by publishing them in respective issues of the "Official Gazette" ("Valstybės žinios").

Research and Technologies: No information available.

Financing: Means of the state budget, the Privatisation Fund, loans received on behalf of the Government, loans with a sovereign guarantee and own resources of economic entities as well as grants from foreign financial institutions are used to finance planned state investments.

Cooperation: In the process of development of different priority investment projects and their financing, co-operation is maintained with the World Bank, the European Investment Bank, the European Bank for Reconstruction and Development, the Nordic Investment Bank, the Governments of Denmark, Sweden, Norway and Finland.

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CHAPTER 3: COMBATING POVERTY

Decision-Making: The World Summit on Social Development held by the United Nations (UN) in Copenhagen in 1995 had a significant impact on the commitment to investigate and solve the problem of poverty in Lithuania. In early 1999, the President of the Republic of Lithuania established the National Social Committee and charged it with the responsibility of preparing the National Poverty Reduction Strategy. It is a National document, which formulates main goals and objectives of the state policy in reduction poverty and measures to implement them. The Poverty Reduction Strategy was elaborated through a consultative process and launched in the middle of 2000. It embraces two strategic goals: to eliminate extreme poverty in Lithuania by 2003, and to reduce relative poverty from 16.8 % in 1998 to below 10 % in 2005. To achieve these goals, the strategy highlights new directions in various areas of public policy, varying from employment and education policies to taxation and social security measures with particular emphasis on the rural residents, where the problem is most acute: here the poverty incidence rate is almost twice the national average.

Programmes and Projects: There are few programmes and projects implemented in Lithuania. UNDP project “*Poverty Evaluation and Reduction*” has been implemented in Lithuania. It aimed to measure and map poverty, identify its root causes, formulate policy recommendations, and establish an institutional framework to help reduce poverty. The Government of Lithuania is preparing *Programme of Implementation of Poverty Reduction Strategy*. This programme will transform the aspirations of poverty reduction to the discourse of practical measures and estimate the necessary resources. A new project “*Assessment of the Implementation of the Poverty Reduction Policies*” has been initiated in support of the recently established multi-sectoral Poverty Monitoring Commission, an independent watchdog entity in charge of monitoring Lithuania’s progress towards the implementation of its social development goals. The main project objective is to identify and communicate changes in poverty status in Lithuania and assess the efficiency and effectiveness of the poverty reduction measures applied by the responsible governmental agencies in the framework of the poverty reduction policies’ implementation. The project will provide inputs for the adjustments of the poverty reduction policies as well as enhance information on destitute population thus allowing for improving the targeting of poverty alleviation and reduction measures

Status: The unemployment rate in Lithuania increased during the past few years, and this has led to a substantial reduction in standard of living in some sectors of society. Access to primary health care, clean water and sanitation, and primary education is rather sufficient with some exceptions. The Government of Lithuania started to prepare Programme of Implementation of Poverty Reduction Strategy. It is expected to be finalized in 2002.

Capacity-Building, Education, Training and Awareness-Raising: The focus is placed on Capacity Building for Rural Poverty Reduction. The Capacity-Building measures have been prepared for Poverty Reduction in Rural Areas. The focus of attention is civil society empowerment, institutional structures, and the policy environment. Capacity building, training and awareness-raising is very important part in most of the projects and programmes implemented.

Information: According to the latest data available, approximately 600,000 Lithuanian people, or 16% of the total population live in poverty. This poverty level is estimated using the relative poverty line and is the main indicator of poverty (According to the calculations of the Lithuanian Statistics Department, it represents 50 % of the monthly average expenditure). At least 30,000 people or almost 1 % of the Lithuanian population live in extreme poverty. These are people whose consumption expenditure is lower than even the lowest poverty line.

Table 1. Poverty lines in Lithuania in 1996-2000 (per household member per month in Lit) (US \$ 1 = 4 LTL)

	1996	1997	1998	1999	2000
Extreme poverty line	90.8	110.8	123.3	125.0	125.0
Relative poverty line	226.2	248.6	276.7	274.6	260.0
Fixed relative poverty line	226.2	246.4	258.9	261.0	263.6

The poverty levels estimated by the basic poverty lines:

Table 2. Poverty levels according to relative and absolute Poverty Lines 1996-2000(in %)

	1996	1997	1998	1999	2000
Extreme poverty line	1.0	0.8	0.8	0.9	0.8
Relative poverty line	18.0	16.6	16.0	15.8	16.0
Fixed relative poverty line	18.0	16.3	13.2	13.1	16.6

In Lithuania, the problem of poverty was universally recognised in the mid-1990s, when it became clear that transitional period is going to be lengthy prolonged and its social costs are going to be very high. Although the history of economy rises and declines in Lithuania is comparatively short it showed that the poverty is not going to decrease without special measures. The poverty level of the most vulnerable population groups is increasing even during the periods of economy upswing. Therefore, poverty reduction issues require the Government and social partners, including non-governmental organizations (NGOs) to play an active role in this process.

Research and Technologies: Research on social exclusion has been started in 2001. It aims at social integration in society. It consists of 5 modules. It is expected to have final results of this research at the end of 2003.

Financing: Programmes are basically financed from National budget. Some projects are financed by UNDP.

Cooperation: There is very close cooperation with different institutions in combating poverty. Three main levels of the process of poverty reduction: state, municipalities, NGO's. The Government is the main initiator of measures intended to fight poverty. The Minister of Social Security and Labour is directly responsible for the coordination of poverty reduction measures. Various ministries are involved: Ministry of Agriculture, Ministry of Health, Ministry of Economy, Education, Finance, etc. Concrete poverty reduction measures have to be implemented particularly at the municipal level. Citizens, NGO's, interest groups, social partners, and the mass media are invited to contribute to poverty reduction.

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CHAPTER 4: CHANGING CONSUMPTION AND PRODUCTION PATTERNS

Decision-Making: The Ministries of Economy, Agriculture, and Environment are the responsible government bodies for sustainable consumption and production patterns. At the local level, eight regional environmental protection departments and environmental protection agencies deal with environmental protection matters related to consumption and production. Lithuania is in process of harmonizing national legal acts in accordance with the directives of the European Union. The following laws seek to promote sustainable consumption and production: Environmental Protection Law, Law on Water, Law on Waste Management, and the Law on Environmental Monitoring. In response to the directives of the European Union, the Ministry of the Environment adopted the Order on Eco-labeling of Products in 1995. Economic instruments encompass taxes on state natural resources, pollution charges, user charges, tax waivers, tax differentiation, subsidies, loans and funds. NGOs, local authorities, industry, and scientific and technological communities participate in working groups, steering committees and other activities related preparing legal acts and guidelines.

Programmes and Projects: Lithuania has an Environmental Strategy Action Programme, National Quality Programmes, a Programme for Ecological Farming, a National Energy Efficiency Programme, and a Programme for Development of Environmental Industry and Cleaner Production. The following projects are implemented to enhance cleaner production: the Norwegian-Lithuanian Cleaner Production Training Programme, Cleaner Production in Lithuanian Tanneries, Cleaner Production in Lithuanian Textile Industry, and Cleaner Technology Demonstration Projects in Lithuanian Plating Industry.

Status: Industry seeks to attain more sustainable production e.g. by cleaner production assessments and projects that were adopted in enterprise. International standard 'ISO 14040: Environmental management systems, Life-cycle assessment, Principles and Structure' is going to be adopted as the national standard.

Capacity-Building, Education, Training and Awareness-Raising: Education and awareness-raising aspects are included in the Programme for Development of Environmental Industry and Cleaner Production in Lithuania. The Norwegian-Lithuanian Cleaner Production Training Programme addressed production and consumption options that promote sustainability. Media is involved in the Environmental Education Strategy and Action Programme of Lithuanian Society.

Information: Information on demonstration projects is disseminated in national seminars. Preparation of manuals of cleaner technologies in industry is going on. Relevant information on consumption and production patterns can be accessed via the Internet.

Research and Technologies: Clean and environmentally sound technologies are promoted and applied in production by an integrated pollution permit system, demonstration projects, education, training, and by creating an infrastructure for promotion of cleaner production.

Financing: Financing is provided by the private sector in partnership with the State Budget, State Fund for Nature Protection, and international assistance. One of the primary sources of financing is revenue from the environmental taxes. Bilateral and multilateral donors provide important financial support. The Environmental Investment Fund was established to support projects. EU requirements for governmental subsidies are taken into account.

Cooperation: Government participates in international cooperation with Denmark, EU (PHARE), European Bank for Reconstruction and Development, Sweden, World Bank, NEFCO, Norway, and the US EPA. Lithuania participates also in the work of the Baltic Council of Ministers, the Nordic Council of Ministers, OECD, and UNEP in the area of changing consumer patterns.

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CHAPTER 4: CHANGING CONSUMPTION AND PRODUCTION PATTERNS - ENERGY

Decision-Making: Responsibility for energy issues is with the Ministries of Economy, Environment Communication, Agriculture, etc. The departments responsible for energy include the Energy Development Department, Energy Resources' Department, and Nuclear Energy and Radioactive Waste Handling Division. The Lithuanian Energy Agency (LEA), was established in 1993, responsible to the Ministry of Economy. Within the LEA, the Energy Conservation Programme Directorate is responsible for preparing the National Programme for Energy Efficiency and Conservation, constant revision and update and implementation of the Program in industries. Besides, the Directorate is responsible for organizing and coordinating activity related to investigation and evaluation of possibilities to use local, renewable and secondary energy resources, developing suggestions for rational usage of the resources and also dealing with environmental issues. LEA is responsible for implementation of the Special Program for Implementation of Energy Conservation means (former Energy Conservation Fund). The Directorate is also responsible for performing functions of the executive body for the National Energy Efficiency Program and supervising and coordinating process of implementation of the National Energy Efficiency Program. The State Commission for prices and energy control is responsible for energy pricing and control of the activity in the energy sector. The state Energy Inspectorate is responsible for supervision and control of energy equipment with a view to ensuring reliable, efficient and safe supply and usage of energy resources. The main documents that outline energy efficiency policy are as follows: the Law on Energy, Law on Biofuel, the National Energy Strategy, the National Energy Efficiency Programme, the Programme for production and usage of biofuel and bioenergy, the National Solar Programme in Lithuania for 2000-2005. The main legislation defining environmental aspects in energy sector are as follows: the Law on Environment Protection, the Law on Ambient Air Protection, the Law on Nuclear Energy, the Law on Taxation of Environment Pollution, the Law on Radioactive Waste Management, the National Environmental Strategy, the National Strategy for implementation of UN FCCC, LAND 12-98 "On Emission Limit Values form Small-Scale Stationary Combustion Sources", the Requirements for Ambient Air while Burning Fuel in Small-Scale Combustion Sources.

Programmes and Projects: Programmes and projects currently carried out are as follows: the National Energy Efficiency Programme, the Special Programme for Implementation of Energy Conservation Means, Programme for Production and Usage of Biofuel and Bioenergy, the National Solar Programme of Lithuania for 2000-2005, activities related to implementation of the project in the SAVE II program, Project of Energy Service Companies in Lithuania, Project of Small-scale Heating Entrepreneurship, Project of Baltic Chain Clearing House and Information Network for Energy, OPET-EU Network Project (Lithuania joined OPET-EU in 1998), Project for Reconstruction of Small-Scale Boiler Houses to Use Biofuel, Twinning Project, and the Project on Regulatory Support for the Ministry of Economy (Energy Acquis).

Status: In 1999 oil products accounted for 36,2 %, nuclear energy - 31,8 %, natural gas - 22,6 %, coal-1,4 %, local fuel (peat and wood) - 7,6 %, hydroenergy-0,4 % of Lithuania's energy needs. In 2000 local fuel accounted for 8,5 % of all energy needs of Lithuania. The two major inputs into primary energy supply are oil products, natural gas and nuclear energy. Renewable energy sources, mainly biomass and hydro, are starting to show promise. Lithuania has a high energy intensity, significantly higher than the EU average. Inventory of regulated pollutants shows that sulfur oxide and nitrogen oxide emissions were reduced twice compared to the reductions in eighties. Emissions of carbon monoxide and VOC (volatile organic compounds) were reduced considerably. Emissions from Stationary combustion sources at controlled companies in Lithuania accounted for 120 thousand tons. The major part of the emissions consisted of the fuel combustion emissions: 46 % of sulfur dioxide, 10 % of nitrogen oxide and 20 % of carbon monoxide. Current challenges include controlling wastewater treatment and air quality.

Capacity-Building, Education, Training and Awareness-Raising: With the assistance of the Governments and specialists from foreign countries, namely: Denmark, Sweden, Germany, Great Britain, France, Norway, Finland and the USA, projects on usage of local, secondary and renewable energy resources are implemented and counseling is carried out, training seminars, conferences are held with the aim not only to disseminate the best practice of the implemented projects but also to install similar projects throughout the country. Information and awareness-raising aspects of energy conservation are included in the National Energy Efficiency Programme. The

Energy Efficiency Centre of EA is one of the implementing bodies of this Programme. In addition the Centre holds training courses for energy auditors and managers. There are no special provisions related to capacity building in the sphere of Environment administration of Lithuania. Specialists are trained according to general training program comprising subjects of ecology and other special issues of environmental protection. Administration officers concerned have to attend courses on environment protection.

Information: Investigations were carried out to find out both companies exceeding emissions of nitrogen oxide and sulfur dioxide, and the most vulnerable ecosystems. The information was submitted to the governmental institutions in order they could evaluate the strategy of reduction of the emissions mentioned. The outcome of evaluation of various ecosystems for acid sediments in Lithuania is included in the Report "Evaluation of impact of acid sediments on the ecosystem of the country (plants, soil and water)". The Report is also available on the Web.

Research and Technologies: While implementing the Programme, scientific research and practical activities are being carried out and legal regulatory and technical documents are developed. Scientific and educational institutions and industries implement the activities. Most of the activities are being carried out by the specialists of Lithuanian Energy Institute, Institute of Agricultural Engineering, Thermal Insulation Institute, Vilnius Gediminas Technical University, and Kaunas Technology University. The Energy Efficiency Centre of Lithuanian Energy Institute is responsible for collecting, investigating, and transferring the best local and foreign practice of energy efficiency to both the specialists and general public. The Energy Efficiency Centre of Energy Agency is involved in energy auditing activities. The experts from the Centre together with the consultants from Denmark carried out a number of energy and environmental audits in industry.

Financing: Projects are being implemented and studies carried out with assistance of the Governments of foreign countries, Phare Programme, the EBRD and international funds, transfer of know-how and experience, and local specialists participating. The aforementioned documents help in organizing and implementing projects related to energy efficiency, energy saving and utilization of local, renewable and secondary energy resources. Other funds provided by various banks of foreign countries are used for implementation of the mentioned means and projects. Implementation of projects of energy efficiency and usage of local and renewable energy resources are carried out with the funding provided by the Housing and Urban Development Fund and the Special Programme for implementation of energy efficiency means. The Environment Protection Investment Fund of Lithuania has as its main aim to support both public and private sectors while implementing environment protection projects and projects mitigating harmful impact on environment.

Cooperation: With the assistance of the Governments and specialists from foreign countries, namely: Denmark, Sweden, Germany, Great Britain, France, Norway, Finland and the USA, projects on usage of local, secondary and renewable energy resources are implemented and counseling is carried out, training seminars, conferences are held with the aim not only to disseminate the best practice of the implemented projects but also to install similar projects throughout the country. With the assistance provided by the Government of Sweden through STEM and technical assistance of Swedish companies, ten boiler houses in Lithuania were converted to use wood fuel. Specialists of environment and energy sectors together with the specialists from Sweden are involved in solving emission-trading issues to meet requirements of Kyoto Protocol. Energy Agency together with Motiva Energy Information Centre (Finland) is implementing demonstrational project of small-scale heating entrepreneurship. The main aim of the project is to create a basis for future cooperation and investment in this sphere. The Government of Denmark provided assistance to reconstruct five boilers to use straw as fuel. Currently the overall production of straw-fired boilers in the country is 10 MW. Last year a demonstrational project of peat usage was implemented with the assistance of the Government of Denmark at the boiler house of Sepeta settlement of Kupiskis district. The project is expected to speed up the usage of peat as fuel throughout the country. Ministry of Environment of Denmark provided assistance to implement a biogas usage project at the agricultural company "Vycia". The biogas plant of 0,3 MW capacity uses pig manure to produce biogas. Operation of the demonstrational geothermal plant of 40 MW capacity was started in Klaipeda. The plant was installed with the assistance provided by the World Bank, GEF, the Government of Lithuania and the Environment Agency of Denmark.

It is expedient to evaluate the country's geothermal resources and include the calculated potential into the state balance of resources. Therefore, both data and technologies are to be collected about geothermal energy and spheres of their usage. A demonstrational project of solar collector of 150 square meters' area to heat water at Kacergine Children Sanatorium is underway. In 1992 Lithuania signed the UN FCCC that was ratified by the Parliament of Lithuania in 1995. The National Strategy to implement the UN FCCC in the country was developed. In 1997 Lithuania signed Kyoto Protocol. In 1979 the country joined Geneva Convention on atmosphere pollution long distance transfer. Lithuania seeking access to the EU, took upon responsibility to harmonize the National legislation with the requirements of the EU while implementing principles of sustainable development. The process involves harmonization of the EU requirements with the National requirements in the spheres of environment protection and energy efficiency.

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CHAPTER 4: CHANGING CONSUMPTION AND PRODUCTION PATTERNS - TRANSPORT

Decision-Making: The main responsible body for the forming of transport policy is the Ministry of Transport and Communications. In addition, the Ministries of Finance, Foreign Affairs, Environment, Social Affairs and Labor, and Economy are also responsible for decision-making in the transport system. Local public authorities are responsible for local transport issues such as development of local public transport including infrastructure. The main laws regulating the activities of different modes of transport include the following: Railway Transport Code, Road Transport Code, Law on Civil Aviation, Law on Use of Air Space, Inland Waterways Transport Code, Law on Klaipeda State Sea Port, Law on Merchant Shipping, Law on Road Traffic Safety, and Law on Non-Engine Transport. Also included are National Environmental Standards LAND 2000 - 14, LAND 2000 - 15, Transport. Minister Orders on Technical Regulation to Road Transport and Periodical Testing, Law on New Economy Activity's Environmental Impact Assessment, Law on Municipality and Law on Public Information. The main policies relating to transport include the following: The National Transport Development Programme, The National Programme, Transport and Environmental Protection, The Vilnius Comprehensive Plan, approved by the Council of the Vilnius City Municipality and The Comprehensive Plan of the Territory of the Republic of Lithuania. The goals and objectives of the national transport policy are defined in the Programme of Government, in the National Programme for the Adoption of the *acquis*, and in the National Transport Development Programme. The main objectives include: well-balanced integration into the EU transport network and transport services market, and gradual improvement of the technical level of the infrastructure by ensuring State support guarantees; institutional reforms, restructuring and privatization of transport companies aimed at organizing a more effective regulation of the transport sector. Lithuanian laws ensure that the public e.g. people living in rural areas with limited mobility also participate in the decision-making process. Most of transport operators belong to various associations and decision-making, planning management are also coordinated and discussed with these associations.

Programmes and Projects: Related programmes include 1992 State Programme "Transport and Environmental Protection", 1996 National Environmental Protection Strategy, 1997 PHARE Study "Lithuania. Transport and Environment: Comprehensive Strategy", 1999 PHARE. ES Multi-Country Transport Programme "Transport and the Environment. A Multi-Country Approach", 1992 National Energy Use Efficiency Improving Programme, revised 1996, 2000, 1998 Bio-fuel Programme, and 1996 Traffic Safety Programme.

Status: Lithuania has a well-developed transport network and it is accessible for users, except railway transport which is under restructuring. The quality and regularity of transport services only partly meet needs/demand of people in rural areas. Since January 1998 leaded gasoline use was banned in Lithuania. Current challenges include rail transport efficiency, road transport efficiency, traffic safety and damage to the environment.

Capacity-Building, Education, Training and Awareness-Raising: Capacity-building and training activities include State Road Transport Inspection, State Railways Inspection, State Water Transport Inspection, Civil Aviation Inspection and Educational Centers for experts, technical staff and service agents together with foreign technical assistance in various modes of transport. Education and awareness-raising activities include: Vilnius municipality together with private sector every year - "Fresh Air Campaigns; Finger book "Transport and Environment", ECAT; Articles on Transport and Environment issues in the main newspapers; Interview by radio and other mass-media; "Traffic Safety" schools; National campaigns, competitions on improving knowledge about Traffic safety rules. Electronic billboards with information about traffic conditions are installed on Lithuania's main road. Information on traffic conditions is broadcast everyday on: TV, Radio and in newspapers.

Information: Some scientific data and information on vehicle emissions have been selected only on the main road of Lithuania, Vilnius-Klaipeda. There is currently not sufficient statistical data regarding EU requirements. In 2001, the Project "Forming of statistical environmental data in the transport sector according to the Eurostat requirements" together with Danish Transport Ministry is starting.

Research and Technologies: Lithuanian scientists and experts are interested in participation of implementation of the EU 5th Framework Programmes transport research works. Research activities in Lithuania related to the

implementation of the National Transport Development Programme are co-coordinated by the Ministry of Transport and Communications. Various transport modal institutions (road and seaport administrations, national associations, Lithuanian railways, etc) also order the projects related to the transport research studies.

Financing: Funds from the state budget are allocated for research activities related to the implementation of the National Transport Development Programme on an annual basis. Building infrastructure, supply of fuel and research and development of alternative fuels and transport efficiency are funded through private and national budgets. The enforcement of regulations and standards is funded through the national budget.

Cooperation: Lithuania has acceded to the Convention on International Civil Aviation, the Convention on the International Marine Organization, and the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR). At the same time, Lithuania began to apply the regulation on the international carriage of dangerous goods by railway (RID), which is a part of the annexes of the Agreement on International Railway Transport (COTIF). Lithuania has close cooperation and special Committees and programmes in the Transport sector with the Baltic Sea Region countries (Estonia, Latvia, Poland, Germany, Denmark, Scandinavian countries), West and East European countries including CIS countries. Lithuania is a member and participates in activities of ECMT (European Conference of the Ministers of Transport), United Nations, IMO (International Maritime Organization), ICAO (International Civil Aviation Organization).

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CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

Decision-Making: The Ministry of Social Security and Labor is the most directly concerned with demographic issues, but the Ministry of Health Care and the Migration Department at the Ministry of Interior are also involved in decision-making in this area. There is as yet no national policy on demographic dynamics and sustainability. The Department of Statistics is in charge of collection of statistical data in Lithuania including the demographical ones.

Programmes and Projects: Depending on demographical indicators, different projects are carried out in various governmental ministries and other institutions. Many international projects are carried out at the Department of Demography of the Lithuanian Institute of Philosophy and Sociology.

Status: For the last five years demographic changes in Lithuania have violated long-term trends. For the first time after post-war period the population started to decrease: total population of Lithuania in 1995 - 3717.7 thous, in 2000 - 3698.5 thous, in 2001 - 3692.6 thous. The population distribution is decreasing in the towns and increasing in the rural areas. Most of the families in Lithuania have one or two children. For the few last years, the fertility indicators decreased among women in all fertility groups. Economic difficulties, housing problems and unemployment are the main reasons for this decrease in births. Unemployment rate in the beginning of 2001 in Lithuania was 13.2 %. Life expectancy at birth is slightly increasing in Lithuania: in 1995 - 71.49 (Males - 63.53, Females - 75.15), in 2000 - 72.87 (Males - 67.62, Females - 77.93).

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

Information: Information is available on web sites of the Ministry of Social Security and Labor (<http://www.socmin.lt>), Ministry of Interior (<http://www.vrm.lt>), Department of Statistics (<http://www.std.lt>), Lithuanian Institute of Philosophy and Sociology (<http://neris.mii.lt/LFSI/index.htm>), etc.

Research and Technologies: Experts of scientific institutions mostly carry out research on demographic dynamics and sustainability in Lithuania.

Financing: State budget and support from international organizations are the main sources of financing.

Cooperation: There are plenty of close relations and co-operation agreements between different institutions of Lithuania and foreign countries. Lithuania cooperates with neighboring countries through joint meetings and seminars between the relevant bodies.

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CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH CONDITIONS

Decision-Making: The Ministry of Health is responsible for the general supervision of the health care system. Health care is currently divided into three levels: Primary health care services act as a “gatekeeper” to specialized care; Secondary services are delivered in central regional hospitals; Tertiary care is provided in university hospitals, providing an advanced medical care. The main body responsible for public health care administration is the State Public Health Service. It manages the public health network including ten county public health centres with their local branches, nine specialized public health centres (in total 55 institutions). The State Public Health Service has subordinate bodies - specialized public health centres - to deal with prevention of communicable diseases, health education, environmental health, nutrition, information and other public health functions. In 1995 - 1997 a lot of legislation has been adopted, some of them have been of key importance in that it seeks to establish the legal framework for the health care system. Regulatory agencies involved in licensing, accreditation, registration and control procedures have been created under the supervision of the Ministry of Health. The first document described priorities in health care was the National Health Programme, adopted by Parliament in 1998. Action plan on Food Safety was adopted in 2001, National Environmental Health Action Plan (NEHAP) is drafted and prepared for Government’s approval. National Strategy of Public Health Care has been recently adopted by the Government (2001). It defines main directions for reform of public health system: development of legislative acts, improvement of management, creating healthy alliances, development of active society responsible for its own health, creating system for product safety, improvement of environment, promotion of healthy lifestyle, healthy nutrition, physical exercise and reducing of tobacco and alcohol use, drug use control and prevention of communicable and chronic non-communicable diseases.

Programmes and Projects: Main National Health Programmes approved in the Lithuanian Health Programme (1998) are being implemented for disease prevention (mental health, cardiovascular diseases, tuberculosis, oral health, AIDS and sexually transmitted diseases, cancer and accidents), health promotion and education, alcohol, drug and tobacco control, implementation of healthy lifestyles in educational institutions, nutrition improvement for infants and children under three years of age, ensuring the quality of health care services, health of children with impaired development.

Status: See table:

Indicators	Figures
Life expectancy at birth (2000)	72.87
Number of live births per 1000 population (2000)	9.2
Total fertility rate (TFR), number of children per woman(1999)	1.27
Maternal mortality rate, per 100 000 live births (MMR) (1999)	13.8
Under-five mortality rate, per 1000 live births (UFMR) (1999)	11.2
Infant mortality rate per 1000 live births (IMR) (2000)	8.5
DPT3 immunization (%)	96.4
Standard death rate (SDR), per 100 000 population (2000)	941.43
Viral hepatitis per 100 000 population (2000)	14.3
Tuberculosis incidence per 100 000 population, all forms (2000)	63.0
Syphilis incidence per 100 000 population (2000)	31.7
AIDS incidence per 100 000 population (1999)	0.13
Human development index (HDI)	0.789
Percent of regular daily smokers age 15+ years, men/women (2001)	51,5 % / 15,8 %

The Health Policy of Government Programme for 2000/2001: Drug Control and Drug Abuse; Cancer Prevention and Control; Traumatism Prevention; Improvement of Primary Health Care; Openness of the health care system

and orientation to the patient; Mental health Programme; Cardiovascular Diseases Programme; Implementation of equity in payment methods; National health information system; Health promoting schools; Food and nutrition action plan; Tobacco Control; Surveillance of communicable diseases and tuberculosis; Nursing; Promotion of primary health care activities; Reconstruction of medical institutions.

Capacity-Building, Education, Training and Awareness-Raising: The concept of health promotion and health education is a priority in Lithuania. The main priorities for health education on the national level are prevention of risk factors and promotion of healthy lifestyle and prevention of diseases. Graduate and postgraduate education of public health and health education professionals is being carried out in Kaunas Medical University, Public Health Faculty (founded in 1994) and Vilnius University, in programme BRIMHEALTH and other international courses. Persons willing to practice as doctors and dentists must have a university diploma in medicine, a certificate of professional qualification and a license for medical practice. According to the Law on Medical Practice adopted in 1996, licensing of all medical doctors and dental practitioners has been initiated. Licenses are issued for a period of 5 years. The Ministry of Education administers them, which together with the Ministry of Health, is responsible for curriculum development.

Information: The main source of information on Health status of Lithuanian population is Lithuanian Health Information Center.

Research and Technologies: Technological development within the health care sector has made it possible to introduce a number of new treatments and to operate on a larger part of population, including the elderly.

Financing: The financing for the health care services is derived mainly from general taxation - the base amount of the financing comes from state and municipal budgets. After adoption of the Law on Health Insurance (1996) the third party payer in the form of a statutory health insurance system appeared which is administered by the State Sickness Fund. During the last two years, total expenditure for health care has remained at 4 to 4.6 % of GDP.

Cooperation: There is a good co-operation between health care institutions, cross-sectoral co-operation between the Ministry of Health Care or the State Public Health Centre and some other Lithuanian ministries and institutions - Ministry of Agriculture, Ministry of Environment, Ministry of Transport, scientific institutes, etc. There are several international bilateral co-operation agreements carrying out in the field of health care. Lithuania is a member of various international health organizations and conventions.

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CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

Decision-Making: The Ministry of Environment is the main coordinator of territorial planning in Lithuania. The coordinators in Counties are nominated persons in County Governor's administration, in Regions - municipalities chief architects services. The territorial planning is regulated by the Law on Territorial Planning (1995) and supported by the Construction Law (1996). The principle of sustainability has been adopted as the major general principle for preparation of the Comprehensive plan of territory of Lithuania. It is meant also for improvement of inter-sectoral co-ordination at the local, regional and national levels. Abrupt changes from state control to practically full reliance on private initiative in housing issues introduced new trends in settlement development. The Regulation on public participation in planning process contributed to transparency of use of land and better use of public and private land. It responded to the political need of direct public participation in management and development of the territory, contributes to transparency of decision-making.

Programmes and Projects: The State housing programme (July 1992) has been especially oriented to investment policy, reduction of energy consumption and improvement of the characteristics of the existing building stock (thermal insulation). Many national programmes serve for better motivation of settlement development. One of them is the State Programme of use and protection of entrails of earth resources (1994). The Hazardous Waste Treatment State Programme (1999) should be mentioned as well. According to the Territorial planning programme promoting sustainable development, Comprehensive plan of territory of Lithuania (started 1996), Study on Spatial Development of Lithuanian-Polish cross border region (first phase completed 1997), preparation on Study of Spatial Development of Lithuanian - Belorussian (2000) cross border region have been carried out.

Status: Agenda 21 emerged as a result of long lasting efforts of specialists concerned about the way, development took in the last century. But awareness of the need of such of principles to guide it - was there in various human activities far much earlier. There are many examples for that. First steps towards creating post-war settlement structure development in Lithuania were made in early sixties, when nation-wide comparatively evenly dispersed urban centres' structure based on historically developed centres was proposed. In this way sustainability not only from the environmental point of view, but also of cultural heritage was taken into account. After regaining of independence (1990) major changes in spatial planning organization took place due to changed status of the country and new/retrieved responsibilities in all levels of administration as well as new ownership relations (private ownership restored). Principle of subsidiarity, decentralisation of decision-making is gradually gaining its momentum. The last period (1994-2000) brought changes into administrative division of the state territory. Former national and local municipal levels were complemented by a regional one (since 1994), based on inherited structure of urban centres. The number of local municipalities was increased from 56 to 60 (since the end of 1999). New challenges, issues, tasks were to be dealt with. Principle of sustainability being major general principle for all development issues, - is adopted as guiding one in comprehensive plan of territory of Lithuania (the preparation is under completion). The Regulation on Public Participation in the Planning Process (the last one in 1996) improves utilisation of public and private land and answers to political need of direct public participation in management and development of home and neighbourhood. Abrupt changes from state control to practically full reliance on private initiative in housing issues introduced new trends in settlement development. State housing programme (July 1992), was especially oriented to investment policy, reduction of energy consumption and with regard to it - improvement of existing building stock characteristics (thermal insulation). This means general change of approach from extensive use of resources towards a sustainable one. Growth of population is very slow, which together with reduced industrial production creates easier conditions in this transition period of the society from environmental point of view (natural resources, waste, atmosphere; supply of shelter, infrastructure and service). In general, public transport is the main means of transport in spite of fast increasing numbers of private cars, which is beneficial to the environment.

Recently set technical restrictions to vehicles will serve to minimize negative impacts on environment in settlements. Engineering infrastructure existing in settlements of Lithuania still needs improvement, especially from water treatment point of view (need of modernisation, reconstruction and extension). It is serious burden on the budgets of local municipalities. Fresh water resources protection and rational use was ensured through means of

making comprehensive plans of settlements meeting existing requirements of regulations. Hazardous Waste Treatment State Programme (1999) has envisaged general system for all the country. Domestic waste dumping system exists, but needs improvement and modernisation. Many National Programmes serve for better motivation of settlement development. One of them is State Programme of use and protection of entrails of earth resources (1994). Creating and maintaining natural sites united into system within urbanised environment as well as tied up with that one in rural territories gradually helps forming an interrelated settlement and nature structure. By financial means regional policy aims to support balanced living conditions all over the country. A difficulty still is rural settlements under changed economic conditions of their existence and management.

Capacity-Building, Education, Training and Awareness-Raising: The Ministry of Environment, Vilnius Gediminas Technical University, Kaunas University of Technology, Vytautas Magnus University promote education and training on sustainable human settlement development in Lithuania.

Information: The Ministry of Environment is periodically presenting information in its annual reports. Articles in national and local newspapers are also rather often. Information is available on web site of the Ministry as well (Internet address: <http://www.gamta.lt>).

Research and Technologies: Engineering infrastructure in Lithuanian settlements still needs improvement, especially in the case of water treatment (need of modernization, reconstruction and extension).

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

Cooperation: Lithuania cooperates with the neighboring countries through bilateral and multinational programmes, agreements, meetings and seminars. Lithuania participates in co-operation with the Nordic and Baltic Sea Region countries in the field of territorial planning since 1992. Co-operation among 11 Baltic Sea Region countries has been carried out through VASAB programme. Lithuania chaired VASAB Committee of Spatial Development CSD/BSR in 1998 - 1999 and together with Secretariat of the CSD/BSR presented International co-operation on territorial planning in Baltic Sea Region and VASAB input to Agenda 21 of the Baltic Sea Region (Chapter 8 Spatial Planning for Sustainable Development in the BSR) in 7 Session of UN Commission for Sustainable Development in New York in 1999. Preparation of multinational projects "Vision and Strategies around the Baltic Sea 2010", "VASAB 2010+", "BSR URBAN NETWORK", "MATROS" have been carried out. The projects were under development into documents INTERREG II C. Transborder cooperation between Poland and Lithuania is carried out since 1995 on the basis of the Agreement between relevant national level Lithuanian and Polish bodies. The first phase of the common cross - border project is completed. There are agreements for co-operation between the Lithuanian Ministry of Environment and corresponding ministries in Finland, Denmark, The Netherlands, as well as Baltic States and Republic of Belarus. The activities include exchange of information, technical assistance, provision of legal documents, etc. Cooperation in sustainable housing was established with Nordic countries as well as among countries in Central and Eastern Europe through preparation of housing and urban indicators intended for the United Nation Conference on Human Settlements Habitat II.

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CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

Decision-Making: A National Council for Sustainable Development of the Republic of Lithuania has been approved by the Government in 2000. Several governmental bodies and research institutes as well as various NGOs are represented. It is headed by the Prime Minister of the Republic of Lithuania. The main institutions responsible for integrating environment and development in the Country are national ministries and the local authorities. The main principles of environmental legislation are fixed in the Constitution of the Republic of Lithuania and in the Law on Environmental Protection. Further environmental principles and integration of environmental requirements into other activities are embodied in the Laws on Taxes for the State Natural Resources and Taxes for the Pollution of the Environment as well as in the Law on Environmental Impact Assessment. EIA is foreseen in the Law on Environmental Protection, in the Law on Protected Areas, the Law on Construction, in the Law on Territorial Planning and other laws and legal documents, such as the Waste Management Law, Law Hazardous Materials and Products, Radiological Safety Law, Fauna Law, Flora Law, Law on Protected Fauna, Flora and Mushroom Species and Communities, etc. Lithuania's first Environmental Protection Programme was developed in 1992. A new programme was developed within the framework of the Lithuanian Environmental Strategy, adopted by the Parliament in 1996. The effective implementation of this Strategy Action Programme requires good coordination and feed-back between all involved state, municipal and non-governmental organizations

Programmes and Projects: There are plenty of programmes and projects in relation to integrating environment and development. It is confirmed in several laws and other legislation acts.

Status: The Law on Territorial Planning adopted in 1995 and the Law on Environmental Impact Assessment, adopted in 1996, confirm integrating environment and development in decision-making process. Territorial planning is a process necessary for implementation of integrated national and regional environmental protection policies. The best form of environmental protection is achieved by rational and balanced use of State's territory. Preparation of Comprehensive plan of the territory of Lithuania is under completion. Lithuania is moving steadily towards these goals. A significant step here was preparation of the country's National Environmental Strategy. According to National Environmental Strategy, the problems resulting from urban development could be solved by preparing a land management scheme for Lithuania and its regional administrative units, municipalities and settlements. The NES proposes that town plans are amended to make them relevant to the new social and economic conditions. The main institutions responsible for supporting the implementation of the Action Programme are the municipalities, the Ministry of Environment. The Ministry of Environment executes the State regulation of the use of natural resources and environmental protection management. Other institutions solve such problems within the limits of their competence. The local authorities conduct part of implementation function of the Law on Environmental Protection. The Ministry of Environment has the leading role in coordinating and implementing the National Strategy. There are big rights given to the public in environmental protection policy in Lithuania. In the 7th article of the Law on Environmental Protection it is foreseen that public has right to information on environmental status and use of natural resources, information on impact to the environment by the planned activities, other environmental information. Non-governmental organizations have equal rights with public (citizens) according to the 7th article of the Law on Environmental Protection - "Rights of Citizens and Public Organizations". This rule gives the right to NGOs to participate in discussion on environmental protection questions. Participation of NGOs in environmental protection is confirmed by the Law on Territorial Planning adopted in 1995 and the Law on EIA. There are 30 contracts written with NGOs, which receive special editions with specified environmental information. Organizations and separate bodies (private as well as legal entities) may object the decisions in the administrative law violation cases by environmental protection officials, other decisions and resolutions to the Court.

Capacity-Building, Education, Training and Awareness-Raising: See **Status Report**. Seminars on territorial planning and environmental issues for civil servants of counties and municipalities are organized twice per year.

Information: The Act on Environmental Protection gives the public a right to information on the environment, the use of natural resources, environmental impact of planned activities, and other environmental information, which is published as well as accessible on web sites.

Research and Technologies: The Ministry of Environment, Vilnius Gediminas Technical University, Kaunas Technological University, Vytautas Magnus University, Institutes of Botany, Geography and Ecology are the main institutions for research and technologies.

Financing: The main sources of funding for implementation of the National Environmental Strategy and other legislation with relation to integrating environment and development are: state budget, budgets of municipalities, state and municipalities nature funds, and foreign support.

Cooperation: Lithuania cooperates with neighboring countries through joint meetings and seminars between the relevant bodies. There has also been cooperation between Lithuanian municipalities and municipalities in the Baltic Sea Region countries. Lithuania is taking part in the international project "The Vision and Strategies for the Baltic Sea Region 2010", "VASAB 2010+" (Spatial development action programme of Baltic Sea Region").

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CHAPTER 9: PROTECTION OF THE ATMOSPHERE

Decision-Making: Responsibility for protecting the atmosphere in Lithuania is ensured by the Ministries of Environment; Health Care; Transportation; Agriculture; and Economy. The State Environmental Protection Inspectorate, 8 regional environmental departments and 54 city and district environmental agencies, and the Joint Research Center perform the monitoring of the implementation and enforcement of the environmental legislation. The principal laws in Lithuania related to this area are as follows: the Environmental Protection Law, the Ambient Air Protection Law, Law on Environmental Monitoring and the Law on Pollution Charges. There are also many Orders of the Ministry of Environment setting standards for air quality, emissions from stationary and mobile sources and for fuel. The New National Energy Strategy adopted by Lithuanian Parliament, proposed a number of environmental measures: promotion of energy conservation, increased use of renewable energy resources, improvement of combustion processes, reducing emissions of atmospheric pollutants, and the use of cleaner fuels. There are several economic instruments used for protection of the environment. These include taxes on natural resources, permits, pollution charges on the emission of pollutants into the atmosphere, and penalties for exceeding emission limit values. The overall objective of the project Environmental Policy Development and Regulatory Capacity Building Programme in Air Sector is to build upon the existing Lithuanian approximation process in the area of environmental compliance and enforcement in the air sector with particular emphasis on strengthening institutional and regulatory frameworks. Particular emphasis will be placed on the development of an ambient air quality management system based upon protecting human health and cost effectiveness and on the foundation of a basis for modern environmental compliance in accordance with the requirements of EURO air sector legislation. All major groups specified in Agenda 21, particularly NGOs, local authorities, and scientific and technological community, are involved very widely in the decision-making process regarding the protection of the atmosphere as qualified advisors, experts in preparation of legal acts, municipality programmes for traffic systems, air monitoring, etc.

Programmes and Projects: Examples of projects relating to atmosphere include The Ministry of Environment's plan to modernize laboratory equipment and ambient air quality monitoring systems in Lithuania and A Country Programme on the Phase-Out of Ozone Depleting Substances. Implementation of the pilot project in the Karst Region, which can be regarded as a promising model for agriculture, is directly interrelated with the commitments of the United Nations Framework Convention on Climate Change. According to the National Programme on ODS phase out in Lithuania CFC is to be ceased by the year 2001.

Status: Lithuania is not a country that currently has a large air pollution problem. There are four main pollutants: SO₂, NO_x, solid particulates and heavy metals. The energy sector is a major source of sulphur and nitrogen-oxide emissions, but it contributes relatively small proportions of the other pollutants. The transportation sector contributes also to pollution and emissions. It is important to meet European Union standards to reduce these emissions. Since 1991, the estimated air emissions of the main pollutants from stationary and mobile sources in Lithuania have decreased on average by a factor of 2. Circumstances for positive restructuring of agriculture when implementing the strategy for climate change, are especially favorable today. It is possible to avoid the former chemical way of farming and exercise sustainable or bio-organic agriculture instead.

Capacity-Building, Education, Training and Awareness-Raising: Lithuania still lacks programmes on climate change issues for students of both higher, special high and secondary schools. Elementary knowledge on ecology is included into the curriculum of biology, chemistry, and physics though not fully integrated and comprehensive. Good measures to promote public awareness of climate change and protection of the atmosphere are active disseminating of information by environmental NGOs and rather often articles in this field in mass media. Periodic bulletins of environmental monitoring data, information of mass media are also provided. The main target groups for education and training are research and education institutions, State and management institutions of all levels (governmental/ county/ local administration), and the sector of economics.

Information: In the Republic of Lithuania, an inventory of greenhouse gases and their absorbents was made in 1995. The mapping of critical loads and exceedances for nitrogen and sulphur have been conducted with the aim of defining the most sensitive terrestrial ecosystems and providing the decision making organizations with a quantitative information as the basis for assessing the strategies of emission reduction for nitrogen and sulphur oxides in Lithuania. As the first step the assessment of sensitivity of various ecosystems to acid deposition in Lithuania has been performed. The results are presented in a report “Assessment of influence of acid precipitation on national ecosystem (plants, soil and waters)”. The Joint Research Center of the Ministry of Environmental Protection and regional departments of environmental protection are responsible for the implementation of the monitoring program. Each year data about air status are submitted to international data centers on the bases of international agreements. There are three automatic monitoring stations in Vilnius, which provides data on the Internet in order to inform public rapidly.

Research and Technologies: The Ministry of Environment is planning to modernize laboratory equipment and ambient air quality monitoring system in Lithuania. To more accurately estimate the amounts of GHG gases, an inventory must use the IPCC methodology of the UP-DOWN method, and additional studies have to be carried out. This first of all concerns identification of national emission factors for CO₂, H₄, N₂O gases, separate technologies or production and perfection of already initiated assessment of pollutants emissions of HFC, CFC, PFC. Some of the technologies and alternative or renewable energy sources available are hydropower, solar energy, geothermal energy, indigenous wood fuel and biogas.

Financing: During the last six years approximately 1 billion liters (approx. 250 million Euro) has been invested in environmental protection. Sources of funding for environmental investment are the State budget, Environmental funds, foreign loans and foreign grants. Of the revenue from the charges and penalties, 70% goes to the Environment Protection Fund, 20% to the Environment Protection Investment Fund and 10% to the State budget. All public priority investments are covered by the Public Investment Programme (PIP) which include projects to be financed from the State Budget, loans and grants taken on behalf of the State, foreign loans guaranteed by the State and earmarked funds in Municipal Budgets.

Cooperation: The Ministry of Environment of the Republic of Lithuania actively enlarged its activity in multinational agreements/conventions with the Governments of Lithuania, Estonia and Latvia, Sweden, Finland, Germany and others. Lithuania participates in the Swedish Programme for an Environmentally Adapted Energy System (EAES) in the Baltic Region and Eastern Europe. In 1992, Nordic and Baltic countries set up an integrated monitoring system. In Lithuania there is one EMEP transboundary pollution measuring station for monitoring of air quality (both long-range transboundary air pollution and precipitation) according to EMEP standards. Lithuania participates in warning systems developed to comply with the Helsinki Commission’s Recommendations on the prevention of air pollution. In 1996, the National Strategy for the Implementation of the United Nations Framework Convention on Climate Change was developed and adopted by the Lithuanian Republic Government. The President of the Republic of Lithuania signed the Kyoto Protocol in October 1998. Lithuania has joined the Convention on the Long-range Transboundary Air Pollution in 1994. Lithuania also is involved in the CC:TRAIN programme, developed by the Climate Change Secretariat and the United Nations Institute of Training and Research (UNITAR).

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

Decision-Making: The Ministry of Environment is responsible for territorial planning, preparing and adopting relevant regulations, norms and standards as well as preparing policy documents since 1998. Sustainable management of natural resources, especially soils, is implemented through national legislation. The Ministry of Environment prepared a new Law on Soil Protection. An updated legislation on coastal zone management, a new law on coastal zone are under preparation. The Government of Lithuania assists local governments in issues of protecting and managing coastal zone and its dune ecosystems. The Parliament of the Republic of Lithuania has enacted a Law on the Amendments to the Law on Land Reform and of the Law on Land Lease. The Cadastre and Register of Land and Other Real Property were established on 1997 as a state enterprise. According to the Comprehensive plan of territory of Lithuania, the National Development Plan and the National Environmental Protection Strategy, sustainable planning and management of land resources is implemented through the optimization of land use. In the context of the Environmental Protection Strategy, short, medium and long term priorities are developed for the management of natural resources and landscape protection, for the improvement and optimization system of protected areas, and for the prevention of urban and agricultural landscapes from degradation especially in protected areas. All decisions for adopting and revising local land use plans by the Law on Territorial Planning were passed to the local authorities; preparation of comprehensive plans of counties is under responsibility of counties.

Programmes and Projects: According to territorial programme - The Comprehensive Plan of Territory of Lithuania, Study on Spatial development of Lithuanian - Polish border region are being carried out; according to cooperation programme of the Baltic Sea Region Countries in the field of territorial planning - Project "VASAB 2010 PLUS" (2001) started.

Status: The integrated approach of the planning and management of land resources is a pre-condition in preparation of documents relating to land resources in Lithuania, in policy development, preparation of programmes and projects, of special requirements for use of land and forests, prevention of urban and agricultural landscapes from degradation, etc. Sustainable management of natural resources, especially soils, is a background of the national legislation. A great attention is granting to the optimization of land use, to raising awareness and promoting public participation in decision making process. Recently the Manual for Environmental Impact Assessment in Lithuania is published (2001).

Capacity-Building, Education, Training and Awareness-Raising: The Lithuanian University of Agriculture, Vilnius University, Institute of Architecture and Construction, Vilnius Gediminas Technical University, Kaunas University of Technology, Vytautas Magnus University, Institutes of Botany, Geography and Ecology. The following major groups are important to the sustainable planning and management of land resources: State, regional and Local Authorities, NGOs, scientists and technologists.

Information: Information on planning and management of land resources is presented in published Reports of several scientific institutions as well as Ministries of Agriculture and Environment. It is available also on web sites.

Research and Technologies: The main institutions for research and technologies are Lithuanian University of Agriculture, Vilnius University and some institutions subordinated to the Ministry of Agriculture.

Financing: The main sources of funding are: state budget, budgets of municipalities, state and municipalities nature funds, and foreign assistance. The state budget allocations for the land reform in 1998 amounted to 30.853 million LTL (8 million US\$).

Cooperation: Within the framework of its bilateral development co-operation, Lithuania is supported for various programmes and projects: Preparation of Planning Scheme for Nemunas delta Regional Park, Denmark; Integrated

Coastal Zone Management Projects, PHARE; Biodiversity and Landscape Conservation, PHARE; Preparation and Implementation of Curonian Lagoon Management Plan, HELCOM, Denmark; Via Baltica spatial development zone, INTERREG II C Baltic sea region, PHARE. Special attention is given for training activities in the field of land use planning and projects with aspects relevant to land resources management.

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CHAPTER 11: COMBATING DEFORESTATION

Decision-Making: Forestry as a whole is under the control of the Ministry of Environment of the Republic of Lithuania. The Department of Forests and Protected Areas within the Ministry of Environment is primarily responsible for forest policy and legislation concerning forestry in Lithuania. The General Forest Enterprise has responsibility for state forest management and commercial activities of all 42 State Forest Enterprises. Forest Control Division within State Environmental Inspection is responsible for ensuring that all forest activities are sustainable and maintaining environmental quality. The Ministry of Agriculture takes active part in forestry matters, as well, especially in EU accession respect. Within the last few years, remarkable progress was made to develop legal and regulatory framework, economic policy, financial instruments and informational means in the Lithuanian forestry sector. The Forest Law adopted by Parliament (1994; amended in 2001) set a regulatory basis for sustainable forest management by taking into account the changes in ownership, economic aspects and ecological requirements. The Forest Law establishes rights and duties of all forest managers, owners and users in the Republic of Lithuania to utilise, reproduce, grow and protect forests, strikes a balance between the interests of forest owners and society, sets the main principles of forest management. All silvicultural measures are aimed at the establishment of productive and resistant stands and protection of biologic and genetic diversity in forests. At the light of implementation of the Forest Law, from 1994 to 2001, a number of rules and regulations have been issued and amended, including Regulation on Forest Use and Protection in Nature Protected Areas, Regulation of Sanitary Forest Protection, Rules of Fire Prevention Service, Hunting regulations, Regulations on Reforestation, Rules of Forest Harvesting, Rules of Roundwood Sale, etc. The liberalisation of management of private forests has been provided in updated Regulations on Management and Use of Private Forests.

Lithuania has jointed Rio de Janeiro, Strasbourg (1990), Helsinki (1993) and Lisbon (1998) Ministerial Conferences on Protection of Forests in Europe Resolutions. Therefore, Lithuanian forest policy is based on the principles of sustainable and multiple-use forest management, protection of biodiversity, increasing of forest area via afforestation of abandoned agricultural land, development of forestry research, education, extension etc. The Forest law covers all main issues of forest policy: trends of forestry policy, forest ownership, forest management and supervision, economic regulation of forestry, forest use, regeneration, growing and felling, forest protection etc. Some IPF proposals for action were taken into consideration while preparing forest policy and strategy. The network of nature protection areas was strengthened within the last few years. Structural and protection quality improvements were followed by the increase of protected areas. Guidelines for Conservation of Biodiversity in Commercial Forests were prepared in 1996, Recommendations were made in 1996 for Conservation of Rare Forest Habitats and Proposals for the Improvement of the Protection of rare Forest Birds' nesting Sites. Lithuanian Biodiversity Conservation Strategy and corresponding action plan was prepared by the Ministry of Environmental Protection and approved in 1998. Seeking to ensure the sustainable forest management, appreciable progress in forest certification has been made. On July of 2000 the certification process started in two state forest enterprises (totally 70 000 ha of state forests). UK Company "SGS Forestry" which certifies according OUALIFOR programme and is accredited by FSC carries out the certification. It is planned that at the end of the year 2001 these two state forest enterprises will obtain FSC certificates. It must be noted that the traditional planning and control system in Lithuania fulfils most of the mandate of forest certification in general and all mandates in sustainable forest management in particular. Therefore, forest certification in Lithuania is not related with essential reorganization of the country's forest sector. Rather, it could improve public understanding of sustainable forestry.

At present the new Forestry policy statement as the separate document is under preparation. In 1999-2000 the FAO project "Development of the Private Forestry Sector in Lithuania" has been preceded. During the implementation of this project the FAO experts assisted Lithuanian specialists in the process of the formulation and preparation of the Forestry policy statement, carried out a preliminary assessment of Lithuania's current legal status in relation to the outcomes of the IPC process, General Declarations and Resolutions adopted at the Third Ministerial Conference on the Protection of Forests in Europe (Lisbon 1998), discussed compliance with international standards on forest management. The first draft of the Forestry policy statement is prepared. It was submitted for comments and suggestions to NGOs and other interesting parties. After their comments and suggestions the draft of the Forestry policy statement will be updated and presented to the public discussions. It is expected that new document on forestry policy will be approved by the Government in the year 2002. According to the IPF proposals for action, the

non-governmental organizations have been involved in the process of legislation and development of forest policy and strategy. Separate working groups representing various interests and consisting of governmental and non-governmental organizations have been set up to consider drafts of different regulations concerning forest management. In order to improve the participation on the highest level a Forestry Advisory Council was set up to assist minister to his decision. The Council consists of representatives from all fields of forestry. Scientists engaged in environment and forestry science provide essential information to decision-makers as well. Lithuanian Green Movement and Lithuanian Fund for Nature (WWF partners) actively pursue the various aspects of sustainable forestry, conservation of forest areas of specific value, and related questions. Forest Owners Association of Lithuania, which was founded in April 1993 is a fast growing organization with countrywide organizational structures: local association and the co-operatives of private owners. The Association represents forest owners interests in Governmental and others institutions, and has influence upon legal acts.

Programmes and Projects: Forestry and Forest Industry Development Programme has been approved by the Government in 1994 and updated in 1996. This programme is closely related to Lithuanian national sustainable development strategy. Some of IPF proposals for action have been taken into consideration while preparing Forestry and Forest Industry Development Programme. The Action Plan, which is annexed to the programme, foresees the actions to be undertaken up to the year 2003. In this Programme and Action Plan the principles of sustainable forest management were introduced in a broader sense. Forestry and Forest Industry Development Programme has linkages with Programme of Diversification of activities in areas less suitable for farming and with Rural Development strategy. The Programme also promotes the use of wood based energy what is closely related to the National energy strategy. Afforestation of abandoned agricultural lands, which is a part of the rural development strategy, is reflected in Forestry and Forest Industry Development Programme as well. The Programme annually assesses the short-term trends in supply and demand for wood. The long-term trends in supply and demand for wood have also been assessed.

Various studies indicated that about 500,000 ha of currently agricultural land should be converted to other land users, for the most part of forestry. Some amount of SAPARD means is foreseen to use for afforestation programme. In order to promote the sustainable planning and establishment of new forests on agricultural lands in Lithuania, the Lithuanian - Danish project "Afforestation of abandoned agricultural land based on sustainable planning and environmentally sound forest management" was initiated in 1999. The project aims at turning marginal agricultural land in to a richer forest based on socially, economically and environmentally sustainable principles to the benefit of the Lithuanian and International society. Bilateral Lithuanian – Danish project "Management Plans and Programs for Nemunas River Delta Regional Park" strive for maintenance of biological diversity in Nemunas Delta Regional Park through local participation in sustainable resource use. Ongoing the Lithuanian – Swedish project "Wood fuel development in Lithuania" aims at finding and creating horizontal and vertical integration in the handling of wood fuel in ordinary forestry and supply systems. The main objective of the project is to increase the use of wood fuels in Lithuania. The Lithuanian - Swedish project "Pilot Woodland Key Habitat Inventory In Lithuania" is launched. The purpose of this project is to inventorize and protect unique and most ecological valuable forest habitats. Lithuania is a member of EUFORGEN since 1995 and actively participates in the programme activities. As a result of such co-operation Guidelines for the Conservation of Genetic Resources were developed in 1996. Comprehensive national program on the Conservation of Genetic Resources is under preparation.

Status: According to the data for January 1, 2001 the forest land covers 30.9 % of the country's territory. The structure of ownership of forests has been considerably changed after the restoration of independence in Lithuania at 1991. Since the beginning of land reform the ownership rights were restored to more than 187.5 thousands forest owners and the share of private forests has reached 22.7 % of total forest area. The average area of private forest holding is 3.4 hectares. However, the process of restitution is still going on and after the completion of land reform, it is estimated that private forests will occupy about 40-45 % of the total forest area. According to the tree species composition, pine (36.6 %), spruce (23.1 %) and birch (20.0 %) stands prevail in Lithuanian forests. Growing stock in the country's forests totals 371.7 million m³. The forest area and growing stock per capita are 0.57 ha and 106 m³ respectively. The Lithuanian policy of forest use is based on the principles of sustainable and multiple-use management and conservation of forest resources. In rather big part of forests (29 %) due to environmental

requirements (protection of biodiversity, protective functions of forests, etc.) restrictions to the forest management are applied. Commercial forests make up 71 %. In these forests management activities have comparably small restrictions, however, general silvicultural and ecological requirements should be followed. The forest management has always been under strict professional control therefore annual felling has never exceeded the sustainable limits of the allowable annual cut. Over the recent years the felling account about 5 million m³ annually. According to experts the potential annual cut of 6.2 million m³ could be maintained for coming ten years. Forestry and forest industries play important role in Lithuania's economy. During recent years value added in forest and timber industry sector was increasing steadily, annually contributing 2.6-3.0 % of gross domestic product in Lithuania.

Capacity-Building, Education, Training and Awareness-Raising: Consequent actions towards education and raising of public awareness in relation to the conservation of biodiversity are being implemented recently. Educational curricula, programs of various courses for university and college degree forestry students, state forestry employees, forest owners and forest workers as an important part also includes biodiversity conservation issues. These activities are aimed not only at forestry professionals and forest owners but also cover broader auditorium, e.g.: schoolchildren, students with environmental background, forestry related institutions and NGO's. At the highest level, the Faculty of Forests, Lithuania University of Agriculture, Kaunas, provides degree courses in Forestry and Applied Ecology. The Faculty has continuing education programmes for the staffs of Forest Enterprises and private forest owners, organize short courses in various aspects of private forestry. Technical level forestry personnel are trained at the Forestry College, Kaunas.

Information: Lithuania has not developed its own criteria and indicators for sustainable forest management. Most criteria and indicators have come directly from the Pan-European system. These criteria were officially approved for use by the former Ministry of Forestry in 1995.

Regularly up-dated information about the Lithuanian Forestry is available at the Web-Sites of the Department of Forests and Protected Areas (<http://miskai.gamta.lt/parkai/depas/dep.htm>) and the Ministry of Environment (<http://www.gamta.lt/>). Centre of Forest Economics (MEC) (<http://www.mec.lt/>) permanently collects and disseminates information on forestry and timber market. Research and educational institutes specialised in forestry are good sources of data and information: Institute of Forest Inventory and Management (<http://www.lvmi.lt/>), Lithuanian Forest Research Institute (<http://www.mi.lt/>), the Faculty of Forests at Lithuanian University of Agriculture (<http://www.lzua.lt/fakult/miskai/forestry.html>). Information for private forest owners can be accessed at Web-Site of Forest Owners Association of Lithuania (<http://www.forest.lt/>). Several forests related organizations publish and give out different kind of publications, brochures and magazines. The information on sustainable forest management is available in the annual report on forestry activities in State Forest Enterprises, detailed forestry and forest industry statistics are presented in the Lithuanian Statistics Yearbook of Forestry, Future perspectives of Lithuanian forestry could be found in the book "Lithuanian Forest Resources in the XXI century", etc.

Research and Technologies: The main research activities are focused on biological diversity and sustainability of forest ecosystems; forest productivity, protection, utilisation and economics; forests genetic resources and their conservation, enrichment and utilisation. Besides the above guidelines and recommendations, numerous fundamental applied research project dealing with various aspects of forest biodiversity and environmentally sound silvicultural practices have been recently conducted. While carrying out harvesting and other silvicultural operations, environmentally sound and economically viable technologies are being introduced on a broader scale. The pulp and paper industry recycles waste paper. The national energy strategy foresees measures aimed at promoting use of biofuel and especially fuel wood instead of fossil fuels.

Financing: The basic forest management unit responsible for the implementation of forest management plans in state forests is the State Forest Enterprise. According to the Forest Law, all forestry activities related to regeneration, tending and protection of forests within Forest enterprises, forest utilisation, construction and rehabilitation of production facilities and building, road construction and maintenance of land drainage systems, recreation and equipment as well as other forest-related activities are paid out of the incomes of State Forest Enterprises. State Forest Enterprises as others state companies pay quite a high proportion of its income to the state in the form of taxes (property, value added, social and etc) and additional fixed payment (5 % from incomes) to the

State Budget Programme for Satisfying Common Needs of Forestry. It is a part of the State financial resources used for development of forestry irrespective of property. So far forestry is concerned to maintain that the intensity of financial interventions is relatively low to ensure the non-wood functions of public interests and to meet ecological objectives.

Cooperation: Country has always participated in major international initiatives aimed at enhancing forest development. Lithuania has signed Strasbourg (1990), Helsinki (1993) and Lisbon (1998) Ministerial Conferences on Protection of Forests in Europe Resolutions, the Bern Convention on the Conservation of European Wildlife and Natural Habitats and Convention on Biological Diversity as well. The Convention on International Trade in Endangered Species (CITES) is being prepared for Parliament ratification. Since 1988 Lithuania has been participating in the international ICP-Forests programme and is a member of EUFORGEN since 1995. The country also took part in the IPF process. The relevance of some IPF proposals for action in Lithuania has been assessed and incorporated in forest policy. Besides the mentioned projects of technical assistance, bilateral cooperation between institutions is very important for transfer of information and exchange of know-how. Lithuanian forestry institutions have established good contacts with foreign partners.

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CHAPTER 12: COMBATING DESERTIFICATION AND DROUGHT

Decision-Making: The Ministry of Environment and the Ministry of Agriculture are considered as the main responsible bodies for the implementation of the Convention on Combating Desertification and Drought (UNCCD) in Lithuania. The issue related to the ratification of the UNCCD has been included to the list of the Lithuanian Government Programme for 2003 and by this time all the required documents for the ratification of the United Nations Convention to Combat Desertification are under preparation. Lithuania intends to become a party to more international agreements. However, it has problems meeting the conventions' obligations because of its economic difficulties and financial constrains.

Programmes and Projects: In 1993 Lithuanian Government approved the Target Programme on Groundwater Protection and Sustainable Agricultural Development in the Intensive Karst Zone. The Programme focuses on measures to stop both non-point and point source pollution. The Tatula' fund was created in 1993 to support the implementation of the Programme's objectives. The Fund provides interest-free credits to farmers, agricultural partnerships, food-processing companies and enterprises implementing measures planned in the Programme or introducing sustainable and organic farming principles. As a contracting organization, the 'Tatula' fund finances the construction of waste-water treatment plants and other environmental facilities. It also funds ecological education and training, consultancies and scientific research as well as environmental monitoring systems.

Status: Lithuania is the most southern of the three Baltic States, bordering Latvia to the north (610 km long border), Belarus to the east and south (720 km), Poland (110 km) and the Kaliningrad region of the Russian Federation (303 km) to the south - west. The Lithuanian coastline is 99 km long. With a surface area of 65 301 km², Lithuania is the largest of the three Baltic countries. The country forms part of the great North European Plain and the landscape alternates between hilly areas and flat plains. Forests cover 30 % of the territory. The forest cover has increased over the past 50 years, from 21.8 % in 1937 to about 30 % in 1997. However, it is lower than in Latvia (41.7 %), Estonia (39.2 %) or Belarus (34.6 %). Agriculture uses 54 % of the land, two thirds is arable. Bogs and marshlands now cover 7 % of its territory. Most are in the west, the south and the east. Some 77 % of wetlands have been drained for agricultural purposes. Over the last few decades the intensification of large-scale agriculture, cutting of forests and draining of bogs have contributed to erosion and loss of soil productivity. At present, about 15 % of the country's farmland are severely eroded. Soil quality varies considerably. Good quality agricultural soil is found on only 34 % of the agricultural area. The measures taken to combat soil erosion such as reducing crop cultivation on eroded areas, sowing perennial grasses on fragile soils and planting trees on the steeper slopes are not sufficient to solve the problem. Three main regions can be identified by soil productivity: the lowlands in central Lithuania have the most productive soils, followed by the low, deeply washed carbonate soils in west Lithuania. The wooded moraine hills and interspersed sandy plains in east Lithuania have a relatively low agricultural productivity. The most characteristic soils are turfy podzolic loam and gley. The Karst Zone (Birzai and Pasvalys districts, Northern Lithuania), one of the most environmentally vulnerable areas of Lithuania, is known for both its water pollution and soil erosion problems. There is elaborated short reference list on land degradation issues, i.e. Soil erosion (wind, water) is detected mainly due to: loss of forests/vegetation, coastal erosion, aridity, inappropriate land use. Loss of Soil Fertility is detected mainly due to water logging and pollution/contamination of the soil (in some areas of the country).

Capacity-Building, Education, Training and Awareness-Raising: Responsible officials from the Ministry of Environment participate in various meetings and workshops on Land Degradation and Desertification in Central and Eastern Europe in the content of the UNCCD, where relationships with other international agreements, co-operation between EU and CEEC, legal sectorial issues are discussed.

The most important land degradation issues for Lithuania are:

- Develop research system of antropogenic impact on land degradation (inappropriate agricultural activities, inappropriate land use and agricultural practices),
- Develop measures to restore agrarian landscape and to extend organic farming,
- Develop of the Country's Land Degradation Study: wind and soil erosion,

- Develop of the coastal erosion research system,
- Establish programmes for scientific, education, public awareness raising and training.

The capacity development strategies should be generally characterized as:

- creating new capacity (searching for new financial resources),
- mobilizing or redeploying existing capacities (implementation of new thinking in the agro-environmental protection measures),
- enhancing existing capacities, i.e. improvement co-operation between different institutions.

Information: All the information on land degradation and related issues is published in the annual reports and other publications of the Ministry of Agriculture and the Ministry of Environment, and also it is entered onto the Internet web sides of the Ministries. Adopted laws, amendments, Government Resolutions and amendments are made public by publishing them in respective issues of the "Official Gazette" ("Valstybes zinios").

Research and Technologies: Some 52% of Lithuania's terrain is rolling-hilly relief, where the soil is erodible. Several investigations of soil erosion in Lithuania were made. The intensity of soil erosion in Lithuania depends on tillage (mechanical) erosion. Prof. Benjaminas Kiburys (1989) comprehensively investigated this kind of soil erosion. The extent of soil destruction and translocation under the tillage erosion depends on the slope gradient, tillage equipment (plough, cultivator, harrow and other) and the direction of tillage operations. Using tillage equipment the farmer creates the favourable conditions for water and wind erosion. Investigations of soil erosion by water have been concentrated at the Kaltinenai and Dukstas Research Stations of the Lithuanian Institute of Agriculture. There are monitoring sites with the bare fallow, grain crops, grasses and wasteland (untilled/uncultivated land). The research data of the Dukstas Research Station represent soil and climatic conditions of the Baltic Uplands. Soil erosion has led to significant deterioration in the agrophysical and agrochemical attributes of loamy sand and clay loam Podzoluvisols. The dry bulk density and percentage of clay-silt and clay fractions have increased and the percentage of total porosity and water field capacity has decreased. Erosion-preventive six-course crop rotations have been investigated at Kaltinenai Research Station since 1983. Losses of soil under erosion-resisting grass-grain crop rotations decreased by 77.4-80.7 % in comparison with the field crop rotation, while on the grain-grass crop rotation they decreased by 21.5-24.6 %. According to the investigations, even grass-grain crop rotations could not completely stop soil erosion. Therefore it is recommended grassing of slopes over 10° and using erosion-prevention tillage with fertilising and liming on the slopes of 2-10° in addition to erosion-preventive crop rotations. In the autumn soil tillage system, deep soil chiseling can be used instead of deep mouldboard ploughing. Spraying the stubble with herbicide 'Utal' can be used instead of stubbling and deep ploughing. With these practice rates of soil erosion were reduced by 1.6 and 8.9 times respectively, while productivity remained at the same level. Differentiation of nitrogen fertilizer rates on various parts of the hilly-rolling uplands and the combination of fertilizing and liming of eroded acid soils are also important parts of the erosion control system. It has been already formed the conservation cropping system for hilly-rolling relief in Lithuania (temperate climate zone) that will enable sustainable land use. Two Lithuanian research programmes have been incorporated into the Core Research Programme of the GCTE (Global Change & Terrestrial Ecosystem) Soil Erosion Network, which is a part of the IGBP (International Geosphere-Biosphere Programme).

Financing: Taking into account present membership of the Convention, proposed draft budget for the year 2000 and the UN share of the Lithuania for 1999 (0,022 %), the contribution of Lithuania in 2000 would be approximately US\$ 2,300. See also under **Decision-Making**.

Cooperation: The international Convention to Combat Desertification in Countries Experiencing Drought and/or Desertification Particularly in Africa has not been signed or ratified.

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CHAPTER 13: SUSTAINABLE MOUNTAIN DEVELOPMENT

This issue does not apply to Lithuania.

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CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

Decision-Making: The Ministry of Agriculture is an executive institution responsible for the implementation of agriculture and rural development policy in Lithuania. In co-operation with other ministries and other governmental institutions it deals with all aspects of the agriculture including market measures, rural development policy, financial matters, agro-environmental policy as well as international relations relating to agriculture. The Ministry of Environment is an executive institution responsible for the implementation of environmental policy on the national level. It mainly deals with the quality of life improvement through a high level of protection of our natural resources, effective risk assessment and management. The Ministry of Agriculture in the process of implementing agriculture and rural development policy is aware of environmental concerns, which are to be incorporated in all the activity areas. National legislation in this area is based on the Law on Land, Law on Land Reform, Law on the State Regulation of Economic Relations in Agriculture and Law on Farmer's Holding. Following the EU tradition of good farming the Ministry of Agriculture in co-operation with the Ministry of Environment by the end of the year 2000 has prepared the Code of Good Agricultural Practice for Lithuania. It is based mainly on directives and regulations of the EU, HELCOM and recommendations of Lithuanian scientists. A part of the rules and recommendations is already binding and being implemented by the farmers. The rest of them will be legitimated in the near future. The main objective of the rules and recommendations of good farming (RRGF) according to the EU Nitrate directive is to reduce pollution by nitrates and ensure that for each farm the amount of livestock manure applied to the agricultural land each year, including the animals themselves, shall not exceed the amount of manure containing 170 kg/ha of nitrogen. The main rules and recommendations on good farming (RRGF) given in the publication are focused on two issues: first, a farmer who follows the rules and recommendations has to improve the environment and, second, a farmer has to achieve a profit that grants sufficiently good living conditions. The guidelines of national policy on agriculture and rural development are spelled out in the Strategy of Agriculture and Rural Development, Strategy of National Environmental Protection and the Lithuanian Agriculture and Rural Development Plan for 2000-2006. The main objectives of agriculture and rural development policy concern availability of additional income for farmers and rural dwellers. Further more, it should ensure increased income levels leading to improved living standards and working conditions. Improved competitiveness and efficiency of primary agricultural production, developed processing and marketing system of agricultural produce, high quality and hygiene standards, creation of employment opportunities in rural areas, and finally achievement of a sustainable rural development through promotion of farming and other economic activities in harmony with the environment have to be attained in the course of implementation of the relevant policy. The Chamber of Agriculture is a self-governing organization uniting agricultural unions and other associations of food processing industries. By participating in preparations and debates on legal acts concerning agriculture and rural development The Chamber of Agriculture plays an important role representing the interests of associations and rural communities. The main objective of the Organization together with Lithuanian Agricultural Advisory Service and other non-governmental institutions is to participate in the process of agricultural reform and to co-operate in implementing general policy.

Programmes and Projects: In 1998 the Ministry of Agriculture launched an Ecological Farming Support Programme financed through the Rural Support Fund. Starting with the year 2001, the Ecological Farming Support Programme is still being continued and financed through the Special Rural Support Programme. The Programme in concern stipulates that the aid is to be provided to organic production farms in the form of direct payments per hectare of certified crop area during the first five years of their operation and in the form of partial compensation of the certification costs borne by the owner of ecological holding and enterprise. In 1993, pilot programme "Tatula" to develop organic agriculture in the Karst region was started. The scope of the Programme is far reaching. It involves design and construction of water cleaning equipment to protect the underground water from the pollution, application of other environmentally sound measures to improve the agro-environmental situation and proceeds with environmental monitoring in the region. Furthermore, in the framework of "Tatula" programme consulting services are delivered. Organization of fairs and exhibitions, other educational activities such as publishing of literature linked to ecological farming are carried out. By now organic farming is being spread up all over Lithuania. With the aim to provide financial support for the holdings and enterprises involved in ecological

farming, special fund "Tatula" was established. Lithuania, following the EU advice to promote sustainable agricultural practice, has incorporated environmentally friendly methods in the Lithuanian Agriculture and Rural Development Plan for 2000-2006 under the Measure 6. The main objective of agro-environmental programme (in the framework of the Measure 6) is to decrease negative impact of agriculture on the environment, restore traditional landscape and increase biodiversity and to prepare measures that ensure normal economic and social conditions for rural population. The measure will be applicable in two pilot areas. One pilot area was chosen in intensive agriculture area, i.e. Kars region. Specific pilot area has been selected in Rusne Island that is the biggest one in the Nemunas river delta.

Status: The Lithuanian agriculture employs 18.7 % of the employed, they create 8% of the GDP per year. About 50% of the employed of the country are related to agriculture: employees of processing enterprises, construction, trade, transport and other service sector, therefore the Lithuanian agriculture is fully integrated into the economic and social life of the country. When implementing the historical justice that was trampled in the years of occupation, ownership rights to land have been restituted to 80 % of the former landowners. Annual exports of the agricultural production makes almost 0.5 billion US\$ and is directed to the European Union (35 %), the CIS countries (26 %) and the Baltic States (19 %). The quality of Lithuanian food products has received recognition all around the world as the majority of farmers' apply environmentally friendly principles in the farming activities. Facing globalisation challenges Lithuania successfully carries on the negotiations for the membership in the European Union, therefore today modernisation tempos of the Lithuanian agriculture increase and rapidly approach the EU standards. Ecological farming in the country was launched in 1990 with the establishment of organic-biological agriculture association Gaja. First ecological production farms were certified in 1993. By the year 2001 there were 247 certified farms and processing enterprises, including 230 organic farms. Ministry of Agriculture in co-operation with the Ministry of Health 1997 established a certification body Ekoagros. In the year 2000 it was granted accreditation in accordance with the accreditation system of International Federation of Organic Agriculture Movements. In spite of the progress made in the field of agriculture there rest still many issues of high concern. Large areas have suffered from past agricultural pollution originated from poor handling of animal waste. Misuse of chemicals in the past and continuous soil erosion also give rise to environmental problems, pushing to find the best ways for their solution.

Capacity-Building, Education, Training and Awareness-Raising: According to the needs of agriculture and rural development situation, educational programmes and plans are constantly being prepared and renewed. Two universities, 13 higher schools, 37 schools with the agricultural specialisation, Lithuanian Advisory Service (with 44 district offices), Chamber of Agriculture uniting NGO's linked to agriculture and Agro-Business Training Centre do provide training and advisory services to the interested parties. The majority of the above mentioned bodies run their activities in the rural areas. Labour Economic and Training Methodology Centre, intending to create coherent and well co-ordinated continuous training system was established in 2001. Later on it is foreseen to extend their services up to 24 more centres mainly based under the educational institutions with the agricultural profile. Educational Programme on Basic Knowledge for Ecological Farming is shaped according to requirements of the interested parties involved in ecological farming. It is being delivered in Lithuanian University of Agriculture and School of Agriculture in Alanta. The end of the Programme grants the enrolled people with the qualification certificates for ecological farming (For more information check programme "Tatula" in **Programmes and Projects**).

Information: In 1998 Rural Business Development and Information Centre started to run the office. The main duty of this body is the management of Register on land parcels and Register on livestock. Research in the field of agriculture and creation of training and advisory information system also falls under their responsibility.

Research and Technologies: Research plays an important role in the process of agricultural reform in Lithuania. Meanwhile research activities are focusing on the following areas: Rural Development and Sociology, Technologies of Organic Agriculture, Development of New Animal Holding and Nutrition Technologies, and Development of Sustainable Technologies of Plant production. The funding is being delivered through the Special Rural Support Programme.

Financing: As a source for agriculture financing *the Rural Support Fund* was established in 1997 with a view to enhance structural changes in the agriculture. The Fund in operation was until the beginning of 2001. *The Special Rural Support Programme*, as a source for agriculture financing, was confirmed at the end of 2000. Financing from the Programme is provided for the following main activities:

- The majority of allocations are earmarked to finance Market Regulation and Farm Income Support Programmes. This part of the Programme is used to pay direct payments. Intervention policy measures of the Lithuanian Agriculture and Food Market Regulation Agency are financed from the same budget line of the Programme as well.
- State budget allocations are earmarked to co-finance priority investment programmes aimed at the upgrading and improvement of primary agricultural structures and to complement the SAPARD measures.
- Funding is also provided for the Agricultural Research, Training and Advisory Service. Financial resources may be allocated to finance implementation of the sector programmes as well as the measures included in the Agricultural Information System Development Programme (viz. IACS and FADN).
- Development of Social Infrastructure in rural areas. To this end, the financial resources of the Programme are administered on the local level to co-finance approved project activities.
- Part of the Programme is used for operation of the Agricultural Credit Guarantee Fund. Because of the liquidity problems of assets and relatively low prices in the land market, the farmers, applying for the commercial bank loans, are facing problems related to the lack of collateral. In order to provide better access to farm credit and to assist them in acquiring more know-how in co-operation with financial institutions, a decision was taken to establish the Agricultural Credit Guarantee Fund. The Fund is liable in terms of its assets to secure, in full or in part, loans extended to farmers, thereby resolving the problem of a lack in collateral.

SAPARD (Special Pre-accession Programme for Agriculture and Rural Development) is by the EU initiated programme for the candidate countries to enhance structural changes in agriculture and proceed with the implementation of rural development policy. The total financial allocation for Lithuania out of the SAPARD fund is foreseen to amount up to 208.207 million EURO. The period of the programme is limited to the year 2006. In the Rural Development Plan (RDP) approved by the European Commission, Lithuania has set up eight priority measures to be supported within the scope of SAPARD programme. They are as follows: (I) Investment in Agricultural Holdings, (II) Improving Processing and Marketing of Agricultural and Fishery Products, (III) Development and Diversification of Economic Activities, (IV) Providing for Multiple Activities and Alternative Incomes, (V) Afforestation of Agricultural Lands and Improvement of Forestry Infrastructure, (VI) Environmentally Friendly Agricultural Methods, (VII) Vocational Training, Technical Assistance, (VIII) Information and Publicity Campaigns.

Cooperation: The preparation of Agro-environmental Programme is being carried out in co-operation with experts from Dutch Avalon Project assisting working group established within the Ministry of Agriculture. With the initiative of experts from Denmark, Project for “Afforestation of Abandoned Agricultural Land based on Sustainable Planning and Environmental Sound Forest management” is being implemented in the course of two years. However, the financing authority recently has approved an extension of 8 months. It is designed to facilitate and accelerate the afforestation of abandoned land, which is considered as the optimal land used based on sustainable criteria.

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CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY

Decision-Making: The Ministry of the Environment is the main responsible body for biological diversity issues and the implementation of the Convention on Biological Diversity in Lithuania. It shares the responsibility with the Ministry of Agriculture. Lithuania signed the Convention on Biological Diversity in 1992 and ratified it in 1995. In 1993 Lithuania ratified the Ramsar Convention on Wetlands (1971). In 1996 Lithuania ratified the Bern Convention of European Wildlife and Natural Habitats (1979). It entered into force on 1 January 1997. Lithuania signed the Convention on Fisheries and the Protection of Fish Resources in the Baltic Sea and the Belts (1992) and Baltic Sea Marine Environment Protection Convention (Helsinki Convention, 1974).

Programmes and Projects: There are several international and national projects and programmes, which have been recently implemented for biological diversity conservation issues in Lithuania:

- Development of National Ecological Networks in Baltic Countries in the Framework of Pan-European Ecological Network (PEEN): a Concept and Implementation in Pilot Areas (1999-2001).

The main objectives are to develop integrated concepts of the national ecological network taking into account the criteria and assumptions of the international initiatives for nature conservation – Pan-European Biological and Landscape Diversity Strategy (PEBLDS), Convention of Biological Diversity (CBD), EU Birds and Habitats Directives, Bern Convention-EMERALD network and achievements of the IUCN EECONET projects – as well as national approaches to ecological network; to evaluate information, gaps and needs relating to the national ecological networks; to estimate the legal, economic and social foundations for the realisation of the national ecological networks, taking into consideration new possibilities resulting from future accession to EU; to introduce concept of the national ecological network in chosen pilot area(s).

- “Approximation of Lithuanian capacity, policies and procedures on nature protection to EU requirements, with particular focus on implementation to the EEC Habitats Directive (92/42) and the EEC Birds Directive (79/409)” (1999 - 2001).

The development objective of the project is to strengthen the capacity and capability of Lithuanian Ministry of Environment (ME) in order to adapt and procedures ensuring Lithuanian compliance with EU requirements on nature conservation. The line immediate objectives are: to outline the constrains in present Lithuanian compliance with EU requirements on nature protection, and recommended actions to eliminate these constraints; to strengthen the capacity and capability of ME in order to ensure Lithuanian compliance with the Birds and Habitats (92/43) Directives; to provide basic data and draft legislation ensuring Lithuanian compliance with the Birds (79/409) and Habitats (92/43) Directives; assessment of present status of information on important species and habitats; surveys of nationally important species in an internationally context; drafting list of candidate Special Protected Areas (SPAs) under the EEC Birds Directive and Special Areas of Conservation (SACs) under the EEC Habitats Directive, development of guidelines for action and management plans; training and capacity building in Danish-Lithuanian project involved staff, transfer of appropriate knowledge and similar actions in order to strengthen the capacity and capability of ME to adapt EU requirements within nature protection sector.

- The joint Project of Estonia, Latvia and Lithuania (under umbrella of the Baltic Environmental Forum, BEF) “Baltic States regional preparation for the implementation of the NATURA 2000 network (BANAT)”.

The headlines of the BANAT long-term project are expert discussions/workshops on specific nature conservation issues (e.g. species protection, habitat classification, hunting requirements, etc.); policy meetings on amending the Annexes of the Directives to the Baltic conditions; info-campaigning activities and stakeholders’ integration. The main objectives are to facilitate information exchange between the Baltic States, as well as decision makers and experts within the countries about the process of implementation of the Habitats and Birds Directives, national inventories of Natura 2000 sites, their selection and management; to share the workload and resources through exchange of experience and to provide the opportunity to benefit from each other’s activities; to widen the circle of involved stakeholders in the process of establishment of Natura 2000 network; to support integration of EU nature conservation requirements into other economy sectors (e.g. agriculture, forestry, transport, planning); to rise the awareness about EU nature conservation requirements; to support capacity building of the employees of Ministries of Environment and other nature conservation administration.

- New proposed and elaborated project "Protection of endangered species of flora and fauna and their habitats through implementation of CITES, Bern and Bonn Conventions and the related EU legislation" (planned 2001 - 2003)

The main objectives, described in the project document, are to protect endangered national and international species of flora and fauna and their habitats in Lithuania through action plans; provide advise on protection of selected endangered Bern and Bonn Convention species occurring in Lithuania, in accordance with the guidelines set forth in the CBD, the Lithuanian red Data Book and the Bern and Bonn Conventions; develop the management plans for those selected species and habitats; provide an analysis of constraints in present Lithuanian legal compliance with CITES and EU requirements on trade in endangered species; to assist in building a fully-fledged CITES administration, implementation and enforcement as required according to EU and international legislation involving all relevant authorities; assist in ensuring that the public in general and the law enforcing authorities become aware of existence and benefits of CITES.

Status: The most valuable ecosystems and nature areas in Lithuanian nature are protected in five national parks, thirty regional parks, four strict nature reserves and three hundred managed reserves of different types. There are 728,042 ha of especially protected areas in Lithuania, comprising 11.1 % of the total territory. The objectives are both to preserve and, where possible, to restore the unique diversity of ecosystems, biotopes, organisms and their populations. The current Lithuanian Red Book describes 501 rare or vanishing animals, plants and fungi species. The Red Data Book of Communities (prepared for publication) will include 59 association communities out of 120 existing ones in Lithuania.

Capacity-Building, Education, Training and Awareness-Raising: Responsible officials from the Ministry of Environment participate in various meetings and workshops on Convention on Biological Diversity issues.

Information: All the information on conservation of biological diversity and related issues is published in the annual reports and other publications of the Ministry of Environment, and also it is presented on the Internet web side of the Ministry: <http://www.gamta.lt>. Adopted laws, amendments, Government Resolutions and amendments are made public by publishing them in respective issues of the "Official Gazette" ("Valstybes zinios").

Research and Technologies: Research on the Convention on Biological Diversity issues is mostly matter of scientific institutes and universities.

Financing: The main sources of funding for the implementation of the Action Plan for Biological Diversity Conservation are the State budget, budgets of municipalities, state and municipality's nature funds, foreign funds, and private money. Financial resources to cover all the objectives of the National Biodiversity Research Programme have been strictly limited. Landscape and Biodiversity Protection Programme is financed by PHARE.

Cooperation: Lithuania has a good multilateral co-operation on biological diversity issues in international organizations as well as implementing international conventions. The Convention on Biological Diversity was ratified in 1995. Lithuania acceded to the Convention on Wetlands of International Importance, especially as Waterfowl Habitats (Ramsar Convention) in 1993. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) were ratified in 2001. Lithuania ratified the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention) in 1997. The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) was ratified by the Lithuanian Parliament in 1996.

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

Decision-Making:

Technology: The Ministry of Environmental Protection has developed a National Environmental Strategy (NES) for Lithuania with PHARE support. The new organizational structure to organize eco-labeling in Lithuania was established in the beginning of 1996 by the Ministry of Environment. At the end of 1995, a Technical Committee for Standardization on Environmental Protection was established. The efforts of this Committee are focused on the adoption and implementation of ISO Standards in several areas. In 1996, the Lithuanian national standard, Environmental Management System: Terms and Definitions, was adopted.

Biotechnology: Development of legislation and policies related to environmentally sound management of biotechnology are in the primary stage only. The Ministry of Health Care, the State Specialized Center of Hygiene and the National Nutrition Center control health, food and drugs. The Ministry of Environment and the Ministry of Agriculture are also involved. The Advisory Committee on Genetic Manipulation has been working since 1996 on the basis of the Society of Genetics and Breeders of Lithuania. Lithuania has also joined the ROCEED. Relevant regulations include the Law on Health Protection, the Law on Environmental Protection, the Law of the Republic of Lithuania on Biochemical Research Ethic, the Law on Genetically Modified Organisms, the Procedure for registration, use, storage, introduction and transportation of microorganisms and other sources of biological pollution, the Procedure to register means for chemical and biological protection of plants and the Rules for chemical commission for state protection of plants. Each biotechnology institution in Lithuania has Regulations, which are prepared according to the laws valid in Lithuania and EEC recommendations (Council Directive on the protection of workers from risk related to exposure to biological agents at work).

Programmes and Projects:

Technology: Projects to transfer EST's include the following: a Danish project on Implementation of Demonstration Projects in Cleaner Technology in the Lithuanian Galvanic Industry; a PHARE project on Strengthening Water Utilities Management; a Norwegian project on Capacity Building Programme in Cleaner Production in Industry in the Baltic Region; and a Danish EPA project on Environmental Efficiency in the Lithuanian Food Processing Industry. The Project involved environmental auditing in seven companies from different food industry sectors of Lithuania.

Biotechnology: At present there are two state research programmes entitled "Molecular basis of biotechnology" and "The research and safeguarding of genetic fund of Lithuanian agricultural plants and animals" The PHARE Project "Strengthening of Institutions to Implement EU Requirements on Chemicals and GMO Management" have been started as well.

Status:

Technology: Several clean production technology introduction projects are carried out in Lithuania.

Biotechnology: The analysis of the structure of industrial production reveals that the amounts of products manufactured in food industry (yeast, ethanol, vinegar, beer) in Lithuania is less than enough for home consumption. At the same time, enzyme preparation both for technological and pure grade as well as preparations for medical use are produced for export, and local demand does not exceed ten to twenty percent of the production volume. Due to recent political and economic changes, it could be predicted that some of the biotechnology potential will be unavoidably lost. One possible way to cope with arising problems might be the deeper involvement of Lithuania's biotechnology in world cooperation. For this reason it is important to prepare the laws and regulations according to European standards.

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

Technology: Mainly the Kaunas University of Technology, Vilnius Gediminas Technical University, Vilnius University and some state research institutes are centres of education and training in Lithuania.

Biotechnology: See PHARE Project of biotechnology.

Information:

Technology: It is available in published reports and web sites.

Biotechnology: It is available in published reports and web sites.

Research and Technologies: *Technology:* Research is carried out at the Kaunas University of Technology, Vilnius Gediminas Technical University and some research institutes. *Biotechnology:* Relevant biotechnology foundations and institutes (particularly the Institute of Biotechnology) are carried out the biotechnological research projects. In addition, there has been launching of plants for technological production of enzymes of modern biotechnology.

Financing:

Technology: For the implementation of NES, an Environmental Investment Fund was created.

Biotechnology: Financing sources - state budget and foreign subsidies.

Cooperation:

Technology: UNEP agencies such as the Industry and Environmental Office (UNEP IE) in Paris and UNEP IETC in Japan, international institutions such as HELCOM and UN ECE, and other, foreign countries organizations as US EPA, Swedish EPA and Danish EPA help to exchange experiences, build up technology, assessment capacities and develop existing national information networks. Initiatives have already been taken to further cooperation in the transfer of experience and technology between business in Western countries and Lithuania. These include both process and product technologies for the prevention of pollution and also “end of pipe” technologies for treatment of pollution after it has been generated. Introducing environmental auditing is probably the best example of recent practical and cost effective initiatives. Also see under **Programmes and Projects**.

Biotechnology: International and regional cooperation on safety in biotechnology would help to prepare and adopt the full value regulation according to international standards.

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CHAPTER 17: PROTECTION OF THE OCEANS AND COASTAL AREAS

Decision-Making: The Ministry of Environment is the main responsible body for the marine affairs. The National Helsinki Commission (HELCOM) Committee was established in 1998 by the Order of the Minister of Environment to facilitate co-ordination among all of the responsible organizations. The HELCOM Baltic Sea Environmental Protection Monitoring Programme, and the State Sea Environmental Monitoring Programme address marine issues. Lithuania has a National Strategy on Integrated Coastal Zone Management. Also the Biodiversity Conservation Strategy and Action Plan affect the management of coastal and marine areas. The Environmental Strategy aims to better control, minimize pollution and preserve natural resources. Lithuania also has a National Oil Spills Contingency Plan. Local authorities, scientific institutions, business and industry, and NGOs are involved in the decision-making process. There is a wide range of legislation in this area, including: the Administrative Law Violation Code of Republic of Lithuania (1994), Statute of the Klaipeda State Sea Port of the Republic of Lithuania (1996), Inner Water Transport Code of Republic of Lithuania (1996), Law on Construction of Buildings in the Coastal Zone and Kursiu Nerija (Curonian Spit) (1995), and the Governmental Decree on Delineation of Coastal Zone No 78 (1996), Law on Marine Environment Protection (1997), and others.

Programmes and Projects: The following plans and documents address the preservation and sustainable use of fragile ecosystems: Project Action Plan with USA called the Redevelopment of a Wetland Buffer System in the Nemunas River Delta (Kursiu Marios Lagoon Estuary of Lithuania), creating Kursiu Nerija (Curonian Spit) National Park, Nemunas Delta and Pajuris Regional Parks. There is a special plan for Kursiu Nerija National Park, and territorial planning documents for Klaipeda, Palanga and Sventoji cities for protection and management of coastal zone.

Status: All of Lithuania's territory is within the Baltic Sea catchments area. The major uses of the coastal areas in Lithuania are recreation, tourism, fishing, shipping and other industries. The primary sources of land-based pollution of the marine environment are industry, agriculture and transport that load waste from the coastal areas to the marine basins. The primary sources of sea-based pollution of the marine environment are oil spills, waste water, garbage, and smoke from chimneys of the ship.

Capacity-Building, Education, Training and Awareness-Raising: The Great Lakes-Baltic Sea Initiative and the Helsinki Commission (HELCOM) activities on the protection of the Baltic Sea environment contain training and awareness-raising activities for the responsible planners and for relevant industries to assist them in managing sustainable development in coastal zones.

Information: Information on marine pollution is available from HELCOM Assessment of the Marine Environment of the Baltic Sea (every 5 years) and from the Annual Report of the Marine Research Center. Lithuania has started to make use of Geographic Information Systems (GIS) to monitor the implementation of relevant laws and regulations.

Research and Technologies: Lithuania applies the best available technology to identify pollution of the marine environment. The problems are with the means for fixing of oil spills (aerial control).

Financing: The sector is financed by the national budget and private sector partnerships.

Cooperation: Lithuania has not signed the United Nations Convention on the Law of the Sea as of 5 January 1999. Lithuania is party to the following international and regional conventions related to marine affairs: 1992 Helsinki Convention on Protection of Marine Environment of the Baltic Sea Area, 1973 Gdansk Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, and Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, International Convention on Civil Liability for Oil Pollution Damage, and International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage. Other sea or marine related agreements include: Agreement on Fisheries Relations between the European

Community and the Republic of Lithuania, Agreed Record of Conclusions of Fisheries Consultations of Fisheries Consultations between the Republic of Lithuania and European Community, Agreement between the Government of the United States of America and the Republic of Lithuania concerning fisheries of the coasts of the United States, and Draft Agreement between the Government of the Republic of Latvia and the Government of the Republic of Lithuania. Other regional activities related to sustainable development and use of oceans and coastal areas include: An Agenda 21 for the Baltic Sea Region - Baltic 21, BAFICO - Baltic Fisheries Co-operation, and UNO - Fisheries and Agriculture Organizations. Also see under **Programmes and Projects**.

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CHAPTER 18: PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES

Decision-Making: There are several bodies at the national level responsible for co-ordinating water resource management and development: the Ministry of Environment, the Lithuanian Geological Survey and the Lithuanian Hydrographical Network Survey. There are eight regional environmental protection departments and forty-four environmental protection agencies at the local level. The general legislation and regulatory framework for water management includes: Lithuanian Environmental Strategy and Action Programme (1996), Water Law (1997), Law on the Nature Resources Usage Taxes (1991), Law on Environment Pollution Taxes (1991), Law on Environmental Impact Assessment (1996), Law on Monitoring (1997), Draft Law on the Protection of Marine Environment, Draft Law on Drinking Water, Code on the Internal Water Transport (1996), and Regulations on the Establishment of the Water Bodies Protection Zone. There are pricing policies for water use in every sector, and costs for water supply and treatment are fully covered by user charges. Representatives from Lithuanian Municipality Association, Lithuanian Manufactures Confederation and some other NGOs participate in preparation laws and strategies on environmental protection issues. The role of the private sector is not substantial in this sector.

Programmes and Projects: According to the National programme for adoption of Aquis, Lithuania will transpose all the EU requirements in water sector until the year 2002. These requirements will be fulfilled by the year 2004 with the exception of Urban wastewater treatment directive, which will be implemented by the year 2010. Tertiary waste water treatment plants will be built in forty-seven Lithuanian cities and towns (tertiary treatment exists in eighteen cities and towns already).

Status: Over 250 millions US\$ have been invested into the wastewater treatment in Lithuania since 1990. This, together with the industry decrease, brought impressive results. Amount of pollutants discharged to the surface waters from point sources has been reduced significantly since 1992: BOD - 80 %, suspended solids - 80 %, N - 65 %, P - 55 %. The usage of fertilizers and pollution from agriculture has been also reduced considerably. With the reduction of pollution loads, water quality in rivers and lakes has improved but these changes are not as dramatic as reduction of pollution load. The main problems remain to be pollution by nutrients and eutrophication. Nevertheless all Lithuania's rivers are of "salmonid" or "cyprinid" quality. Wastewater treatment systems are mostly under the authority of municipalities. Surface water bodies can be owned by the State or by individuals. Lithuania is located in a very humid zone and abounds in water resources. Therefore exceptionally ground water is being used for drinking water supply systems.

Capacity-Building, Education, Training and Awareness-Raising: The Water resources management department has been established under the Ministry of Environment to facilitate effective implementation of EU requirements in Water sector.

Information: Reports with statistical data are available on the Ministry's Environment computer net. Reports on "Environmental Protection in Lithuania" are published annually.

Research and Technologies: The principles of "best available technology" and "best available practice" are under implementation in Lithuania.

Financing: Costs for water supply and treatment are fully covered by user charges. External resources come mainly from bilateral donors such as Sweden, Finland, Norway and Denmark, and also from PHARE, EBRD, NEFCO, WB and ISPA.

Cooperation: Lithuania currently takes part in the following agreements concerning the use of international watercourses, lakes or groundwater: 1992 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area and 1992 UN ECE Convention on the Protection and Use of Transboundary Water Courses and International Lakes. The Lithuanian Government has signed bilateral intergovernmental co-operation agreements in the field of environmental protection with Latvia, Sweden, Russian Federation and the Government of Flanders, the Ministry of Environment has signed bilateral agreements with related ministries and other institutions of Austria, Denmark, United States, Poland, Finland, Byelorussia, Slovakia, and the Netherlands. A trilateral agreement in the field of environmental protection was also signed between the Governments of the Republic of Lithuania, Latvia and Estonia.

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

Decision-Making: The institutional structure for chemicals management is set by the Law on Chemical Substances and Preparations (adopted on 18 April 2000). The Ministry of Environment, Non Food Products Inspectorate, Ministry of Health, Ministry of Social Security and Labour, Ministry of Agriculture are the main institutions involved according to their competence. The above Law also provides for the state control of chemicals to be conducted by the respective institutions under Ministry of Environment (State Environmental Protection Inspectorate), Ministry of Health (Inspections under Ministry of Health), Ministry of Social Security and Labour (State Labour Inspection), Ministry of Agriculture (Plant Protection Service), as well as Customs Department under Ministry of Finance.

According to the Law on Chemical Substances and Preparations all institutional functions related to chemicals implementing EU requirements are delegated to the State Non Food Products Inspectorate which will operate commencing from 2002. The Law on Chemical Substances and Preparations sets the framework provisions for dangerous substances and preparations (including general provisions for testing, classification and labeling, notification about new substances, risk assessment, PIC procedure). This Law entered into force on 1 January 2001, full implementation - in 2004. Ministry of Environment together with Ministry of Health prepared: 1) Regulations on Classification and Labeling of Dangerous Chemical Substances and Preparations (adopted on 19 December 2000); 2) Regulations on Testing of Chemical Substances and Preparations According to Physico-chemical, Health and Environmental Properties (adopted on 29 December 2000). Lithuania is already preparing itself for the implementation of provisions of the EC Regulation Concerning the Export and Import of Certain Dangerous Chemicals 2455/92/EEC. Ministry of Health together with Ministry of Environment has prepared the Hygiene Standards HN 36-1999 "Banned and Restricted Substances" and HN63:2000 "Banned and Restricted Pesticides". The Regulations on Risk Assessment to be prepared in 2003 shall determine the administration system to perform the risk assessment procedure, relations among various institutions as well as functions of the National Competent Authority (Chemicals Supervision Institution) for execution of the Regulation on the Evaluation and Control of Risks of Existing Substances (EEC) No 793/93. Regulations on Notification of New Substances that are Intended to Be Placed on the Market are to be prepared in 2003 together with the guidance for industry.

The nearest very important task preparing to implement the notification procedure is to carry out an inventory of chemicals circulating on the national market in Lithuania. The aim of such inventory is to identify the new substances (chemical substances deemed to be non-existent on the EU market by 19 September 1981 and were not included in the European Inventory of Existing Commercial Chemical Substances EINECS) on the national market. The inventory of new chemical substances circulating on the Lithuanian market is planned to be completed by 1 April 2003.

Programmes and Projects: The project "Strengthening of Institutional Capacity to Implement EU requirements on chemicals and genetically modified organisms management, IPPC and climate change(to be carried out within Phare 2001 programme)" will provide for the training for governmental officials on notification and risk assessment issues (procedures, documentation, data basis, management and etc.) as well as training for enforcement bodies and preparation of guidance document for them. The Twinning Light Project "Strengthening of Institutional Capacity to Implement EU requirements on chemicals and genetically modified organisms management" will start in February 2002 (duration - until August 2002). Another part of the Project should provide with training for industry (EU requirements for chemicals sector, identifying responsibilities of industry, possible problems for implementation, experience of Member States, etc.). The development of necessary laboratory capacity for chemicals sector is also foreseen under this project. The Baltic Environmental Forum (Riga, Latvia) conducts the Regional project "Chemicals Control in the Baltic States". Several workshops on hot issues implementing the new chemicals control legislation are foreseen in the framework of the conducted by the Baltic Environmental Forum.

Status: The main task in chemicals sector is harmonization of the national legislation with EU legislation. Simultaneously the administrative-institutional structures are being strengthening to implement new requirements

for chemical management. Full transposition is expected in 2003. The new requirements in force will lead to the balanced chemicals management system in Lithuania. The Register of dangerous substances and preparations to be established will be the central data base of information on chemicals and will be the effective instrument for the chemicals management and control, for the setting priority substances, developing risk managing programmes. The Statute of this Register already is adopted by the Governmental Resolution. Substances that are of particular concern due to their health or environmental hazards are banned or restricted by the several national legal acts that are in line with respective EU legislation or International Conventions.

Capacity-Building, Education, Training and Awareness-Raising: For the development of successful system to implement provisions for chemicals management (e.g. notification, risk assessment, etc.) there is a need to enhance the capacity to manage the new chemicals legislation. This in turn requires improvement of qualifications in toxicology and ecotoxicology of personnel working in public institutions, in trade and industry and scientific institutions. The latter has been proved also by the experience of institutions concerned with chemical control in Member States. Initial arrangements for organizing studies in toxicology/ecotoxicology are made (in bilateral cooperation with Swedish Environmental Protection Agency and Chemicals Inspectorate); this Project may be of great significance. Specialists, involved in EU approximation process, from the Chemicals unit in the Ministry of Environment visited environmental and health institutions in Germany, England, Sweden, the Netherlands and had consultations with the experienced specialists (this training was organized by the EC TAIEX office and with support from the EU PHARE Programme). The participation in various workshops, seminars organized by EC TAIEX office is very important. Kaunas Institute of Engineering Ecology (APINI) conducts the training courses on classification and labelling of dangerous substances for industry as well as for authorities.

Information: Understanding the importance to establish a national system to link existing sources of information on chemicals the Ministry of Environment is drafting the Regulations on information submission, maintenance and dissemination (to be adopted on 01 January 2002). The Non Food Products Inspectorate (the Statute already adopted) will establish the Register of dangerous substances and preparations. During the accession to EU period it is sought: 1) to inform manufacturers/importers related to the implementation of the about the use of banned or severely restricted substances, obligation to provide data, about data bases available and access to them; 2) to make consultations with other governmental stakeholders and non-governmental organizations (Association of Chemical Industries, Confederation of Industrialists etc.) which are related to the Regulations on chemicals. The List of Dangerous Substances is available to everyone in the Web site of the Ministry of Environment; the EINECS list will be available in the nearest time. It is common to invite representatives of state institutions, participating in the management of chemical substances, non-governmental organizations, manufacturers, importers to the meetings with experts from the EC, CEFIC, organized by the Ministry of Environment.

Research and Technologies: Seeking to join the European Union and other International Programmes on Risk Assessment, to conduct toxicological and ecotoxicological tests the respective existing laboratories are planned to be adapted to operate according to the GLP principles avoiding the use of animals for experimental and other scientific purposes; the accreditation system is to be established. The accreditation principles are fully harmonized with the corresponding EU requirements. National Accreditation Bureau is appointed for these activities.

Financing: Institutional and administrative structures are planned to be strengthened (as mentioned above) according to NAAP and the Plan for Capacities Development of Institutions that Implement AQCUIIS. Recently developed the draft Plan for Capacities Development of Institutions that Implement AQCUIIS provides for the strengthening of institutions involved in chemicals management (needs for additional staff, purchase relevant software and hardware, training, financial recourses). The financing resources will be provided from the State budget, Phare, bilateral donors, etc.

Cooperation: Lithuania acceded to the following international agreements: the Convention on International Civil Aviation, the Convention on the International Marine Organization, the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR), and the Agreement on International Railway Transport (COTIF). International cooperation takes place in the context of the International Programme on Chemical Safety

(IPCS), the Intergovernmental Forum on Chemical Safety (IFCS); the International Register of Potentially Toxic Chemicals (UNEP/IRPTC); and the National Chemical Inspectorate, Sweden. The project on Support to Lithuania on Chemicals Control 2001-2004 (funded by Swedish Environmental Protection Agency and other Swedish institutions) will continue the co-operation between Lithuanian Ministry of Environment and Swedish Chemicals Inspectorate during EU accession process as regards development of legislation and administrative system in the area of chemicals control in Lithuania.

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CHAPTER 20 TO 22: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS, SOLID AND RADIOACTIVE WASTES, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC

Decision-Making:

Hazardous waste: The Ministry of Economy shall organize the management of hazardous waste. The Ministry of Environment shall organize the development of legal acts regulating waste management and shall control the compliance with the established requirements. The Government of the Republic of Lithuania approved the National Hazardous Waste Management Programme and Its Implementation Measures in 1999. National Strategic Waste Management Plan shall be prepared and submitted to the Government for approval up to 31st of December, 2001. Counties Waste Management Plans and Municipal Waste Management Plans shall be prepared as well. Waste management plans shall include separate parts dealing with hazardous waste, packaging waste and biodegradable or separate plans for management of the mentioned waste sorts shall be prepared. Legislation in this area includes Law on Environmental Protection, Article 23, Law on Waste Management of the Republic of Lithuania, Waste Management Regulations, Rules for Setting up, Operation, Closure and After-care of Landfills of Waste and others.

Non-hazardous waste: Ministry of Environment is responsible for the development of legal acts regulating non-hazardous waste management. The Ministry of Economy shall develop and implement the National Waste Management Programme designated to promote the prevention of waste production, recovery of waste, development of the market for products manufactured from recovered waste. Municipal waste are managed by local municipal institutions.

Radioactive waste: The Ministry of Economy is responsible for management of radioactive waste. State Enterprise Radioactive Waste Management Agency is to be established in the nearest future. Regulatory functions are split between several governmental institutions: Ministry of Environment, Ministry Health Care and State Nuclear Power Safety Inspection. Lithuania has ratified the Nuclear Safety Convention and signed the Joint Convention on the Safety of Spent Nuclear Fuel and the Safety of Radioactive Waste Management. A law on the Management of Radioactive Waste and Law on Radiation Protection were adopted in 1999. In addition, there are other regulatory documents: Basic Radiation Protection Standards (1997), Regulations for Licensing of Nuclear Power Related Activities (1998), General Requirements for Dry Type Storage of Spent Nuclear Fuel (1999), Ignalina Nuclear Power Plant Decommissioning Requirements (1999), Order on Import, Export, Transit and Internal Transportation of Radioactive Substances and Radioactive Waste and returning of Spent Sealed Sources (1999), Clearance Levels of Radionuclides and Conditions of Reuse of Materials and Disposal of Waste (2000), Regulation on Predisposal Management of Radioactive Waste at the Ignalina Nuclear Power Plant (2001), Order on Limitation of Radioactive Discharges from Nuclear Facilities, Permitting of Discharges and Radiological Monitoring (2001).

Programmes and Projects:

Hazardous waste: The Government of the Republic of Lithuania approved Outline National Waste Management Strategy and Action Programme in 1999. In the period 1997-2000 Lithuania's Waste and IPPC Approximation Project was carried out. The Government approved National Hazardous Waste Management Programme and Measures of its Implementation in 1999. National Strategic Waste Management Plan is being prepared.

Projects for ISPA 2002:

Vilnius regional waste management system development (Establishment of waste management system in Vilnius region, Construction of regional landfill, closure of old landfill); Klaipėda regional waste management system development (Establishment of waste management system in Klaipėda region, Construction of regional landfill, closure of old landfill); Marijampolė regional waste management system development (Establishment of waste management system in Marijampolė region, Construction of regional landfill, closure of old landfill). These projects are being prepared.

Radioactive waste: The Strategy on Radioactive Waste Management will be prepared in 2001.

Spent fuel management: Both the wet and dry spent fuel storage concepts were considered. The proposal of GNB Company (Germany) was chosen based on outdoor storage in dual-purpose (transport and storage) metal or

concrete casks. The casks meet safety requirements for storage and transportation. After cooling in the storage pools for at least 5 years the spent fuel is loaded into CASTOR or CONSTOR casks and disposed into the interim storage site where it is stored for 50 years. Projects under preparation/development: construction of Cement Solidification Facility (2001-2003), Expanding of Spent Fuel Interim Storage facility (2001-2005), reorganization of Long Lived Solid Radioactive Waste Management (2001-2004), reorganization of Short Lived Solid Radioactive Waste Management (2001-2004), construction of Waste Incineration Facility (2001-2006), construction of Short Lived Radioactive Waste Repository - initial planning (2002), development of the Environmental Strategy for Ignalina NPP region.

Status:

Hazardous waste: According to the data from 2000 from the Ministry of Environment there were 160 thousand tones of hazardous waste accepted to the waste management enterprises. Most hazardous waste was generated in industry. There is no waste incineration plant in Lithuania. There was recycled 48 % of hazardous waste in 2000, 49 % of hazardous waste (most oil waste) was stored in 2000. There is enterprise which recycle luminescent bulbs in Lithuania and part of these bulbs were exported to Latvia.

Non-hazardous waste: According to the data from 2000 from the Ministry of Environment, 3,022 mil tones of non-hazardous waste were accepted to the waste management enterprises. There are about 680 small municipal waste landfills/dumping sites with an area below 1 ha, about 120 medium-size landfills with an area of 1 to 5 ha and 35 large landfills in Lithuania. Waste is currently disposed in more than 300 landfills. 1084 thousand tones of municipal waste were delivered to landfills in 2000. Some part of old lead accumulators was exported from Lithuania.

Radioactive waste: Nuclear facilities, hospitals, research and industrial facilities are producers of radioactive waste in Lithuania. Radioactive waste is stored in two sites. One repository for radioactive waste was built in the 1960s according to a concept typically applied in the former Soviet Union at the time. Radioactive waste from research, medicine, industry and military installations in Lithuania and Kaliningrad district (Russian Federation) was deposited there from 1963 to 1988, when the facility was closed. After Long-term safety assessment it was concluded, that the existing facility does not provide safe long-term storage of the waste already disposed in the facility. Two alternative concepts for providing a higher safety of long-term disposal of the stored waste are defined, an additional barrier protecting against leakage of water through the facility concept and a retrieval concept. Ignalina NPP generates over 99 % of the waste. All the waste is stored in the site of the NPP. The solid waste is separated into three classes. At collection points the waste is segregated into combustible and non-combustible. Volume of non-combustible waste is about 50 %. From 1997 up to the present time generation of Group 1 waste has stabilized on a level of about 1500 m³ per year. Generation rate group 2 waste, which has a dose rate between 0.3 and 10 mSv/h is about 300-330 m³ per year. An assessment of the long-term safety of the present status of the storage building at Ignalina NPP for low-level solid waste has been done with Swedish assistance. The assessment showed that the buildings were not suitable for very long storage or as repositories.

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

Hazardous waste: Workshops, Training courses for environmental protection inspectors are organized annually. Participation at the training course at the Regional Training Center (RTC) for the Implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal in Bratislava, Slovak Republic since 1997. Baltic Environmental Forum is actively organizing workshops on waste management issues for representatives of environmental authorities of Estonia, Latvia and Lithuania, and publishing Baltic State of the Environment Reports

Radioactive waste: Seminars and workshops on radioactive waste and spent fuel management were organized with assistance of Swedish Radiation Protection Institute in years 1994, 1998, 2000. Number of specialists from regulatory institutions and operators participated in IAEA training courses on radioactive waste management and safe transportation of radioactive materials. State Enterprise Radioactive Waste Management Agency is to be established in the nearest future.

Information:

Hazardous and non-hazardous waste: Waste recovery, disposal and export enterprises shall annually report on waste management issues to Regional Environmental Protection Departments of the Ministry of Environment. Ministry of the Environment publishes report on the environment issues annually, including issues on waste management.

Radioactive waste: Amount of produced waste is reported annually.

Research and Technologies:

Hazardous waste: Measures for reduction of hazardous waste accumulation include improvement of technological processes in enterprises and introduction of low waste technologies.

Solid waste and sewerage: There are some modernization projects going on in Lithuania, e.g. on Kaunas landfill where a monitoring system was already established in 1994. Sludge is disposed in a special landfill. The technique appears to be very expensive, and it is therefore important to reduce volumes of sludge by introducing best available techniques.

Radioactive waste: Investigations of suitability of geological formations in Lithuania for disposal of high-level radioactive waste were started. Experience in safety and environmental impact assessment has been built.

Financing:

Hazardous waste, Solid waste and sewerage: For waste management are being used: The central government budget and municipal budgets; The municipal funds for the protection of nature; 20% of the Fund for the Support of SMEs to credit the business of utilization of recoverable waste; Funds of foreign countries, international organizations and financial institutions as well as targeted contributions of natural and legal persons of the Republic of Lithuania. For implementation of projects of regional waste management system will be used: 50% the ISPA Fund; 20% Lithuania funds (state and municipal budgets, money of private persons, etc.); 30% State-guaranteed loan.

Radioactive waste: The cost of radioactive waste management is the responsibility of users. The Program on Decommissioning of Unit 1 of Ignalina Nuclear Power Plant has been developed and approved by the Government of Lithuania. Decommissioning policy and financial aspects have been discussed at Donor Conference organized by the Lithuanian Government with support of the European Commission in Vilnius on 20-21 June 2000. International donors pledged during the conference to collect about 216 mln. EUR needed to close the first reactor of Ignalina Nuclear Power Plant.

Cooperation:

Hazardous waste: The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was ratified at the end of 1998 and entered into force for Lithuania on July, 1999.

Solid waste and sewerage: International cooperation takes place in the context of the International Programme on Chemical Safety (IPCS), the Intergovernmental Forum on Chemical Safety (IFCS); the International Register of Potentially Toxic Chemicals (UNEP/IRPTC); and the National Chemical Inspectorate, Sweden. Lithuania has acceded to the Convention on International Civil Aviation, the Convention on the International Marine Organization, the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) and the Agreement on International Railway Transport (COTIF).

Radioactive waste: In 1996, the Energy Ministry and the Ministry of Environmental Protection signed agreements with the Swedish Nuclear Fuel and Waste Management Company for the period 1996-1997 on the radioactive wastes management plan in Lithuania which is aimed at long-term safety assessment of existing radioactive wastes storage and their safe operation.

CHAPTER 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS

Women: Decision-Making: In 1996, the Lithuanian Programme for the Advancement of Women was approved by the Government. The national machinery for the advancement of women comprises: Advisor on Women and Family Issues to the Government and Commission on Women Issues and Women's NGOs. From 1994 to 2001, the percentage of women in the Government increased from 0 % to 15.4 % and in Parliament from 7.1 % to 10.6 %. The percentage of women at the local government level was 19.4% in 1996. Cooperation: The Convention on the Elimination of All Forms of Discrimination Against Women was signed in 1994 and ratified in 1995.

Children and Youth: Status: At present there are many possibilities for dialogue between the youth and government at all levels. Unfortunately sometimes youth are not very active in the process of national activities and development.

Indigenous People: Status: Not applicable.

Non-governmental Organizations: Decision-Making: At a meeting in 1995 between the Environmental Protection Ministry and NGOs, a letter of intention was signed which later served as a basis for cooperation agreements with NGOs. As a result, in 1995 the Environmental Protection Ministry started to release an Information Bulletin. NGOs also have made commitments to provide information on planned or on-going projects as well as about informational issues. Finally, the cooperation agreements have led to an increasing number of common projects. Currently there are a total of 80 Non Government environmental organizations of different levels (state, district, city, local), many of whom participate actively in the process of implementing sustainable development.

Local Authorities: Decision-Making: Local authorities have created a number of programmes and action plans according to the recommendations of Agenda 21. Municipality of Kaunas-city was the first one in Lithuania, which started Local Agenda 21 process in 1998. Main results to date are Environmental Policy for Kaunas-city (approved in 1999) and Public Health Policy (approved in 2000). Co-operation with Tampere Municipality (Finland) provides opportunity to share ideas and experience to achieve significant result. Project was supported by Phare. Other big cities such as Klaipeda, Siauliai and Panevezys afterwards were involved in LA21 process as well. They also have had partners in Sweden, Finland, Denmark, and Ireland. Project "Local Agenda 21 for small and medium municipalities in Lithuania" was started in 1999 by the initiative of Environmental Centre for Administration and Technology-Lithuania. 12 municipalities were involved (Alytus, Marijampole and Siauliai cities and Ignalina, Kaisiadorys, Kaunas, Radviliskis, Raseiniai, Rokiskis, Siauliai, Trakai and Varena districts). Workshops, supportive materials as well as individual consultations were provided to initiate development of local sustainable development strategy according to the needs of community. LA 21 activities in Visaginas were initiated in 2000.

Workers and Unions: Decision-Making: Workers participate in the implementation of Agenda 21 according to rights they have after ratification of Aarhus Convention.

Business and Industry: Decision-Making: In order to encourage the implementation of cleaner production, the financial and economic instruments as well as some regulatory framework, the procedure for assessment of environmental impact should be applied. In Lithuania, the principle documents regulating these issues are the Lithuanian Environmental Strategy adopted by the Parliament of Lithuania and the Lithuanian Environmental Action Programme approved by the Government of Lithuania. The Cleaner Production Programme (2000) includes the perspective industries, biotechnology, and the energy and transport sectors. Lithuania has been following the orientation towards implementation of the Environmental Management Systems standards, ISO 14000, and the Environmental Management and Audit Schemes (EMAS) in the Lithuanian industries. Status: Particularly successful actions in the field of promoting ecological ways of production include: financial incentives, subsidies, taxation, charges and return systems for recoverable goods on an environmental basis; the Law on Environmental Impact Assessment; environmental management; the National Environmental Strategy and Action Programme; and the Law on Waste. Efficiency of energy consumption has been promoted by raising the price of energy. The main

focus in the development of environmental taxes has been placed upon the imposition of environmental pollution fees and taxes for the use of natural resources. Water and air pollution have been reduced substantially both by improvements in processing techniques and by cleaning emissions. In 1997, the Ministries of Environment of Lithuania and Norway signed the Protocol on the cleaner production training programme in Lithuania for 1997-2000. The main effort in this Programme was focused on training of the Lithuanian enterprises and experts. Around sixty industrial enterprises and organizations have participated in the training course and around 100 local experts have been trained. Several Lithuanian enterprises have received certificates of the standard ISO 14000. Information: The main information on waste production is collected from enterprises by the established order according to submitted reports. Information for public is available on annual reports and web sites.

Scientific and Technological Community: Status: In Lithuania there are 15 Universities, 23 State Research Establishments (e.g. University Institutes) and 26 State Research Institutes; in Business Enterprises sector - about 60 research entities. The main part of Lithuanian R&D capacities is concentrated in Higher Education and Government (State Research Institutes) sectors. Nevertheless, in other sectors there are some laboratories as well as small and medium enterprises having high-tech products competitive in the world market. In this respect the most successful results are obtained in biotechnology and biochemistry, laser optics, chemistry and physics. There are in Lithuania more than 10,000 scientists and researchers; among them - 5400 having PhD and 4050 - Dr. Habilitatus degree.

Farmers: Decision-Making: The Ministry of Agriculture is authorized to formulate an agricultural and food industry development strategy and a scientific-technical, technological and investment policy. These functions also include the formulation and implementation of long-term sustainable agricultural development programmes. A number of NGOs have been involved in formulation and implementation of the Agricultural Policy. Status: As a result of the privatization policy in agriculture, the number of farmers is constantly increasing. At the same time, the farmers' influence in formulation and implementation of the policy of sustainable agricultural development has increased. Financing: The Farmers Support Fund established by the Government of Lithuania in 1992 provides assistance to new farmers and their groups.

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CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS

Decision-Making: After adoption of the state budget by Parliament, the Ministry of Finance is the main institution in Lithuania for financial resources management. Other ministries and state institutions are also responsible for financial resources management according to their competence. There are some legal acts related to financial resources, e.g. Law on Taxes on State Natural Resources, Law on Pollution Charges, etc. The main objectives of expenditure of financing are as follows: prepare for EU membership; Develop National defense and integration into NATO; insure the further financing of education and science, health care system and agriculture.

Programmes and Projects: The Public Investment Programme is created for 3 years period and is a constituent part of the State Budget Law. There are plenty of other important programmes and projects related to financial resources, e.g.: Support to Environmental Protection Programme, Waste and wastewater investment projects, PHARE support projects, Fund to support the Karst region programme for the development of ecological agriculture and to stimulate environmentally sound agriculture production, etc.

Status: The majority of environmental investments are allocated from the state budget. Another sources are loans and subsidies from foreign countries and international donor organizations, municipal funds and companies' own resources. In order to provide incentives for waste and pollution minimization and to accumulate additional funds, the Environmental Investment Fund was established. Economic instruments encompass taxes on state natural resources; pollution charges; user charges; tax waivers; tax differentiation; subsidies, loans and funds. Construction of wastewater treatment plants is subsidized from the national budget. During the last 10 years period more than US\$ 250 million for the reconstruction and construction of wastewater treatment plants were allocated.

Capacity-Building, Education, Training and Awareness-Raising: Each year Lithuanian specialists had professional trainings. Also there were special international education programmes in foreign countries.

Information: Major part of information is available on the web sites of the Ministries, e.g. Ministry of Finance (<http://www.finmin.lt>), Ministry of Economy (<http://www.ekm.lt>), Ministry of Transport and Communications (<http://www.transp.lt>), Ministry of Environment (<http://www.gamta.lt>).

Research and Technologies: Not applicable for that Chapter.

Cooperation: In 2000 in Nice the EC proposal to start in 2001 the qualitatively new stage of this cooperation between the EU states and candidate countries during which it will be sought that the EU member states and the candidate countries should start carrying out the adjusted economic policy was approved. The Economy programme of the Republic of Lithuania for the pre-accession period to be renewed annually, will be submitted to the EC on 10 October 2001. The Republic of Lithuania cooperates in the field of environmental protection with several foreign countries, i.e. Sweden, Finland, Denmark, USA and others. Financial support such as subsidies or soft loans from the Governments of above mentioned countries as well as from bilateral and multilateral donors were allocated for the investment projects, as well as for training programmes and other environmental purposes.

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CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT

Decision-Making: In the field of R&D the main decision making bodies are the Seimas (Parliament), the Government and the Ministry of Education and Science. The Seimas approves the grand total funds for Research and higher Education. The Government allocates the funds for the main programmes as well as to the institutions implementing these programmes. The Government also issues the main regulations and decisions on R&D. The Ministry of Education and Science issues the decisions and regulations of lower rank. The Department of Science and Higher Education under the Ministry of Education and Science drafts all decisions/regulations of the Government and the Ministry. The Science Council of Lithuania is the main scientific expert by the Seimas and the Government on issues of organization and funding of research and higher education. The Science Council is formed and acts according to the regulations approved by the Seimas. The Lithuanian Academy of Sciences is an autonomous, state-subsidized expert body, which brings together the most distinguished Lithuanian scientists, as well as foreign scholars whose activities are related to Lithuania.

Programmes and Projects: All R&D activities are carried out under the one Programme entitled “Development of R&D and assurance of scientific competence of the country”. In the frame of this Programme institutional sub-programmes as well as State research programmes are being implemented. At present there are three State research programmes entitled “Molecular basis of biotechnology”, “The research and safeguarding of genetic fund of Lithuanian agricultural plants and animals”, and “Evolution of Earth and forecast of its resources changes in Lithuania”.

Status: Lithuanian R&D system consists of about 150 institutions. In Lithuania there are: Higher Education sector: 15 Universities, 8 State Research Establishments (e.g. University Institutes); Government sector: 26 State Research Institutes, 15 State Research Establishments, 25 other entities; Business Enterprises sector: about 60 entities.

The main part of Lithuanian R&D capacities is concentrated in Higher Education and Government (State Research Institutes) sectors. Nevertheless, in other sectors there are some laboratories as well as small and medium enterprises having high-tech products competitive in the world market. In this respect the most successful results are obtained in biotechnology and biochemistry, laser optics, chemistry and physics.

In 2000 the distribution of R&D personnel among the sectors was following:

	Persons / FTE			
	Higher Education sector	Government sector	Business Enterprises sector	Total
Total R&D personnel	8 841	5 077	674	14 592
	6 248	4 974	569	11 791
Researchers	7 195	2 566	339	10 100
	4 932	2 557	288	7 777
Among them having PhD or higher (Dr. Habilitatus) research degree	3 833	1 500	44	5 377
	2 531	1 500	20	4 051

In 2000 distribution of researchers having PhD or higher research degree was following:

- physical sciences 19 %
- biomedical sciences 28 %
 - among them:
 - agricultural 24 %
 - natural 37 %
 - medical 39 %
- technological sciences 21 %
- social sciences 15 %
- humanities 17 %

Lithuanian R&D system is able to fulfill the needs of the country. In 1995 the experts of the Research Council of Norway evaluated Lithuanian research. It was noticed that: there are a number of good research institutions and many skilled individual researchers. Many groups range as excellent ones by international standards.

Capacity-Building, Education, Training and Awareness-Raising: At present a reform of R&D system is being launched. The main goal of the reform is to increase the efficiency of R&D system and to strengthen links between research and industry. It is foreseen to turn some State research institutes towards Lithuanian universities and grant to these institutes a status of University research institute. The reform of the system of doctoral studies is being implemented as well. Programmes for upgrading and modernizing research equipment of universities and state research institutes are implemented since 1998.

Information: Information on Lithuanian R&D is available on the Internet:

<http://www.mokslas.lt/en>

http://www.5fp.lt/EN/partners_en.html

Research and Technologies: In Lithuania environmental and sustainable development research is being carried out mainly in Kaunas University of Technology, Vilnius Technical University, Vilnius University and State research institutes such as Institute of Botany, Institute of Ecology, Institute of Physics, etc. Priorities of national R&D are following: Internationally recognized research in various fields of science; Research involved in international research programmes; Applied research vitally important for the Lithuanian society and the development of the economy; Fundamental and applied research in the field of Lithuanian language, culture and history. More detailed priorities are being discussed at present. Biotechnology, material science, nanotechnology, information technologies could be named as future priorities of Lithuanian R&D system.

Financing: In previous years about 95 % of expenditures on R&D were made in Higher Education and Government sectors. In 2000 expenditures on R&D in Business Enterprises sector increased and reached 21.5 % of Gross Domestic Expenditure on R&D (GERD). GERD was constantly growing from 1991 to 1998. As a percentage of Gross Domestic Product GERD was slightly varying during last several years: in 1996 it amounted to 0.52 %, in 1997 and 1998 - 0.57 %, in 1999 - 0.52 %, in 2000 - 0.60 %. It should be noticed that fraction of State budget funds in GERD was higher than 70 % in 1996 - 1999, but it diminished to 57.9 % in 2000. The increase of GERD in 2000 was caused only by increase of Business Enterprises sector expenditures on R&D up to 0.18 % of GDP. Nevertheless, even at present business expenditures on R&D are too low to compare to such expenditures in EU countries. The situation is typical for all economies in transition; and it shows that links between Lithuanian research are not strong enough. However, the increase of business expenditures on R&D in 2000 seems to be encouraging. New Law on financing of Science and Education was recently adopted. It is planned to increase gradually the funds assigned for the State Research and Higher Education Fund up to 25 % of State budget funds allocated to research. These funds will be used for competitive funding of research as well as to support collaboration between industry and research entities. The Fund is being reorganized in order to make it able to distribute increasing amount of funds.

Cooperation: There are about 20 international agreements between Lithuania and other countries on collaboration in education, science and culture. At present Lithuania participates in the 5th Framework Programme as a full-fledged member. Interest of Lithuanian researchers in the Programme and new opportunities opened by it is high enough. Taking into account the fact that such participation is new and challenging to country's R&D system, Lithuanian participation in the 5th Framework Programme can be considered as quite satisfactory. It is expected that the participation in the Programme will substantially promote the integration of Lithuanian research system into the international one.

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CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

Decision-Making: Since 1990 the Parliament (Seimas of the Republic of Lithuania) is responsible for a legal base for education. There is the Committee for Education, Science and Culture that adopts legislation acts on educational issues, approves the statutes of institutions of higher education etc. The Ministry of Education and Science is responsible for the formation and implementation of State policy on education, setting of educational standards, defining criteria and ways of financing, initiating of educational research, pre-service and in-service education of pedagogues, etc. A variety of State and non-governmental or public organizations (councils, associations, unions) are involved in decision-making and consultations on educational issues. Sustainable development principle was adopted on the governmental level in the Lithuanian Environmental Policy in 1996. The importance of environmental education and public awareness is emphasized as a significant component in its implementation. The Committee for Environmental Education, Public Awareness and Training was established in 1996 at the Ministry of Environment including representatives of Ministries concerned, scientific institutions, business and NGOs. The main task of the Committee was defined as initiation and further implementation of Lithuanian Strategy and Action Plan for Environmental Education. The Government in 1998 approved the Lithuanian Strategy and Action Plan for Environmental Education based on the UN Agenda 21, Chapter 36. The National Committee on Environmental Education, which consisted from representatives of major groups, was established for the co-ordination of implementation of this Strategy and Action Plan. The main goal of the Strategy is defined as promotion of knowledge, attitudes and action competence to contribute to sustainable development. The Lithuanian Strategy and Action Plan for Environmental Education involves various actors: formal education system (kindergartens, secondary schools, vocational schools, colleges, and universities), Ministries and subordinate institutions, local authorities, scientific institutions, business, mass media, NGOs, etc. Specific goals and objectives are formulated for the institutions/groups of institutions, both for formal and non-formal education systems. Taking into account requirements of the EU Directive on access to environmental information and the Aarhus Convention, the Order on Public Access to Environmental Information in the Republic of Lithuania was approved in 1999. On 10 June 2001 the Lithuanian Parliament ratified the Aarhus Convention. In the current Programme of the Government for the period of 2001 - 2004, promotion of environmental education on all levels, increasing of public awareness and transparency is emphasized.

Programmes and Projects: By the initiative of the Ministry of Education and Science, the project of reorienting education towards sustainable development (“Education for Sustainable Development”) has been started in 2000 with financial support of the UNDP. Education for sustainable development should take an interdisciplinary approach incorporating social, economic and environmental issues. It is thus a broader concept than traditional environmental education, which focuses on protection of and care for the environment. Project activities covers wide spectrum of educational institutions: pre-school to upper secondary education and formal adult education; universities and other institutions of higher education; non-formal education. Essential output of the project will be the State Policy of Education for Sustainable Development and Action Plan, including objectives, lines for action, monitoring/indicators, implementing institutions, coordination and funds. The Government in 2002 will approve the Policy as expected. The Regional Environmental Centre for Central and Eastern Europe, Country Office Lithuania initiated national project “School Agenda 21” in 1999. Aim of the Project is to encourage students and teachers to identify, investigate and take action toward the prevention and resolution of environment issues in their own community as well as make connections between school curriculum (classroom based programmes) and sustainable development principles. Project Co-ordination Group was established involving experts from relevant institutions for the evaluation of current activities, preparation of guidelines and teaching/learning materials as well as for individual consultation of the participants. Training workshops are permanently organized for teachers and school administration. The Ministry of Education and Science recognized the project “School Agenda 21” as a pilot project of education for sustainable development. An extension of the Project on international level was its link with the project “Children Across the Baltic” (2000 - 2001), as well as ongoing project “Schools for Sustainability in the Baltic States Education for Sustainability - an Interactive Learning Web Site” (2001 - 2003). Schools, universities, NGOs, and municipalities implement variety of local projects including elements of education for sustainable development.

Status: The main goals and objectives of education for sustainable development as defined in UN Agenda 21 and other relevant documents are compatible with the main goals of Lithuanian education reform. It provides space for practical implementation of basic principles, i.e. development of critical thinking and action competence in changing world as well as communication, democracy and responsible citizenship skills. The Law on Research and Higher Education of the Republic of Lithuania adopted in 1991 and the Law on Higher Education adopted in 2001 regulate higher education in Lithuania. New documents such as “National standards of education”, “Indicators for school audit” are under preparation. Key principles and components of the education for sustainable development will be included in these documents. A cross-curriculum on education for sustainable development is under preparation. National Curriculum is going to be revised as well.

Capacity Building, Education, Training and Awareness-Raising: Teachers are the key actors in education for sustainability. According to the survey accomplished in 2000, during the last 3 years about 60% of teachers attended training courses on environmental education organized by various institutions, i.e. municipal teacher in-service centres, environmental institutions, universities, and NGOs. However, education for sustainability is quite new issue in teacher in-service education programmes. The main sources of information and methodology on sustainable development for teachers are international and national projects. Representatives of universities, Ministry of Environment and subordinate institutions also considered international seminars and projects as significant means for the professional development. Universities mention the importance of Internet and participation in research projects. Universities themselves are organizing master and postgraduate studies and training on environmental and sustainable development issues for various professionals. For example, Institute of Environmental Engineering at Kaunas Technological University organizes training courses for central and local Government officials, industry, consultants and academia on environmental management and auditing. Danish Environmental Protection Agency and Finish Ministry of Environment initiate Grants Programs for NGOs to promote implementation of sustainable development practice in local communities. Regional Environmental Centre for Central and Eastern Europe, Country Office Lithuania was nominated as an administrator and provides appropriate trainings for NGOs.

Development and implementation of municipal sustainable development plan - Local Agenda 21 has been started in 15 Lithuanian municipalities (about 1/4 of total) since 1998. An important component of the Local Agenda 21 is training of municipal officials and politicians. Workshops, supportive materials and individual consultations are provided by representatives of universities, scientific institutions and NGOs to stimulate local sustainable development policies and according to the needs of community. Local media mostly is interesting in the Local Agenda 21 process. The role of media (TV, radio, press, Internet, advertisers) in informal education and awareness rising should be recognized. Unfortunately, sustainable development issues are not on priority agenda settings of central media. There are some TV programs ahead of environmental protection and consumer education issues. Recently Lithuanian TV companies and newspapers expressed their commitment to publish social advertisements and video clips to promote sustainable lifestyle.

Information: There are various information resources on environmental and sustainable development issues available in Lithuania provided by governmental institutions (Ministries, Municipalities) and NGOs. In particular, development of the Internet web sites as well as access to Internet is increasing rapidly during the last 3 - 4 years. The Ministry of Environment publishes quarterly and annual reports on the state of the environment, issues quarterly Newsletter with information about ministry's policy, implementation of various programmes, preparing laws, etc. Since 1999 the project “Ministry of Environment to the Public” is implemented. According to this project leaflets with comprehensive explanation of the main adopted laws are issued. In accordance with the Law on Civil Service (1999) the Lithuanian Public Administration Institute is responsible for preparation of programmes and organization of training courses for civil servants. The implementing national, bilateral and international co-operation projects, organizing seminars and workshops have a great value for the improving qualification of civil servants of state and local public authorities, representatives of NGO and other institutions, as well. In recent years a lot of such activities have been organized, e.g. the Ministry of Environment has organized the Training Course on Public Participation in Territorial Planning and Environmental Decision-Making (in the co-operation with the Finnish Environmental Institute), Training Seminar on Public Information with Focus on Mass-Media Relations (in the co-operation with the Swedish Environmental Protection Agency), etc. Specialists from the system of the

Ministry of National Defence constantly improve their qualification on environmental issues according to the international Environmental Security Programme. The Ministry of Communication has organized seminars on environmental issues in communication field for Ministry's senior officials and managers of transport enterprises. Environmental issues are integrated into qualification improvement programmes for transport specialists as well as into driving licenses courses."

Ministry of Environment could be mentioned as a provider of the most comprehensive environmental information (<http://www.gamta.lt>). Aspects linked to education are presented on the web site of the Ministry of Education and Science (<http://www.smm.lt>).

Information for academic institutions is provided by the Lithuanian Centre of Baltic Environmental Information Dissemination System, BEIDS (<http://www.beids.lt>).

The UNDP since 1995 prepares annual Lithuanian Human Development Reports, which are also available on Internet (<http://www.un.lt/hdr.htm>).

Research and Technologies: The Department of Sociology of the Vytautas Magnus University carried out social survey on environmental consciousness in Kaunas-city in 1998. Level of public awareness, attitudes, motivation and involvement in solving of environmental problems were considered. Investigation of public information/awareness and attitudes on particular waste problems as well as preparedness of citizens to accept and implement modern waste management technologies was carried out in Kaunas, Jonava and Siauliai in 2000. Modern IC technologies are common in all universities including access to the Internet and distance learning possibilities. At the school level computers are used since year 1986. At present, 1 computer is used by 58 schoolchildren in average. It is planned to achieve the level of 10 schoolchildren 1 computer in by the year 2004. In the current Programme of the Government for the period of 2001 - 2004, promotion of new ICT is emphasized. It includes training, supply of relevant ICT equipment and software.

Financing: The national and the municipal budgets finance environmental education as a component of the formal education system. Local environmental/sustainable development extra-curricula educational activities and projects usually are financed by municipal Nature Protection Funds. Ministry of Environment currently supports environmental newspapers "Zaliasis pasaulis" ("The Green World"), "Teviskes gamta" ("Nature of the Country"), "Zalioji Lietuva" ("The Green Lithuania"). Particular educational projects are financed by EU funds (SOCRATES, PHARE), UNDP, the Nordic Council of Ministers and Governments of foreign countries (Denmark, Finland, Japan, The Netherlands, Sweden, USA, etc.).

Cooperation: Within the country, partnership between the Ministry of Environment and Ministry of Education and Science in environmental education should be mentioned, particularly on the policy level. In implementation of concrete projects, partnerships of various stakeholders i.e. schools, universities, scientific institutions, municipalities, NGOs are common. National initiatives in education for sustainable development are integrated into the regional plans within the Baltic 21 - Agenda 21 for the Baltic Sea Region (BSR). It was decided at the Meeting of the Ministers of Education of the Baltic 21 countries in March 2000, to develop and implement Agenda 21 for Education in the BSR. Regional co-operation will bring added value to the process. Lithuanian Ministry of Education and Science is responsible for the Agenda 21 for Education within the Baltic 21 as a Lead Party in co-operation with Sweden. Meeting of the Ministers of Education to approve Agenda 21 document on education for sustainable development is expected in December 2001. Lithuanian schools are involved in various international networks dealing with sustainable development issues such as the "Associated Schools Project and the Baltic Sea Project" (UNESCO), "European Network of Health Promoting Schools" (WHO), etc. Universities participate in the Baltic University Programme covering all countries of the region through a common study material (booklets, videos) as well as via different distance learning technologies, common seminars and conferences. In particular, international masters' programme "Sustainable Development in the Baltic Region" should be mentioned. Various projects involving particular institutions (schools, universities, NGOs) are implemented in partnership with appropriate foreign organizations.

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

Lithuania is one of the countries in transition. It is seeking to finalize negotiations of its EU membership, to solve its own development problems. Temporally it is not able to develop international cooperation for capacity-building in developing countries.

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CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

This issue deals mainly with activities undertaken by the UN System. Lithuania was admitted into the United Nations on 17 September 1991. In 1992 Delegation of the Republic of Lithuania participated in UNCED. Few programmes of UNDP cooperation with Lithuanian Government have been implemented.. UNDP provided technical assistance to support Lithuania's transition. Lithuanian Centre for Public Administration Training was established in 1993, NGO Information and Support Centre - in 1995. UNDP and UNEP are supporting implementation of UNFCCC, UN Convention on Biological Diversity, and Phase-out of Ozone depleting substances in Lithuania.

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CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

Lithuania has ratified plenty of multilateral agreements-conventions in various sectors of activities (environment, transport, energy, industry, trade, nature conservation, etc.). There are several adopted by the Parliament Strategies and approved by the Government Action Programmes for implementation of some conventions at the national level. Lithuania has signed also plenty of international bilateral intergovernmental agreements on cooperation in different fields of activities. National ministries, other institutions have also their bilateral cooperation agreements with colleagues in foreign countries. Many activities according to these international legal instruments are directed to the implementation of sustainable development.

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CHAPTER 40: INFORMATION FOR DECISION-MAKING

Decision-Making: The Department of Statistics under the Government of the Republic of Lithuania is responsible for general statistical information management and dissemination at the national level. Other public authorities, e.g. the Ministry of Environment, the Ministry of Economy, the Ministry of Social Security and Labor, etc. are responsible for the collection, analysis, management, and dissemination of information and data according to their competence. The authority for information management is delegated to the lowest level of public authority, or local government by laws and other legal acts or executive regulations. There are various laws, regulations, or policy instruments addressing the flow and management of information for decision-making in Lithuania. These include: Law on Statistics of the Republic of Lithuania, Lithuanian Environmental Strategy and Action Programme, Law on Ambient Air Protection, Law on Waste Management, The State Environmental Monitoring Programme, Law on Environmental Impact Assessment, and others. here are different indicators of three interdependent dimensions - economic, social and environmental. There are specific indicators for the following issues: a safe and healthy life for current and future generations, the economic dimension, the quality of environment and nature conservation, the agriculture sector, and others. It is very important to harmonize and standardize data on sustainable development at national and international levels. The Baltic Sea Region is the first region in the world, which adopted the common regional goals for sustainable development. These goals include an overall goal, goals for each of the 8 Baltic 21 sectors (Agriculture, Education, Energy, Fisheries, Forest, Industry, Tourism and Transport), and a goal for Spatial Planning. In order to monitor the Baltic 21 goals, a set of core indicators has been elaborated for each goal, and statistics have been compiled. Scientists, local authorities, institutions under ministries participate in the collection, assessment, management, and dissemination of information and data for decision-making. The private sector is regularly providing information, in particular with regard to environmental indicators (emissions, concentrations, discharges, etc.).

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

Status: The main purposes of sustainable indicators are planning, assessment and decision-making. Collection, analysis, management, and dissemination of information on sustainable development are realized in separate sectors of activities in Lithuania. The integrated information network related to sustainable development is not developed in Lithuania yet. At this moment a lot of small IS in different areas or sectors, such as environment, energy and transport, are developed without any vision of systems integration. Lithuania requires high integration of databases with GIS and web technologies for improving data collection, management and analysis needs. The rural population has the worst possibilities of accession to information in Lithuania. The main channels of information are computer networks, programmes on mass-media, bulletins and other publications.

Capacity-Building, Education, Training and Awareness-Raising: The Lithuanian Public Environmental Education (information, education, training) Strategy and Action Programme was developed for 1998-2002. In this Strategy main environmental education trends and tasks are foreseen based on principles of sustainable development. The Strategy is the background for the organization PA&EE in Lithuania. Following the Strategy and Action Programme, institutions of either formal education system (comprehensive schools, vocational schools, colleges, complementary education institutions, universities, adult education institutions), or informal education system (Ministry of Environment, other ministries or public authorities, counties, municipalities, science and studies institutions, mass media, enterprises, NGO, family) implement PA&EE activities according to their competencies. Seminars and workshops are organized for creating environmental databases and information systems. There are several Internet web sites where relevant sustainable development data is available.

Research and Technologies: Computer systems are usually used for data collection. The satellite-based remote sensing maps and GIS are used as well. Geographic Information Systems are used for physical planning of territories and development of data bank for territorial planning. Management system of water basins with integration into GIS is under development. The GIS systems and analysis tools are used in high scale in the development of management system of protected areas, register of water bodies, the cadastre of forests, geological

survey. A few modeling systems are used for water and air management. Lithuania is a member of EIONET network. On the basis of this project there was developed EIONET server of Lithuania. The development of this server has the main purpose to build up the catalogue of data sources (CDS) of environment and sustainable development.

Financing: See under **Cooperation**.

Cooperation: Lithuania has been co-operating on different (bilateral, regional and international) levels in gathering and sharing information on sustainable development. Lithuania is one of 11 member-countries of the Project Baltic 21 - an Agenda 21 for the Baltic Sea Region. Representatives of Lithuania take part in international and regional conferences on specific issues of sustainable development. Lithuania has developed indicators of sustainable development together with other countries of the Baltic Sea Region in the frame of Baltic 21. Lithuania submits information to the European Information Network EIONET since 1997. There are several agreements on standardizing and exchange of information with the neighbor countries Latvia, Poland. Lithuania has used several co-operation agreements in the transfer of technology and know-how on the development and management of national data bases and information systems (e.g. with US EPA Region V, with Denmark). A lot of different programmes and projects for capacity building related to improving the collection, assessment, management, and dissemination of information have been implemented in Lithuania using foreign subsidies. The projects include: "Technical assistance for the development of an information system on waste management in Lithuania", and "Long Term Assistance on Information and Reporting; Information Management Programme". The Ministry of Education and Science in co-operation with the Regional Environmental Center for Central and Eastern Europe (Country Office Lithuania) implements the Project "School Agenda 21", the Ministry of Environment constantly provides information on the state of environment, the Ministry of Economy organizes campaign "My house: Energy saving".

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CHAPTER: INDUSTRY

Decision-Making: The Action Programme of the Lithuanian Environmental Strategy sets the national policy for ecologically sustainable industrial development. The Ministry of Environment is responsible for the implementation of the Programme of Action, the main objectives include the following: creation of a waste management system; reduction of environmental contamination caused by industrial and hazardous waste; reduction of surface water pollution from municipal and smaller settlements waste waters; and reduction of pollution from transport exhaust gases. The National Commission for Sustainable Development is approved by the Government in 2000. The Ministry of Economy is in charge of modelling and implementing the sustainable industrial development policy. Certain environmental protection and social issues of sustainable development fall to the sphere of regulation, within the range of their competence, of the Ministry of Environment, the Ministry of Social Security and Labour, county administrations, municipalities as well as agencies established to the said end. The basic principles of sustainable industrial development are set forth in the Medium Term Industrial Development Policy of Lithuania and the Industrial Policy Implementation Strategy approved in 2000. Great attention is paid to solution of environmental, social and economic problems of industrial development in the Strategy. To realise principles of sustainable industrial development outlined in the strategy and more efficiently co-ordinate activity of all interested institutions within this sphere, the Sustainable Industrial Development Programme, which is planned to approve in the start of 2002, is being prepared at present.

Programmes and Projects: One of the most topical environmental problems in Lithuania, like in most East European countries, is hazardous waste management. Every year about 120 thousand tons of such waste that may cause harm to the human surroundings and environment are generated in Lithuania. Therefore, seeking to resolve problems of hazardous waste management, which have accumulated in the run of many years, the Ministry of Economy has developed the Public Hazardous Waste Management Programme started to implement since 1993. Implementation measures provided for by the programme envisage elaboration of the regional hazardous waste management and development of hazardous waste disposal systems and creation of specific hazardous waste (medical, leather processing industrial, polluted with oil products and other kind of waste) management systems. In the process of realisation of the measures set forth in the programme, regional hazardous waste management sites have been started to build and specialised waste management enterprises have been established on their grounds. The said enterprises will co-ordinate hazardous waste management in the areas attributed to their sphere of regulation and will provide services of hazardous waste transportation, storage, rendering harmless and other kind of management. Household waste management is also a problem of today. The main point here is that a large portion of secondary raw material, which could be recycled, if the system of secondary raw material collection and recycling were in place, are brought to household waste landfills in Lithuania. To address the said problem, the Programme for Utilisation of Secondary Raw Material and Waste has been developed and is under implementation. The key goal of the said programme is creation of a modern system for sorting household waste that would be in line with requirements of the EU as well as development of repeated utilisation and recycling of secondary raw material. Recently realisation of projects on collection of landfill gas and its utilisation to generate electrical power has been started. This task was undertaken by the joint Lithuanian-Danish-Finnish-Swedish venture CC Baltic Consultation Group (BCG). In Lithuania, landfill gas is being already collected in the Kariotiškės landfill, where the gas is burnt, Vilnius city landfill. Collected gas will be used to make electrical power. This will be the first installation for gas processing into electrical power in Lithuania. Deadline for completion of works is set for the autumn of the next year (2002).

Status: The principal sources of pollutant emissions in Lithuania, as in many other countries, are transport, industry and energy sectors. The main pollutants of the atmosphere are: SO₂, CO, NO_x, C_xH_x, and particles; the main contaminants into surface water are BOD₇, suspended substances, N total, P total, oil products. According to the Statistics Department's data, industry consumed 0.8 % of the total freshwater amounts in 1996. This percentage is less than in previous years due to the recession Lithuania has been experiencing.

Capacity-Building, Education, Training and Awareness-Raising: Capacity building in the sphere of Industry is mostly under responsibility of private enterprises. Specialists are trained according to general training programme comprising environmental requirements and principles of sustainable development.

Information: All the information about programmes realised by the Ministry of Economy and financed projects is entered onto the home page of the Ministry: www.ekm.lt .

Research and Technologies: The main institutions for industrial research and technologies are Kaunas Technological, Vilnius Gediminas Technical and Lithuanian Agriculture Universities.

Financing: Various programmes, environmental and innovative projects that stimulate sustainable industrial development are financed from the state and municipal budgetary funds as well as means of agencies and own resources of enterprises. The Business Development Council under the Ministry of Economy analyzes expedience of development and implementation of environmental (e.g. design and testing of the medical waste incineration experimental installation) and innovative projects (e.g. clean production technology introduction projects). Construction and equipment of regional waste management sites are financed from the state and municipal budgetary funds. Ways and possibilities for attracting foreign investment are sought for. The sites of Šiauliai and Klaipėda - two regions most heavily polluted with hazardous waste - are in the final stage of their equipping in the current year upon assigning funds under the PHARE Cross-border Co-operation Programme. The Danish Environmental Protection Agency allocated about 6 million DKK (about 3 million LTL) for collection of landfill gas, which will be used to make electrical power. Contribution of the Vilnius Municipality would make about 0,5 million LTL. Plans are made to provide budgetary allocations to enterprises involved in waste and secondary raw material processing. A draft law on substitution of the Law on Tax on Pollution will be considered at the Parliament during its autumn session in 2001. The draft provides for imposing taxes on products, usage of which causes waste generation. It is noteworthy, that upon adoption of the said law, funds will be accumulated to finance waste managing enterprises and induce waste prevention. Great importance will be attached to introduction of cleaner production technologies and their development.

Cooperation: Lithuania has good co-operation relations on industry issues with different institutions of neighboring and some other countries as well as with IFIs (the World Bank, the European Investment Bank, the European Bank for Reconstruction and Development, the Nordic Investment Bank, etc.).

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CHAPTER: SUSTAINABLE TOURISM

Decision-Making: The Sustainable Tourism Development Commission of the Parliament is the main institution in Lithuania. The Ministry of Economy and Lithuanian State Department of Tourism are responsible for decision-making for sustainable tourism. Local authorities and Tourist Information Offices are responsible at the local level.

Legislation, regulations and policy instruments: Legislation relating to sustainable tourism includes the Law on Protected Areas, the Planning and Building Law, the Republic of Lithuania Land Reform Law, the Water Law, the Law of Non engine Transport, the Law on Protected Natural Objects, the Law of Property, and a separate Law on Tourism. The established standards and guidelines for sustainable tourism are the following: national minimum standards for accommodation establishments, the Blue Flag Project for Beaches. The Blue Flag has been given for Neringa at the beginning of 2001. During the last 3 years, the Lithuanian State Department of Tourism in cooperation with industry and Administrations of National Parks and Regional Parks, is planning to work out and launch sustainable tourism guidelines to the hotels and criteria for the tour operators in developing ecotourism products. Both industry and consumers are reacting positively to these guidelines.

Programmes and Projects: Sustainable tourism is one of main principles of the National Tourism Development Programme for 1998-2002. Presently, several strategic plans covering sustainable tourism development are being developed: the National Tourism Development Plan to the year 2010 with an Operational Plan for 1999-2003; Environmental Action Plan to the year 2010 where one of the proposed activities is to work out a National Strategy for Recreational Areas and Ecotourism, and a Biological Diversity Strategy. Ecotourism and nature-based tourism is a part of the National Tourism Strategy and Plan. Based on the Agenda 21 for Baltic Sea Region Tourism, monitoring procedures are going to be worked out in the coming years. There do presently exist monitoring procedures in the national parks, nature parks and nature reservation areas. A control system and penalties are regulated by law. *Major Groups:* Non-governmental organizations: Lithuanian Tourist Association, Lithuanian Hotel Association, National Hotels and Restaurant Association, Lithuanian Rural Tourism Association, Lithuanian Guides Guild, Lithuanian Youth Hostels Association, Lithuanian Travellers' Union, local authorities, and County governments are involved in the decision making process.

Status: Tourism is one of the most important sectors of the Lithuanian economy, and its further development is encouraged. Exports of tourism services form 14% of total exports of Lithuanian goods and services. The total contribution to GDP in 2000 from expenditure by foreign visitors was 5 %. The revenue from international tourism is expected to be more than US\$ 600 million. Establishment of a network of the Tourist Information Centres by Local Authorities and Administrations of National and Regional Parks has had a very positive effect on sustainable tourism development.

Capacity-Building, Education, Training and Awareness-Raising: No special programmes have been identified. Under the Phare National Tourism Development Programme in 1993-1998, some courses on sustainable tourism have been organized. Partners responsible for awareness-raising: Mainly all events and campaigns are organized by local and regional tourism authorities, Tourist Information Centres of National and regional parks. There were few programmes and projects realized by Ministry of Environment in partnership with Danish colleagues.

Constraints: Constraints to pursuing sustainable tourism include a lack of education and training programmes on sustainable tourism, lack of information exchange among stakeholders, insufficient capacity at national level to coordinate activities, and a lack of funding.

Information: Information is available to assist both decision-makers and the tourism industry from visitor surveys and statistics, national and cultural resource inventories, and tourism development plans. The relevant development plans are available to the public (printed materials or websites). Based on the report of Agenda 21 for Baltic Sea Region Tourism, the development of indicators is planned for the coming years. Better cooperation between the Ministry of Environment, the Lithuanian State Department of Tourism and the Lithuanian Tourist Association would be very positively.

Research and Technologies: Environmental management systems very rarely applied in hotels and other tourist establishments.

Financing: Fixed costs (e.g. administrative costs, salaries for public personnel, operational costs in national nature areas) are covered by the State budget. Development activities (e.g. strategic plans, investments for product development) mainly are financed by the State budget, the Environmental Fund and external assistance (e.g. Phare, bilateral projects).

Cooperation: National tourism development programme of Lithuania was created mainly in accepting the Irish model (PHARE programme support 1993-1998). The main reasons for that are quite similar climate and socio-economic conditions. Nevertheless Lithuania is cooperating with all countries of the Baltic sea region, especially Sweden, Denmark, Finland, countries in ecotourism development. Lithuania cooperates with ten Baltic Sea countries through the Baltic Tourism Commission. Main outputs include Agenda 21 for Baltic Sea Tourism Region, international seminars and conferences. At the regional level, there are international projects for the development of sustainable tourism e.g. EURO VELO II, the Tourism Development Programme for South Lithuania and North Poland (Border Crossing Projects), etc.

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