



# GOVERNMENT OF THE REPUBLIC OF LITHUANIA

## RESOLUTION No. 1160 ON THE APPROVAL AND IMPLEMENTATION OF THE NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT

September 11, 2003  
Vilnius

Following the recommendations of the European Council meeting (Barcelona, 2002) and Article 162 of the Implementation Plan of the World Summit on Sustainable Development Meeting in Johannesburg (2002), the Government of the Republic of Lithuania has resolved:

1. To approve the National Strategy for Sustainable Development (attached thereto).
2. To authorize the Ministry of Environment to co-ordinate the implementation of the National Strategy for Sustainable Development.
3. To delegate the Ministry of Environment, the Ministry of Social Security and Labor, the Ministry of Transport, the Ministry of Health, the Ministry of Education and Science, the Ministry of Economy, the Ministry of Foreign Affairs, the Ministry of Interior and the Ministry of Agriculture within their competence to revise the national programmes in 3 months from the date this resolution becomes effective and, if needed, supplement with such provisions of implementation of the National Sustainable Strategy for Sustainable Development, which are not foreseen in these programmes.
4. To instruct the Ministry of Environment to establish:
  - 4.1. a task force from representatives of the Ministry of Environment, the Ministry of Social Security and Labor, the Ministry of Transport, the Ministry of Health, the Ministry of Education and Science, the Ministry of the Economy, the Ministry of Foreign Affairs, the Ministry of the Interior, the Ministry of Agriculture and the Department of Statistics at the Government of Lithuania for the preparation of biennial reports on the implementation of the Strategy referred to in the paragraph 1 and the submission to the National Sustainable Development Commission;
  - 4.2. a specific expert group for regular analysis of external and internal changes, the evaluation of the progress in the implementation of the Strategy referred to in the paragraph 1 and the preparation of recommendations on how to eliminate defects.
5. To establish the financing of the implementation of the Strategy referred to in the paragraph 1 from the assignments allocated in the State budget to specific ministries responsible for the implementation of the Strategy, the Public Investment Programme and other sources.

Minister of Economy acting as proxy  
for the Prime Minister  
Čėsna

Petras

Minister of Environment

Arūnas Kundrotas

## **NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT**

### **I. GENERAL PROVISIONS**

1. The main provisions of sustainable development were articulated in the World Summit meeting in Rio de Janeiro in 1992. Sustainable development was endorsed as the main long-term ideology of society. The concept of sustainable development is based upon three pillars of equal importance – environmental protection, economic development and social development. An action programme for the implementation of sustainable development called Agenda 21 was adopted in Rio de Janeiro. The main sustainable development principles were identified in the approved Declaration.

2. This National Sustainable Development Strategy (hereinafter referred to as “Strategy”) identifies sustainable development as a compromise between environmental, economic and social objectives of the society that provide opportunities to improve the welfare of present and future generations without exceeding allowable limits of impact to environment.

3. In terms of individual problems and distinctive methods for the implementation of sustainable development, there are two categories of states commonly distinguished to start with: developed and developing countries. If very rapid growth in population, poverty, gender inequality, education, and medical service problems are characteristic of developing countries, the category of developed countries mostly faces such problems as excessive consumption of natural resources and environmental pollution. At the same time, both country groups have one very important common development feature (except in states devastated by wars and other natural disasters) – progress is based on natural evolution patterns. Both experience economic and welfare growth, although at a very different rates.

4. After the former Soviet bloc collapsed, a third group of countries with very distinctive features emerged. Extremely large scale and rapid pace of on-going changes is a characteristic feature of all countries with economies in transition. If the changes of the last decade in economy, consumption of natural resources, state of environment and social development in the the developed and developing countries are measured by per cent or tens of percent, in the countries with economies in transition such changes are measured by several times or even by tens of times.

5. Assessing the changes during the transition period from the point of view of sustainable development and future development potential, it is very important to ascertain whether a decrease in consumption of natural resources in the countries with economies in transition occurred due to the transformational depression of the economy and whether

environmental pollution was reduced only due to decreased consumption of resources. If answers to both questions were positive, this would mean that the changes of the last decade brought nothing positive in terms of sustainable development as the proportional increased consumption of natural resources and environmental pollution would start along with the recovering economy.

6. During the preparation of a National Report for the Johannesburg Summit, an analysis was carried out which revealed that consumption of energy resources and air pollution decreased more rapidly than production and services, even in the beginning of transition period when the decline of the economy was greatest. In the middle of the last decade Gross Domestic Product (GDP) in Lithuania decreased by 40% from the level of 1990, consumption of energy resources and air pollution – by almost 60%, i.e. by one and a half times more than the GDP decline. In the second part of the last decade the economic recovery started, thus, consumption of resources and environmental pollution slowly increased. In 1995-1998 the growth of GDP in Lithuania was 18%, though final energy consumption and air pollution increased by only 1-2%. In 1999, due to the Russian economic crisis, a reappearance of a short economic depression was registered in Lithuania. However, since 2000 the rapid growth of Lithuanian economy has resumed, meanwhile, energy consumption and environmental pollution continued to decrease.

7. Since the beginning of the transition period in Lithuania, implementation of a market economy and restructuring of economic sector, as well as increase in the prices of energy and other natural resources, have determined considerably more efficient consumption of energy and other natural resources and favourable development changes in terms of sustainable development. Even during the economic depression, economic changes were decoupled from changes in consumption of resources and environmental pollution. The decrease in consumption of resources and environmental pollution was more rapid than in production and services. When economic growth resumed, increase in consumption of resources and environmental pollution was slower or nonexistent compared with the growth in the economy.

8. Since 1999, the changes in environmental pollution have been decoupled from changes in consumption of resources. Implementation of advanced fuel combustion technologies and introduction of natural gas in energy and industrial companies and liquid gas in the transport sector, as well as renovation of car fleets, have influenced the decrease in emissions of pollutants and greenhouse gases per the same amount of consumed fuel. Due to changes in the last decade, ecological efficiency in various economic branches has significantly increased, energy consumption per GDP unit has gone down by two times and emissions into the air by more than 2,5. However, the efficiency of energy consumption in Lithuania is still rather low if compared with EU countries, i.e. consumption of energy per production of one GDP unit is 1,7 times higher. Nevertheless, emissions into the air are several times lower than average amount of emissions in EU countries if compared with the emissions from stationary sources into the atmosphere per area unit in EU countries.

Accomplished changes and the current state of affairs in different economic branches are investigated in more detail in the Chapter on Strategic Analysis.

9. Preparation of the National Sustainable Development Strategy was based on the approach that Lithuania's development during the investigated period (until 2020) will be mainly influenced by eurointegration processes. Thus, foreseen changes and their implementation directly correlate with the Lithuanian membership in European Union. Formulation of priorities and objectives of the Strategy followed national interests and already prepared strategic documents (National Long-term Development Strategy approved by the Resolution No. IX-1187 of Seimas (Parliament) of the Republic of Lithuania on November 12, 2002, Master Plan of the Republic of Lithuania approved by the Resolution No. IX-1154 of Seimas of the Republic of Lithuania on October 29, 2002, Long-term Economic Development Strategy of Lithuania until 2015 approved by the Resolution No. 853 of the Government of the Republic of Lithuania on June 6, 2002, etc) as well as EU sustainable development strategic provisions as formulated in the documents of European Council meetings held in Lisbon (2000), Gothenburg (2001) and Barcelona (2002).

10. The Strategy takes into account peculiarities of Lithuania as a country with an economy in transition. First of all, the substantial decrease in consumption of natural resources and environmental pollution during the transformational depression of the economy followed by fast current economic growth will unavoidably effect some increase in consumption of natural resources and environmental pollution. While assessing changes in consumption of resources and environmental pollution at the present development stage of Lithuania as a country with economy in transition, the main focus is on eco-effectiveness indicators – consumption of energy and other natural resources per GDP unit, emission of pollutants and greenhouse gas per GDP unit, and per conditional energy consumption unit, etc.

11. The Strategy foresees significant reductions in the consumption of energy and other natural resources as well as in emissions of pollutants and greenhouse gas emissions per GDP unit aiming at the current average level of EU countries. *The main objective of sustainable development in Lithuania is to achieve the present developmental level of EU countries by 2020, according to indicators of economic and social development as well as the efficiency in consumption of resources, and not to exceed allowable EU standards, according to indicators of environmental pollution, while meeting the requirements of international conventions in the field of minimization of environmental pollution and input into global climate change.* In order to achieve these objectives it is necessary to base future development of the economy on advanced, environment-friendly technologies. Thus, the Strategy puts special emphasis on the design and implementation of technologies that are based on scientific achievements and knowledge rather than resource-intensive technologies.

12. Taking into account that cross-sectorial barriers are major obstacles of sustainable development, efforts were made to link very closely the objectives and tasks of different sectors. For example, if it is foreseen that expansion of the amount of rapes and crops

cultivated for energy purposes (biodiesel and bioethanol) would cover 15% of transport fuel needs, then the industrial sector must promote strengthening of required capacities for expansion of biofuel production, the transport sector must expand a network of petrol stations that sell this type of fuel, the financial sector must establish economic preconditions for the increased biofuel competitive ability. If the waste management sector expects to increase recycling capacities for secondary raw materials, including packages, the industry sector must promote the development of enterprises that use local secondary raw materials, etc. In addition, active public involvement into these processes is anticipated. Primary sorting of household waste, purchase of products made from secondary raw materials, implementation of biofuel, rational use of transport, environment-friendly lifestyles must be encouraged.

13. Implementation of sustainable development principles is impossible without extensive public participation. The Strategy foresees encouragement of more active public participation not only in addressing specific above-mentioned tasks, but also in decisions that are important from sustainable development point of view at different levels: from the National Commission for the implementation of the Sustainable Development Strategy to local authorities. It is very important to ensure not only the before-mentioned horizontal but also vertical links in implementation of the Strategy. Transposition of the main principles of the Strategy to regional and municipal development plans will be one of the major conditions for the successful implementation of the Strategy.

14. First of all, while preparing the Strategy, the main principles and priorities of sustainable development in Lithuania describing the most important trends and solutions for sustainable development (Chapter II) were formulated based on the National Report on Sustainable Development prepared for Johannesburg Summit and main provisions of EU Sustainable Development Strategy. Within the frame of the main priorities, a detailed strategic analysis (SWOT) was carried out and main strengths, weaknesses, opportunities and threats of Lithuania's development in terms of sustainable development were highlighted (Chapter III). A sustainable development vision of Lithuania, mission of the state (Chapter IV), strategic objectives and implementation measures (Chapter V) were formulated based on the results of strategic analysis. Efforts were made to define strategic objectives more specifically with particular emphasis on their quantitative expression, where possible, as effective enforcement of the Strategy is likely only when quantitative long-term development indicators are in place. Chapter VI describes issues related to the implementation and monitoring of the Strategy.

## **II. LITHUANIAN SUSTAINABLE DEVELOPMENT PRIORITIES AND PRINCIPLES**

15. Lithuanian sustainable development priorities and principles were formulated taking into account interests and peculiarities of the country as well as provisions of the EU Sustainable Development Strategy and other documents.

The EU Sustainable Development Strategy is confined to a limited number of problems and identifies six sustainable development priorities: mitigation of global climate change; minimization of transport sector impact on the environment; minimization of threats to public health; more effective use of natural resources; combating poverty and social exclusion; addressing problems of an aging society.

16. If compared with EU countries, the range of development problems is much wider in the countries with economies in transition. Lithuania has, accordingly, expanded its list of sustainable development priorities. First of all, taking into account the relatively low level of economic development in the countries with economies in transition and the significant transformational decline, fairly rapid and stable economic growth is an essential precondition for the successful implementation of Lithuanian sustainable development provisions. The most acceptable economic development scenario in terms of sustainable development from all scenarios presented in the Long-term Economic Development Strategy of Lithuania is the one anticipating the annual GDP growth of 5-6%. Such economic development would make it possible to reach the present average level of economic development in EU countries through the sustainable development strategy implementation period (until 2020). The slow economic growth (pessimistic) scenario would not ensure implementation of the main sustainable development strategy objective that is formulated in the introductory Chapter of the Strategy. According to the forecast, the rapid economic growth (optimistic) scenario would pose a threat of a rapid increase in environmental pollution. Therefore, moderate economic development balanced between economic sectors and regions is considered as one of the most desirable sustainable development priority of Lithuania.

17. Unequal economic and social development in regions and growing disparity in people's welfare are listed among the main threats in the EU Sustainable Development Strategy. Taking into account that economic and social disparities between different Lithuanian regions have not only not decreased but rather increased in the last decade, a decrease of differences between living standards of regions while preserving their identities is one of the main sustainable development priorities of Lithuania.

18. Although only the transportation sector is singled out from all sectors in the EU Sustainable Development Strategy, integration of environmental concerns into the other main sectorial policies (the Cardiff process) is considered as one of the most important sustainable development measures since 1998. It was legalized officially in the EU Amsterdam Treaty in 1999. Minimization of environmental impact from the main sectors (transport, industry, energy, agriculture and tourism) to the environment while increasing their eco- efficiency and integration of environmental concerns into sectorial development strategies is considered as a very important priority of sustainable development in Lithuania. The household sector is often neglected when talking about the impact from different economic branches to the environment. Given that the Lithuanian household sector consumes more than one third of the final energy production and it is considered to be one of the major water polluters, this

Strategy emphasizes integration of environmental concerns into the household sector as well as minimization of impact from this sector to environment.

19. In order to decouple economic growth from the use of natural resources and to reduce the use of resources and environmental pollution below the growth rate of production and services, the EU Sustainable Development Strategy puts special emphasis on improved eco-efficiency of production and services. Lithuania, as other former soviet countries, has inherited an economy sector with particularly inefficient and irrational consumption of energy and other natural resources. Despite the progress achieved in the last decade, consumption of energy per production of GDP unit is still 1,5-2 times higher than the average in EU countries. Due to the very poor thermal behavior of most buildings and a physically outdated heat supply infrastructure, energy consumption efficiency for household purposes is 2-2,5 times lower in our country than in most of the EU countries. Hence, increased consumption efficiency of natural resources, waste minimization and rational waste management as well as secondary use of waste are among the most important priorities of sustainable development in Lithuania.

20. The list presented below includes certain EU sustainable development priorities that are relevant to our country: minimization of impact on human health, mitigation of global climate change and its consequences, protection of biodiversity, minimization of unemployment, poverty and social exclusion. Although landscape management problems are not identified in the EU Sustainable Development Strategy, they are considered as very important priorities in this Strategy due to the importance of landscape protection and its rational management.

21. Practical implementation of the Sustainable Development Strategy is impossible without active public participation and support. Today public awareness of the main sustainable development principles and public participation is not sufficient in Lithuania. Thus, public education, including environmental education and promotion of environment-friendly lifestyles are one of the priority tasks of sustainable development. Enhancement of the scientific research role, more effective application of research results at practical levels as well as design and implementation of environment-friendly production and information technologies are considered as important priorities of Lithuanian Sustainable Development Strategy.

22. When Lithuania becomes a member of EU and joins this huge economic space of the world's richest countries, preservation of cultural identity will become a very significant task of Lithuanian society. Therefore, preservation of cultural identity and the distinct Lithuanian state, its ethnic regions and national minorities is also among Lithuanian sustainable development priorities.

23. Taking into account all the points that were made in paragraphs No. 18-24 of the Strategy, the following Lithuanian sustainable development priorities can be formulated:

- 23.1. Moderate economic growth balanced between economic branches and regions;
- 23.2. Minimization of social and economic differences between regions and within regions by preserving their identity;

- 23.3. Minimization of the impact from the main sectors (transport, industry, energy, agriculture, housing, tourism) on the environment;
- 23.4. More efficient use of natural resources and waste management;
- 23.5. Minimization of impact on human health;
- 23.6. Mitigation of global climate change and its consequences;
- 23.7. More effective protection of biodiversity;
- 23.8. More effective protection of the landscape and rational landscape management;
- 23.9. Decrease of unemployment, poverty and social exclusion;
- 23.10. Enhancement of education and science roles;
- 23.11. Preservation of Lithuanian cultural identity.

24. The Strategy and its implementation measures are based on the following main principles:

24.1. **Participation (partnership) principle.** Successful implementation of the Sustainable Development Strategy depends upon participation and co-operation of different social groups of the society, intergovernmental, governmental, municipal and private institutions and persons on equal partnership bases.

24.2. **Management (leadership) principle.** It is impossible to ensure the right tendency of sustainable development processes, rational coordination between and restriction of departmental, regional, institutional and sectional interests for the sake of general society interests without fairly strong management at the state, regional and municipal levels with a clear distinction between interinstitutional functions.

24.3. **Subsidiary principle.** Decisions on efficient management of a sustainable development process must be taken at the most effective level.

24.4. **Principle of equal opportunities.** Equal opportunities to use economic and social development results and enjoy clean and healthy environment must be ensured for all present and future generations and inhabitants of all regions and other territorial subdivisions.

24.5. **Coherence (integrity) principle.** Sustainable development objectives and tasks must be implemented by interconnecting environmental, economic and social development objectives, strategies of different economic sectors and development of regions.

24.6. **Flexibility principle.** The main sustainable development priorities, objectives and tasks as well as their implementation measures must be coordinated and regularly adjusted in a flexible way, considering rapidly changing internal and external conditions.

24.7. **Responsibility (polluter pays) principle.** While implementing the Sustainable Development Strategy this principle must be extended with special emphasis on transport sector.

24.8. **Payback principle.** Environmental protection measures cannot be treated as inevitable additional expenditures on account of economic development. Economic and organizational mechanisms that improve economic efficiency of environmental protection measures and ensure their payback must be legalized.



24.9. **Accessibility principle.** Expenditures related to environmental protection and management (waste management, wastewater treatment, etc.) cannot be imposed on taxpayers alone and must be affordable to all inhabitants. Thus, implementation measures must be based on economically advanced and ecologically efficient technologies.

24.10. **Precaution principle.** Planning of economic activities must be done very carefully in order to reduce negative impact on environment and human health. Environmental impact assessment is required for planned economic activities. Strategic environmental impact assessment must be performed for sectorial development programmes and territorial plans.

24.11. **Eco-efficiency (dematerialization) principle.** Based on this principle, production and services must develop faster than consumption of natural resources, i.e. less energy and other natural resources must be used for production of the same amount of products and services.

24.12. **Substitution (transmaterialization) principle.** Non-hazardous materials and renewable resources must substitute for hazardous materials and nonrenewable resources

24.13. **Science, knowledge and technological progress principle.** In terms of this principle, the development of different sectors and their branches must be based on modern scientific achievements, knowledge and advanced environment friendly technologies.

### III. STRATEGIC (SWOT) ANALYSIS OF LITHUANIAN DEVELOPMENT

25. The goal of this strategic analysis is to identify internal and external factors and processes that influence the main strengths, weaknesses, opportunities and threats of Lithuania's development from the sustainable development point of view. Most attention was paid to the major internal factors of the transition period. Future sustainable development opportunities and threats are investigated mainly in the light of Lithuania's integration into the European Union and on-going globalization processes. Results from the strategic analysis were used as background information to form a national vision of the Strategy, state mission, strategic objectives and implementation measures.

26. During the strategic analysis three main sustainable development elements were distinguished, namely, environmental quality and natural resources, economic growth and social development. In analysing strengths and weaknesses of environmental quality changes as well as opportunities and possible threats to solving environmental problems, the main emphasis was on the following components of the environment: air, water, soil, as well as landscape and biodiversity. Waste management is also covered by this component. Analysis of economic development was made in terms of the impact on the environment from the following main economic branches: transport, industry, energy, agriculture and tourism. Analysis of social development was limited to the following priority aspects: unemployment, poverty and social exclusion. This element also covers problems related to the human health, strengthening of the role of education and science as well as preservation of cultural

distinction and identity. Problems of regional imbalances, including those of economic, social and environmental development, are analysed separately.

## **Environmental quality and natural resources**

### **Air**

#### *Strengths*

27. Due to the decline in the economy and the increased effectiveness of the use of energy resources, emissions of pollutants into the air have decreased by almost 3 times in the last decade. The largest share of decreased emissions – five times – is observed from stationary sources (industry, energy). Despite the rapidly growing number of vehicles, transport-related emissions into the atmosphere decreased by almost two times. Decreased air pollution has significantly influenced the improvement of urban air quality and air quality in industrial centers. Sulphur dioxide concentrations in Lithuanian cities are low due to the centralized heating system. With elimination of leaded gasoline, lead concentrations in the cities and near highways have also decreased by several times. Greenhouse gases emissions have also decreased significantly. During that period emissions of carbon dioxide have decreased by almost three times, methane – by one third. Consumption of ozone depleting substances has declined by more than ten times during the last decade. Gradually, the air monitoring network is being upgraded by modern equipment that meets EU requirements.

#### *Weaknesses*

28. The largest energy producers do not have necessary treatment facilities for pollutants. Meanwhile, smaller ones have outdated energy production technologies. Due to worn out heat supply systems and poor thermal behavior of older buildings, heat is being used very inefficiently. This has caused a rather high amount of emission of pollutants into the air. Although greenhouse gas emissions have decreased by several times during the last decade, energy use and air pollution per production of one GDP unit is still 1,5-2 times higher than in EU countries. Due to an outdated and ineffective traffic control systems and the rapidly increasing number of vehicles in some of the cities, in particular their central parts, increased concentrations of nitrogen dioxide and dust are frequently observed. Air pollution in the central parts of the cities is also influenced by slowly developing biotransport (bicycles, roller-skates) infrastructure, lack of modern, multi-modal regulation of transport flows (park and cycle, park and go, etc.). Urban air quality monitoring system is insufficiently developed or not regulated at all in some of the smaller towns.

#### *Opportunities*

29. In addition to the state and municipal funds, timely prepared eligible projects may use the EU structural funds allocated for the purpose of reducing air pollution from transport (development of bypasses, bicycle tracks, multi-modal transport systems, etc.). Effective use of EU assistance and more extensive use of private capital will enable modernization and renovation of the heating system and buildings, as well as promote more efficient energy consumption. The implementation of the National Energy Strategy approved by the Resolution No. IX-1130 of Seimas of the Republic of Lithuania on October 10, 2002, and the Revised and Updated National Energy Efficiency Programme and Core Directions for Implementation of the Programme in 2001 through 2005, approved by the Resolution No. 1121 of the Government of the Republic of Lithuania on September 19, 2002, will decrease the use of fossil fuel, promote the use of biofuel in energy and transport sectors, and promote more extensive use of renewable energy sources (wind, solar, hydro-thermal energy). It will also significantly decrease air pollution and greenhouse gas emissions. The implementation of progressive and environment-friendly technologies in industries, as well as an increase of ecological production efficiency, are the main steps toward reduction of air pollution.

#### *Threats*

30. In case of failure to modernize the central heat supply systems, to increase energy consumption efficiency and to decrease energy supply losses in the short run, heat provision decentralization might arrive too rapidly and increase emissions into the atmosphere. In order to avoid a situation where a rapidly developing car fleet may affect air quality in the largest Lithuanian cities, it is necessary to take actions to renew the car fleet and improve control of exhaust gases from vehicles by introducing the responsibility principle (polluter pays), while improving the traffic regulation as well as the state of public transport in time. Having Russia as an exclusive supplier of natural gas, thermal power plants and boiler houses that use gas, Lithuania will always face a substantive threat to meet sulphur dioxide emission requirements in case the gas supply is limited or prices are increased. Emission of pollutants into the air will significantly increase if appropriate actions are not taken to prepare for decommissioning of Ignalina NPP and to implement proper environmental protection measures at thermal power plants.

#### Water

#### *Strengths*

31. Consumption of water (excluding the amount consumed for energy needs – mostly for the purpose of cooling Ignalina NPP) has decreased by almost 4 times in the last decade. With the reduced water consumption, the amount of polluted wastewater has also decreased

by more than 2,5 times. Recently, a rather large number of wastewater treatment plants have been constructed or upgraded. For this reason, almost 99 % of wastewater is treated before it is discharged into the surface water bodies (mainly rivers). Discharges of organic and suspended solids decreased by more than 5 times; pollution with oil products by more than 6 times; with nitrogen by nearly three times; with phosphorus by almost as much as twice; and with most heavy metals by 10 and even more times. With the decrease in pollution, the quality of surface water bodies started slowly improving. Inhabitants of most of the cities and a rather large number of smaller towns are supplied with drinking water through the public water supply network that receives water from underground. Water quality is frequently monitored and in most cases meets sanitary norms. Groundwater resources are abundant. Today only one fourth of all prospected drinking water resources is used.

### *Weaknesses*

32. The water sector is still economically inefficient and, in most cases, loss-making, despite large investments (1,2 billion litas) made into the sector in the last decade. Many of the wastewater treatment plants are physically worn out and outdated. Meanwhile, newly constructed wastewater treatment plants have excess capacity and are used inefficiently. Very few plants have nitrogen and phosphorus treatment introduced, thus, only 15% of wastewater is brought up to the established standards. Rather many houses in smaller towns and most in the countryside are not connected to the drinking water supply network and sewerage systems. Existing water supply networks are worn out (some of them are 50-70 years old). With the decreased water consumption, the duration of water in the networks increases, thus, sediments are formed and drinking water quality declines. According to the concentrations of iron and manganese, rather large amount of drinking water supplied in a centralized way does not meet the set requirements. Most of the people (approximately 1 million) in the countryside and smaller towns use water from shallow dug wells that is highly polluted with nitrates and exceeds norms set up for microbiological pollution. Monitoring of water quality in wells is insufficient and the monitoring system of the Baltic Sea, Curonian Lagoon and lakes is inadequately developed. The monitoring system of bathing-places is also inefficient. There is a lack of control of wastewater discharges from industrial enterprises. Control of priority hazardous substances that are discharged into the surface water bodies is also weak. There is no non-point source water pollution monitoring system established in agricultural areas.

### *Opportunities*

33. Implementation of the EU directives regulating water policy will provide the possibility of using the EU structural funds for construction and modernization of wastewater treatment plants, introduction of nitrogen and phosphorus treatment, renovation of drinking water supply networks and sewerage systems, and construction of waterworks. The SAPARD

program will support the implementation of a minimization program for pollution from agriculture and development of ecological farming. Additional possibilities for modernization and exploitation of the water sector infrastructure will be provided by more extensive use of private capital. Reorganization of the national and regional administrative structure for water resources management, a harmonized legal framework with the EU requirements, as well as broader international co-operation, will enable change to an integrated water resources management system based on the basin management principle. Implementation of the best available and environment-friendly technologies, as well as cleaner production methods and management systems in industrial enterprises, will facilitate the economical use of resources and raw materials as well as the reduction of discharged amounts of hazardous substances into the water bodies.

### *Threats*

34. With the reviving economy in Lithuania, pollution of surface water bodies will increase and groundwater pollution will begin due to leaky sewerage networks. In order to avoid this situation, the EU assistance has to be used effectively, private capital has to be involved, wastewater treatment plants and sewerage networks renovated in time, and control requirements for industrial discharges changed to stricter ones. Without a timely renovated water supply sector, sufficient water quality will not be ensured and threats to human health will start increasing. It is important to ensure that proper attention is paid to the supply of good water quality to people in the countryside and the expansion of drinking water supply networks as well as the establishment of a network of deep wells. Otherwise a major threat to human health in the countryside will persist.

### Soil

### *Strengths*

35. Use of fertilizers in agricultural land has significantly decreased during the past decade, however agricultural lands are not exhausted. The amount of phosphorus and potassium in the soil is almost unchanged, and even a slight increase in the quantity of soil enriched with phosphorus and potassium was observed. Leakage of nitrogen compounds into groundwater and surface water bodies, as well as the eutrophication of these water bodies, has decreased due to the diminished use of mineral nitrogen fertilizers and their improved quality. Soil pollution with pesticide residues has been significantly reduced due to a decreased use of pesticides and stricter regulation of their stock. With on-going renaturalization processes and expanding territories with perennial vegetation, the intensiveness of soil erosion declines. Regular soil monitoring is being carried out.

*Weaknesses*

36. Soil in Lithuania is rather acid. Before liming was introduced, more than 40% of soil in Lithuania was relatively acid (pH 5,5 and less). Due to intensive liming in the end of the soviet period, the acid soil area decreased to less than 19%. Acidity of artificially deacidified soil starts slowly recovering after the termination of regular liming activities. In the western part of Lithuania, where the largest areas of relatively acid soil prevailed before the liming, their comparative part increased by almost 11% in the past decade. During the period when collective farms existed, land reclamation was very intensive and, thus, large territories with perennial vegetation have been destroyed, areas of pastures and meadows have been reduced, and soil erosion processes have been intensified. Soil near the roads is highly polluted with lead compounds due to extensive use of leaded gasoline.

*Opportunities*

37. Realistic possibilities for gradual soil self-cleaning come about with the expansion of ecological farms and introduction of more environmental friendly farming in traditional farms, as well from as minor use of mineral fertilizers and chemical plant protection measures. The expansion of territories covered with forest on the expanse of non-productive land and territories covered with perennial vegetation, as well as the establishment of field protection plant stands, will reduce the area of lands affected by erosion. Prohibition of the use of leaded gasoline in Lithuania provides the chance to gradually reduce pollution of soil near the roads with lead compounds.

*Threats*

38. A Strategy for Agriculture Development foresees a rapid growth of productivity in growing grain and other agricultural crops. This may have a significant influence on the increased use of pesticides and mineral fertilizers that will, in turn, endanger soil contamination with pesticide residues and increase leakage of nitrogen compounds into groundwater and surface water bodies. Liming of previously artificially de-acidified soil has to start in time otherwise soil acidity intensifies and fertility decreases.

## Landscape and Biological Diversity

*Strengths*

39. After restoration of Lithuania's independence, favorable preconditions for the systematic protection of landscape and biodiversity occurred. The Biodiversity Conservation Strategy and Action Plan, approved by comon Order No. 9/27 of the ministers of

environmental protection and agriculture on January 21, 1998, is being gradually implemented. Measures outlined in the Strategy provide realistic preconditions for sustainable landscape and biodiversity protection and use. With the on-going spontaneous renaturalization processes, forest and natural areas as well as biological and landscape diversity increase. Due to abandoned non-productive land, the number of forests in Lithuania has increased by almost one percent in the past decade. Since the restoration of independence, the territory of protected areas has increased by more than twice and an integrated protected areas network has been formed. Currently, preparations to integrate the protected areas network into the European ecological networks have been undertaken. The Nature Frame of Lithuania is being further developed. The inventory of key habitats was started and regulation of their protection is under preparation. Abandoned quarries and landfills are being closed down and projects on afforestation of non-productive farming land are being implemented.

#### *Weaknesses*

40. Due to collectivization and intensive land-reclamation, natural meadows and pastures as well as most wetlands, homesteads of farmers and their seedlings have been destroyed, large open spaces atypical to Lithuanian landscape have been formed, most rivers and streams have been regulated and changed to channels. This has impoverished the Lithuanian landscape beyond recognition and decreased biological diversity. During the independence period a part of the poor but, from biodiversity point of view, valuable meadows and pastures have been abandoned and overgrown by useless shrubs and trees.

#### *Opportunities*

41. Spontaneous renaturalization of landscape and increased biodiversity as well as focused implementation of the Biodiversity Conservation Strategy, the Forest Area Expansion Programme approved by common Order No. 616/471 of the Ministers of environmental protection and agriculture on December 02, 2002, the Countryside Tourism Development Programme approved by the Resolution No. VIII-1284 of Seimas of the Republic of Lithuania on July 01, 1999, and other specialized programmes will provide the possibility of at least partly restoring the impoverished landscape of Lithuania and enhancing its stability. With assistance from the EU and other international funds it will be possible to implement protection and management measures outlined in the Biodiversity Conservation Strategy and Action Programme. Participation in the development process of European ecological networks will help gain assistance from international programmes for the development of the national protected areas system and the formation of the Nature Frame. Additional assistance from the EU funds can also be received if larger more integrated landscape management projects and countryside tourism development plans are prepared. This would also speed up closure of old

quarries and abandoned landfills, handling of ruined and derelict farm buildings and solving other specific countryside landscape problems of post-collective farms origin.

### *Threats*

42. Intensive economic development will more and more endanger elements of the natural landscape, protected and recreational territories. Rapid land privatization processes will increase the number of owners of land in the territories that are most valuable from nature and recreation point of view. Thus, public accessibility to such land will become limited and soon construction activities in these territories may take pace. Ongoing changes in the purpose of land use will bring more new conflicts in the management of landscape. Intensifying economic activities at the Baltic coastline will increase the negative impact on unique landscape of the coastline. A gap between landscape and biodiversity conservation measures and actions outlined in the laws and legal acts will appear if sufficient funds are not allocated. As traditional economic activities wane, if effective nature management measures are not implemented protected biodiversity objects might become endangered.

## Natural Resources

### *Strengths*

43. Even though Lithuania is not very rich and diverse with natural resources, it is abundant in mineral construction materials, drinking water, forests, and farming lands. According to the number of these vitally important resources, the capacity of Lithuania's territory exceeds the current number of inhabitants. Lithuania has a rather abundant supply of anhydrite and sapropel that have not been used previously. Natural resources are quite extensively prospected, easy to reach, their use is regulated by legal and economic mechanisms. Natural conditions in Lithuania are favorable to the restoration of renewable resources that are of vital importance. Rich recreational resources are favorable to the development of tourism. The transition of Lithuania to market economy relations and economic restructuring, the increase in prices of energy and other natural resources, increased effectiveness of natural resources use. Consumption of energy and water per one GDP unit has decreased by almost twice.

### *Weaknesses*

44. At present short-term economic interests prevail in the field of use of natural resources, a market for local raw materials decreases. Extraction of mineral resources and peat declined, abandoned and damaged quarries and peat bogs were left without owners. Often mining in these quarries and peat bogs is illegal and they are turned into the landfills that have



a very slow pace of recultivation. Yearly fires do not only destroy large quantities of peat resources but also damage large land plots and cause air pollution. There is no adequate legal framework for regulation of use of certain natural resources (for example, oil extraction) and it raises a conflict of interests between the management of protected areas and urban development. Effectiveness of use of natural resources is still too low: consumption of energy resources per GDP unit is approximately 1.7 times higher than in the EU countries. Progress in use of alternative energy resources (wind, solar, geothermal energy, etc.) is still slow.

### *Opportunities*

45. Implementation of the sustainable development principles will provide pre-conditions for rational use of natural resources based on long-term interests. Integration into the European Union will strengthen internal coherence, and Lithuanian natural resources will become of international importance, helping to ensure more effective use and protection of resources. Faster transfer of experience and assistance from the EU countries will provide the chance to expedite and strengthen the role and use of alternative energy sources (wind, geothermal, solar, etc.). As a result of eurointegration, abundant and distinctive natural resources in Lithuania will also become a matter of great importance and possibilities to use them more broadly will increase. Implementation of more advanced and environment friendly technologies will open opportunities to increase the efficiency in use of natural resources.

### *Threats*

46. Eurointegration and globalization processes may pose a threat for more extensive use of some natural resources in Lithuania. If the long-term sustainable urban development policy is not approved, the intensive urban development may escalate conflict of interests among rational use and restoration of natural resources, protection of environment and urban development. If the use of natural resources is not regulated clearly enough, it may be a reason for too high anthropogenic load on valuable natural territories. Economic interests of energy importing and re-producing companies may block the development of indigenous renewable energy resource usage. Global climate change, regional and local environmental pollution may cause negative long-term quantitative and qualitative changes of some natural resources (biological, recreational resources).

## Waste Management

### *Strengths*

47. Generation of non-hazardous and hazardous waste has significantly decreased in the past decade. The annual quantities of non-hazardous waste decreased by almost three

times and their generated amount per capita is almost two and a half times below the average in EU countries. The annual amount of generated municipal waste is lower than 300 kg per capita--that is almost one and a half times lower than in European Union. During this period the annual amount of hazardous waste has decreased by nearly twice. The implementation of a National Waste Management Strategy, approved by the Resolution No. 519 of the Government of the Republic of Lithuania on April 12, 2002, has been started. Municipal waste collection in the cities and most of the smaller towns is centralized, and currently a waste collection infrastructure is being developed. Implementation of a waste collection system using containers has started in the countryside. Collection and recycling of hazardous waste is being developed. A regional hazardous waste management system is under preparation. A Radioactive Waste Management Agency is established, new radioactive waste management methods are being introduced and a dry repository for spent nuclear fuel has been constructed.

### *Weaknesses*

48. Most of the currently operating landfills do not comply with environmental requirements. There are many illegal and abandoned landfills that are not closed down. Municipal waste management system and the primary sorting of household waste are insufficiently developed, recycling level of secondary raw materials is very low – only 25% of paper and cardboard, 18% of glass, 6% of plastic are recycled. Thus, waste disposal in landfills still remains as the main waste management method. Companies recycling secondary raw materials import more than half of the waste in this category from foreign countries. The largest part of waste collection transport is physically worn out and outdated. Recycling capacities for some waste categories, such as construction and demolition waste, glass, tires, electricity and electronics equipment, textile, unusable cars, hazardous waste treatment and utilization capacities as well as biodegradable waste treatment capacities, are insufficient. A part of hazardous waste is disposed in landfills together with household waste. Large amounts of radioactive waste and spent nuclear fuel are accumulated, however, there are no financial resources available for their safe underground disposal. Existing radioactive waste repositories are unsuitable for the long-term storage of radioactive waste.

### *Opportunities*

49. Effective application of experience from European countries and use of available EU assistance (ISPA and other funds) provide an opportunity to prepare and start implementing projects on establishment of regional landfills in accordance with the National Waste Management Strategy and Action Plan, as well as to prepare to use EU Structural Funds for implementation of a modern national waste management system. The Law on Packaging and Packaging Waste adopted by Seimas of the Republic of Lithuania (No. IX-517

on September 25, 2001), should ensure the reduction of total waste and increase waste collection and recycling capacities. The Amendment of the Law on Environmental Pollution Taxes, adopted by Seimas of the Republic of Lithuania (No. IX-720 on January 22, 2002), that defines taxes for certain types of products and packages should encourage producers to organize waste collection and recycling systems or provide favorable conditions for accumulation of financial resources in the state budget to solve waste management problems. Implementation of municipal waste sorting, firstly, primary sorting of packages on a larger scale, will improve recycling capacities of local secondary raw materials. Assistance from donor countries allocated for decommissioning of Ignalina NP could be used to establish modern radioactive waste repositories.

### *Threats*

50. Implementation of a modern waste management system may increase costs for the services of waste collection and management. This would induce inhabitants and enterprises to refuse such services and that could be a reason for illegal waste disposal and environmental pollution. Since the primary sorting of household waste has not yet been developed it will be difficult to increase the use of secondary raw materials and the majority of hazardous household waste will be further disposed in the landfills. Again, the lack of development of capacity of the recycling industries and not having increased the demand for secondary raw materials the use of these materials will not be adequate and they will be disposed of in landfills. The public may oppose the construction of regional landfills, and thus the establishment of regional waste management systems would be unreasonably delayed. This could hamper the development of regional waste management systems. It will be very difficult to establish proper repositories for radioactive waste and, in particular, spent nuclear fuel, if required assistance for decommissioning of Ignalina NP is not secured.

## **Economic Development**

### Transport

#### *Strengths*

51. The larger part of the current car fleet consists of cars produced in Western Europe, Japan and Korea. They are more economical and less polluting to the environment if compared with the cars produced in Russia. Therefore, even if the total number of cars has increased by more than twice in the last 10 years, the total amount of fuel consumed by cars has decreased by almost 30%. Composition of fuel consumed by the transport sector has changed significantly: the amount of consumed diesel has increased and the amount of liquefied gas consumption has gone up by almost three times in the last three years. Based on

that, emissions of pollutants and greenhouse gas emissions into the atmosphere have decreased by almost a twice in the past decade, i.e. much more significantly if compared with fuel consumption. At present the development of the roads network is ongoing, its quality and capacity improves, by-passes are constructed which help to reduce urban air pollution and noise. Currently prepared and approved strategic documents (National Long-term Development Strategy, Master Plan of Lithuanian Territory, Long-term Economic Development Strategy of Lithuania until 2015) strongly emphasize the implementation of sustainable development principles in the transport sector.

### *Weaknesses*

52. The car fleet in Lithuania mostly consists of vehicles older than 10 years. The amount of emissions from these vehicles is comparatively large. Due to strict requirements to carriers in EU countries, the renewal of heavy-duty trucks is rather rapid. However, eastern production old cars that are very inefficient in terms of fuel consumption, air pollution and noise, are typically used in local transportation of goods. Urban air pollution and noise increases due to insufficient capacity in the streets of the cities and very few by-passes, outdated and physically worn out public transport means, weakly developed tracks for biotransport (bicycles, roller-skates) and multi-modal (park and cycle, park and go) urban transport systems. Hence, increased air pollution is observed in many urban centers. Most polluting transport means (road transport) are developing in the most rapid way. Meanwhile, modernization of those transport means that have the least impact on environment (railways, inland water transport) requires large investments. The rate of road accidents is high and, in fact, a decreasing tendency is not observed.

### *Opportunities*

53. As eurointegration processes are on-going, opportunities for more rapid development of roads and by-passes, modernization and faster development of railways network, including tracks of European type, will appear. The broader use of railways, in particular, for cargo transportation purposes, will provide possibilities for significant reduction of emissions into the air from transport sectors as well as their negative impact. Development of Klaipėda Port increases its competitive ability with respect to other eastern Baltic ports and provides opportunities to use cleaner types of transport, such as water transport, and to develop modern multi-modal transport systems. Broader application of capital partnership principles and attraction of private capital into the public transport sector will provide opportunities for more rapid modernization of the sector, more effective use of energy resources, reduction of prices and service costs as well as negative impact on environment. Faster renewal of the car fleet is possible if new financial strategies (such as leasing) for purchasing new cars are introduced.

*Threats*

54. Economic growth, intensive development of the transport sector and growth in the number of cars will increase air pollution if importation of old cars is not limited and pollution control is not strengthened. Inadequate railway investments, in particular in projects for the renovation of railways infrastructure and rolling-stock, will hamper development of cargo transportation and effective use of this more environment-friendly transport means. Without required economic preconditions it will be impossible to develop one of the most environment-friendly transport means – inland water transport. Slow reconstruction of Klaipėda Sea Port would reduce the chance to compete with the other Baltic Sea Ports and states in the field of multi-modal transport. No favorable conditions for the development of transport infrastructure will be created if improperly prepared for the use of EU funds. The lobbying activities of oil production and trade companies will pose a threat to broader application of alternative, renewable fuel.

*Industry**Strengths*

55. Privatization of industrial enterprises, entrenchment of market-driven economic relations and introduction of taxes on natural resources and environmental pollution have influenced production efficiency in most of the remaining industries, more efficient use of natural resources and decreased environmental pollution. Preventive environmental protection measures and cleaner production methods are being introduced in industries. Eco-efficiency in the industrial sector has significantly increased in the last decade, the average energy consumption per GDP unit has decreased by 1.7 times, water consumption by almost twice, emissions of pollutants into the atmosphere by more than double. The Long-term Economic Development Strategy of Lithuania until 2015 highlights the implementation of sustainable development principles in the industrial sector. A Programme for Sustainable Development of Industry has been prepared.

*Weaknesses*

56. Despite positive changes in the past decade, many industrial enterprises in Lithuania are still technologically underdeveloped. Consumption of energy, raw materials and water per production unit is still comparatively high and exceeds the corresponding average rates of EU countries by 1.5-2 times. Thus, negative impact on the environment from these enterprises is rather strong and competitive ability is weak due to high production prices. Meantime, Lithuanian industries pay too little attention to the protection of the environment,

and are slow to implement advanced environment-friendly technologies and cleaner production methods. There are no methods prepared yet for Lithuanian industries to use life cycle analysis, or for the design of environment-friendly products. Rather large amounts of materials that are dangerous to the environment and human health are used in production. Very few enterprises use secondary raw materials and the ones that do import them from foreign countries. There is a lack of economic mechanisms promoting broader use of local secondary raw materials.

### *Opportunities*

57. Transfer of new experience and financial as well as technical EU assistance will facilitate restructuring, modernization and development of industry. EU membership will provide possibilities for more rapid and effective use of EU achievements in science and technology, not only for the economic development of industry but also for the increase of its eco-effectiveness and decrease of impact on the environment. Strict EU requirements in the field of minimization of environmental impact by industry will speed up the implementation of environment friendly technologies and cleaner production methods, as well as application of more effective environmental protection measures. Introduction of environmental management certificates will increase the competitive ability of industrial enterprises and provide opportunities to establish special investment funds marked with “eco-labels.” Stricter Lithuanian laws (Law on Packaging and Packaging Waste, Amendments to the Law on Environmental Pollution Taxes, etc.) will stimulate minimization of waste and environmental pollution in industries and recycling of secondary raw materials.

### *Threats*

58. Sustainable development and environmental protection issues could receive inadequate attention when Lithuanian industrial enterprises seek more rapid production growth and larger profitability. The extent of recycling of packaging and secondary raw materials foreseen in the National Waste Management Plan may suffer if required state support and additional investments are not allocated for the development of companies that recycle secondary raw materials. If promotion mechanisms for biofuel production are not established in time, there will be a lack of sufficient capacity for production of fuel required for processing of such amount of rapeseeds and grains used in biodiesel fuel and bioethanol production as foreseen in the Agricultural Development Strategy. Fast implementation of progressive environmental protection measures, cleaner production methods and environmental management systems (ISO 14001 standard) could prevent the increase in negative impact on the environment from industries and still, while integrating into the EU and global market, decrease their competitive ability.

## Energy

### *Strengths*

59. In the last decade energy consumption efficiency has significantly increased, and quantities of pollutants emitted from energy production have been reduced by almost 3 times. The structure of the primary energy balance has improved – the part of energy resources (natural gas and nuclear energy) that have the least impact on the environment has increased. Input from local and renewable resources into energy production has increased by approximately 4 times. About 9% of energy is produced from renewable resources (mostly wood and its waste). Consumption of polluting fuel (sulphurous fuel oil and coal) has decreased. In 1990 consumption of coal in a total balance of primary energy resources comprised about 3,7% and in year 2000 only 1%. The current structure of energy balance helps to ensure the reliability of the energy supply and keep electricity prices and environmental pollution at rather low levels.

### *Weaknesses*

60. A rather large part of the electricity networks and substations are outdated and worn out. Central heating supply systems are worn out and large losses of energy occur in heat distribution. Such situations raise service prices and pollution of the environment. Modern heat meters are not installed in most dwelling houses. Thus, there is no motivation for saving supplied heat. Inceptive decentralization of the heat sector increases air pollution and aggravates the work of centralized heat supply systems. Many cities and settlements in the country are not connected to the natural gas supply system yet. The current structure of energy resources and power surplus hinders the effectiveness of combined heat and power production. Repositories of natural gas are not present and only one source of gas supply is used. Thus, the main thermal power plants in the country have to use such polluting fuel as fuel oil and orimulsion in order to ensure a reliable supply of energy. Large quantities of radioactive waste and spent nuclear fuel are accumulated in Ignalina NP. Meanwhile, there are no financial resources allocated for their safe underground disposal. There is too little emphasis made on the development of renewable energy sources (wind, solar, geothermal energy, etc.).

### *Opportunities*

61. Effective energy consumption will provide possibilities to maintain a rather low energy demand growth rate and assist in solving environmental problems. Restructuring and privatization of power grids will increase their economic efficiency and force the development of an energy market. The existing gas mains provide a possibility to increase natural gas

consumption and the existing centralized heat supply systems allow the expansion of combined heat and power production along with more effective use of primary energy sources and reduction of environmental pollution. The effective use of EU assistance and raising of private capital will help to speed up the upgrade and renovation of the heat sector and the development of renewable energy sources. Financial assistance from European Union countries and other states will help consumers to avoid additional taxes for the management of radioactive waste and spent nuclear fuel. It will also help to solve environmental problems related to the increased electricity production in thermoelectrical power plants.

### *Threats*

62. In Lithuania approximately 90% of the primary energy is imported from a single supplier. Therefore, the energy supply is very vulnerable. Due to a strong dependence on imported primary energy resources, Lithuania's economy is vulnerable to shocks in international energy markets. Consumers may disconnect from the centralized heat supply systems if the upgrade and renovation of centralized heat supply systems are overextended. This could cause serious environmental, economic and social problems. Too slow a transfer to advanced technologies in electricity and heat production will keep down the efficiency of energy production.

### *Agriculture*

#### *Strengths*

63. After initial transformational decline, agricultural crop production has reached the level of 1990s. While the use of pesticides has decreased by more than five times in the last decade. Meanwhile, the quality of pesticides has significantly improved. The amounts of mineral fertilizers have also decreased substantially and, currently, if compared with the EU countries, smaller amounts of nitrogen, phosphorus and potassium (NPP) active substance are used. Leakage of mineral fertilizers, in particular nitrogen compounds, into the groundwater and surface water bodies as well as their eutrophication have significantly decreased. Diminished use of mineral fertilizers and pesticides has reduced the amount of hazardous materials in agricultural and food products, and improved the quality of agricultural production. Discontinued large cattle-breeding farms and rejection of new large cattle-breeding operations have reduced the negative impact on environment and, above all, surface and groundwater pollution. Following the requirements of EU "Nitrates Directive," recommendations for minimization of non-point source pollution from agriculture, a code of good agricultural practices have been approved. Other legal documents related to agricultural impact on environment and human health are under preparation. The Government supports the



development of ecological farms, thus, the territory under ecological farming constantly increases.

### *Weaknesses*

64. Too intensive land reclamation during the period of collective farming has destroyed large areas of natural vegetation and seedlings at homesteads, intensified soil erosion and caused severe damage to the Lithuanian landscape and biodiversity. Due to intensive use of low quality mineral fertilizers in this period, non-point agricultural pollution has significantly increased, which resulted in strong eutrophication of many surface and groundwater bodies. The pace of development of ecological farming is still too slow and certified ecological stock-breeding and rendering entities are not in place. An infrastructure for trade in ecological products is not established, only 45% of certified ecological production is sold as ecological and relevant price affix is received. The agricultural products quality control is insufficient and a safe natural products certification system is not implemented yet. There is too little attention given to small size businesses in the field of crop production and stock-breeding, namely, cultivation of herbs, medicinal plants, essential-oils bearing plants, goat-breeding, sheep-breeding and fur-bearing animals breeding.

### *Opportunities*

65. With the increasing demand for food products on a world-wide scale, a demand for natural healthy products will particularly intensify and so will their market and utilization development. Introduction of environment friendly farming in traditional Lithuanian farms rather than only in ecological farms, coupled with reduced consumption of mineral fertilizers and chemical protection measures for plants, will have less negative impact on the environment and more on improved quality of food products. Ecological agricultural and food products will be in a position to compete in the markets of the European Union and other countries. Development of such agricultural crop production that has increased profitability (gardening, vegetable-growing, berry-growing, floriculture) and satisfies energy demands, rather than only the traditional type of agricultural crop production, cultivation of technical and herbal crops, as well as development of non-traditional countryside businesses, will increase competitive ability of smaller farms and ensure favorable conditions for economic, social and cultural development of the countryside. Relatively low soil pollution provides good opportunities for fast development of ecological farms. When EU assistance funds allocated for agricultural sector become available, it will be possible to use them in the development of ecological farming and introduction of good agricultural practices.

### *Threats*

66. Development of ecological farms will radically slow down and its extent foreseen in the Agriculture Development Strategy will not be achieved if economic and legal mechanisms required for the promotion of ecological farms and a proper infrastructure for the outlet of ecological products are not established. In order to avoid a severe impact from agriculture on the environment, it is imperative to comply with all provisions of the European Commission in the field of crop production, stock-breeding, poultry-breeding, and wastewater discharges while increasing farmland plots, concentrating stock-breeding and poultry-breeding in big farms and their partnerships. Rapid increase in productivity of cereal and other agricultural crops foreseen in the Agricultural Development Strategy could significantly raise the use of pesticides and mineral fertilizers and have a negative impact on the environment. If proper economic and legal pre-conditions for the intensive development of crops (rape, grain) cultivated for energy production purposes are not established and required biofuel (biodiesel, bioethanol) production capacities are not in place, there will be no possibilities for production and development of renewable fuel.

## Housing

### *Strengths*

67. In 2000 there were about 800,000 dwellings in apartment buildings and about 500,000 single dwellings (private houses) in Lithuania. Housing infrastructure is quite well developed. Approximately 70% of all dwellings are connected to the central water supply network. About 50% of dwellings are connected to the central heating system. The largest part of household waste is collected in a centralized way in most of the cities and smaller towns. A waste collection system using containers is being implemented in the countryside. During the privatization of dwellings, people were given those apartments where they lived. Today approximately 95% of all dwellings are under the ownership of people living there.

### *Weaknesses*

68. Heat insulation in most of the apartment buildings and a rather large portion of individual houses is very low, windows are out-dated and leaky. Therefore, energy consumption in the heating of dwellings is very high (in average about 200 kJ per degree per day for 1 m<sup>2</sup>) and it exceeds the required energy amount in most of EU countries by more than 2-2.5 times. A large part of the centralized heating infrastructure is out-dated and has low energy efficiency. In particular, large energy losses are detected in distribution networks, thus, apartment-heating cost is very high and comprises approximately 20% of average family income. Water supply networks are also worn out. Therefore, due to increased water supply cost, less water is consumed which causes longer continuance of water in the network, formation of sediments, and reduced drinking water quality. There is still no sorting of

household waste implemented and in many places waste is collected sporadically under the unsanitary conditions.. Inhabitants are not willing to allocate more money for maintenance of their dwellings. Thus, in some places the status of premises is very poor, the establishment of apartment building communities is very slow and the condition of apartment buildings declines.

### *Opportunities*

69. In Lithuania integration into EU facilitates the adoption of such legal acts that liberalize household infrastructure management, increasing liability and accountability. A substantial part of EU assistance is allocated to water supply and household waste management sectors. This may be an accelerator for the establishment of payback housing infrastructure. The EU subsidies are also provided to finance programmes for minimization of CO<sub>2</sub> emissions into the environment. These subsidies may encourage the implementation of programmes for energy saving in dwellings and faster renovation of buildings as well as the upgrade of the heat supply infrastructure. Establishment of regional waste collection, sorting and final treatment systems along with the attraction of private capital will create opportunities for the improvement of service quality and cost reductions for customers. Assistance from the EU structural funds and the state will direct a solution to the priority household problems. Opportunities to stimulate renovation of dwellings will increase when a proper legal base for the establishment of apartment building communities and mechanisms for administration of subsidies are in place.

### *Threats*

70. If present EU assistance administrative institutions do not function effectively and eligible investment projects are not timely prepared, it will be impossible to properly use the assistance from EU structural funds for renovation of dwellings and modernization of housing infrastructure. Thus, their condition will continue to decline. If prices for centralized heat supply remain high, people may start refusing centralized heat supply which can have a negative impact on the quality of heating sector and increase pollution of environment.

### Tourism

### *Strengths*

71. Growth of GDP influenced by tourism has relatively lower negative impact on the environment compared with other economy sectors. Lithuania's mild climate, natural landscape, high potential for recreational resources, sufficiently rich nature and cultural heritage, an ethno cultural peculiarity create favorable preconditions for tourism development,

employment and income increases. Tourism encourages the protection and nurturance of valuable natural and cultural environment and helps to solve social, economic and nature protection problems in less developed regions. Leisure, cognitive and remedial tourism encourages people's mobility, enables them to know peculiarities and traditions of their country, and positively affects human health. Countryside tourism development involves elderly people into action, reduces depopulation in rural regions, minimizes the unemployment rate and antisocial phenomena.

### *Weaknesses*

72. Uncontrolled and unorganized tourism poses a serious threat to the natural and cultural environment, increases anthropogenic loads on sensitive and unprepared natural territories. Basically, tourism infrastructure development does not use the heritage of estates and surroundings of ethnographic sites. Thus, it irreversibly loses the genius and charm as well as tourist potential. The incoming tourism is developing slowly due to insufficient information and the level of tourism management. Therefore, growth of number of people engaged in the tourism sector and incomes from this sector is too slow. An infrastructure of countryside tourism services is poorly developed, thus, income of people does not grow and unemployment rate remains the same in regions where agricultural development is not viable. Resources of resorts, treatment potential in sanatoriums are insufficiently used; employment rate of inhabitants in resorts does not increase. Methods for the assessment of recreational potential and regional regulations for the use and protection of recreation resources are not prepared.

### *Opportunities*

73. A convenient geographic location between the East and the West, the North and the South creates favorable conditions for incoming tourism development. The distinctiveness of Lithuanian countryside has been very little affected by industry. Thus, improvement of information and introduction of tourism infrastructure development would help to stimulate countryside tourism, drawing many unemployed rural inhabitants into the tourism services sector, improve living condition in economically and socially underdeveloped regions. Effective use of assistance from European Union to countryside tourism development would facilitate the establishment of tourism infrastructure and provide possibilities for the management of abandoned, non-productive land. Tourism development provides good incentives and possibilities to cherish and manage the environment, combine natural and cultural values, disseminate environmental knowledge at full-scale. Rational development of recreational infrastructure helps to regulate flow of visitors in protected areas, reduce loads on sensitive territories. A well-prepared legal framework for tourism development could enable

stricter regulation of the use of recreational potential, ensure protection of most valuable recreational habitats from increasing anthropogenic load and inadmissible urban development.

### *Threats*

74. Insufficient legal regulation of tourism business and use of recreational resources may pose a threat of too intensive an anthropogenic load on valuable natural territories and their consequent degradation. On the other hand, lack of comprehensively regulated use of recreational resources and norms for protection of these resources may be a risk for unsound prohibitions and limitations that could hamper recreation and, in particular, countryside tourism development. Inadequate assistance from the state for tourism development and lack of capacity in the field of administration of EU assistance may become an impediment for substantial improvements in the tourism infrastructure, countryside tourism development as well as increase of economic and social viability in regressive regions.

## **Social Development**

### Employment

#### *Strengths*

75. Lithuania has established a coherent employment policy implementation system, which is specialized according to labour market target groups. The system ensures accessibility to employment and other labour market policy implementation measures. Sufficiently qualified administration and advanced financing principles provide an opportunity to combine labour supply and demand. Entrenching market economy is a good basis to ensure that an increasing number of people can live from their businesses and jobs. The labour force is sufficiently educated, it has adjusted psychologically to market economy requirements and its comprehension about personal responsibility has matured. The Programme of the Republic of Lithuania for Increase of Employment for 2001-2004 approved by the Resolution No. 529 of the Government of the Republic of Lithuania on May 08, 2001, is prepared and being implemented.

#### *Weaknesses*

76. The economy level in Lithuania is rather low and does not ensure sufficient rate of employment as well as restrains the implementation of large employment programmes. Employment rate in the agricultural sector is low. Tax policy is pointed to large pressure of taxation which is put to labour force directly through income and social security taxes and indirectly through value added taxes (VAT) and excise duties. Large taxations tend to hinder

work initiative but also promote illegal economic activities and work. Due to the lack of labour market flexibility, it becomes too difficult to adjust to structural changes, new professions and activities. Opportunities for lifetime studies are used too little which impedes the re-training of people with unmarketable professions. A large illegal work market has been formed and illegal labour force migration has appeared due to inadequate quality of workplaces, low wages, violations of legislation on employment and requirements on security at work.

### *Opportunities*

77. More intensive economic growth will solve problems of increasing unemployment more efficiently if coordinated with the adequate employment policy. Implementation of innovative technologies will open large opportunities to use high labour force potential, improve employment quality, and raise payment for work. Eurointegration processes will positively effect the development of workplace quality and civilized labour terms. Implementation of new information technologies and development of small and average size businesses will increase demand for flexible work planning forms: division of a workplace by introduction of a part time working day, more flexible organization of shift work, contractual, amateur, remote work, independent employment, seasonal jobs, rotation of workplaces.

### *Threats*

78. Improper and ineffective use of EU assistance may hinder economic growth. At the same time it could slow down the growth of the employment rate. Inadequate labour market flexibility in the process of economic restructuring may possibly pose a threat to longstanding high rate of unemployment, discourage introduction of innovations and modern technologies, impede the demand for highly qualified labour force. Migration of labour force and, in particular, highly qualified specialists could be an obstacle for further economic development. Unbalanced regional development will have an impact on further differentiation of employment levels and could escalate significant differences in labour force qualification and motivation to work.

## Poverty and Social Exclusion

### *Strengths*

79. Lithuania has established a consistent social security policy implementation system, which aims at reducing poverty and social exclusion. The system is divided into parts according to specifics of rendered security. It ensures that most of the risk group members have access to social security measures. In Lithuania financing of poverty and social exclusion

prevention constantly increases. If compared with other social security measures, priority is given to faster decision-making in terms of risk problems. The Poverty Reduction Strategy Action Programme for 2002-2004 approved by the Resolution No. 1753 of the Government of the Republic of Lithuania on November 07, 2002, is under implementation.

### *Weaknesses*

80. In Lithuania a part of GDP allocated for social security is almost two times less than the average level in other EU countries. In addition, increasing social differentiation goes along with regional differentiation – regions differ very much in terms of their social development. Some people are pushed out of the market, lose their qualification or never acquire a proper one to return back to the market. In such way poverty and social exclusion groups are formed. Social security focuses too much on employed people and does not take into account those who are involved in other type of economic activities leaving them without necessary social guarantees. The existing social security system is unable to cover marginal social security groups. There is a lack of information: receivers of social support are not adequately informed about their rights and possibilities, providers of social support are not well informed about actual needs.

### *Opportunities*

81. A growing economy that is coordinated with sound social policy provides good opportunities to solve poverty, social exclusion and social support problems. Promotion and implementation of lifetime studies will increase possibilities to prevent poverty of unqualified employees and, in particular, young people with primary or secondary education. Institutional social policy systems, which are being improved, will increase possibilities to adjust the social system to changing realities, providing social support to those who need it the most. A strong non-governmental sector can also be successfully used in solving poverty and social exclusion problems.

### *Threats*

82. Unbalanced regional development poses a threat to further differentiation of employment and social development levels and marginalization of regions. For this reason, significant differences in education, labour force qualification and motivations to work may occur and social exclusion may continue to increase. Insufficient extent of social security is a risk for the possible formation of large social groups without their rights to social security and only with minimum social support. Rather ineffective social policy will increase social exclusion and social differentiation that may pose a threat to democracy and society's stability.

## Public Health

### *Strengths*

83. Legal reform of the public health care sector in line with the European Union requirements is systematically carried out in Lithuania. A rational coordination of the public health policy is formed at national level. Lithuanian Health Program approved by the Order No. VIII-833 of Seimas of the Republic of Lithuania on July 2, 1998, the National Public Health Care Strategy approved by the Order No. 941 of the Government of the Republic of Lithuania on July 27, 2001 and the National Environmental Health Action Programme for 2003-2006 approved by the Order No. 66 of the Government of the Republic of Lithuania on January 21, 2003 are being implemented. The structure of population mortality corresponds to the structure in developed countries and infant mortality rate is coming close to the average in EU countries. Knowledge about health is increasing in the population. In the country an emergency response system of prevention and control of communicable diseases functions effectively, recommendations and requirements of the International Nuclear Energy Agency and European Union, which ensure radiation safety, its state monitoring and control for inhabitants and the environment, are being implemented.

### *Weaknesses*

84. Population health is still not considered to be a long-term national concern, authorities are reluctant in taking health protection and prevention measures mostly because of high expenditures, and they neglect the fact that economic prosperity of the country depends on population health. More attention should be paid to the implementation of public health care, which is directed towards public health and education. There is inadequate intersectorial cooperation in the field of public health care, seeking to avoid negative impact on human health. Innovative methods of health impact assessment, evaluation of economic losses due to poor health are not being used in decision-making and priority settings. A system of education and re-qualification of specialists in public health care is poorly formulated. Differences in the health status of urban and rural population are significant, distribution of physicians in the biggest cities and regions is unequal. Average life expectancy of inhabitants of Lithuania decreases. The morbidity of some communicable diseases increases. The morbidity of allergic diseases and asthma among children increases. The incidence of smoking, alcohol and drug abuse also grows. The population has insufficient knowledge about healthy nutrition. Physical environmental factors in living environment and preventive measures of their negative impact are not considered seriously.

### *Opportunities*



85. In Lithuania public health system reform is based on the implementation of the European Union public health care policy and recommendations of the World Health Organization. Active participation by Lithuania in the implementation of the European Union Public Health Programme and European Environment and Health Strategy may improve the health status of the population and public health management. Public health promotion will improve if specialist training and professional education reform in the public health care sector is successfully developed, conception of a healthy lifestyle and its dependence on a healthy environment is elaborated, health risk and impact assessment methods and information technology systems in the field of public health are implemented, public health indicators are constantly monitored, use of public information measures for the needs of public health are enlarged.

#### *Threats*

86. There will be lack of attention paid to personal and public health care if the public continues to give the highest priority to rapid economic development of the country. Insufficient attention to prevention, rather than curing of diseases, and inadequate financing of public health care could diminish capacities of public health care institutions in implementation of preventive measures for reducing the risk and negative impact of hazardous environmental factors on human health and increase subsequent growth of population morbidity rate. Qualified public health specialists could leave their positions. This will cause a shortage of different public health specialists. Proper personal and public health care quality will not be ensured if certain medical equipment is not upgraded.

#### Education and science

#### *Strengths*

87. After restoration of independence, Lithuania has made progress while implementing systematic changes in all education levels: a Law on Education No. I-1489 of June 26, 1991 adopted by Seimas (Parliament) of the Republic of Lithuania and provisions of a National Education Strategy for 2003-2012, which initiate the third phase of the education reform, approved by the Governmental Resolution No. IX-1700 of July 4, 2003, promote systematic changes in the society by increasing personal creative ability, activeness, responsibility and opportunities to adjust to the objectives of eurointegration and globalization while preserving the cultural identity of the society. A higher education system has been significantly extended; the number of students has increased. A system of lifetime studies is being elaborated. A Strategy and Action Programme for Environmental Education of the Republic of Lithuania approved by the Governmental Resolution No. 165 of February 29,

1998 emphasizes the implementation of sustainable development principles in all fields of life. Together with Sweden, Lithuania is responsible for implementation of the Baltic Agenda 21 for the Education Sector in this region. Science and Technology White Book of Lithuania has been prepared, a reform of Lithuanian science system is on-going, competitiveness between Lithuanian scientific institutions and their influence on social development processes are growing. More attention is given to the development of the information society.

### *Weaknesses*

88. Education reform is too weakly co-ordinated and lacks reference to rapid changes in the society's life. Schools, community and the society are inadequately prepared for this reform. Teacher-training systems are insufficiently directed towards the development of an information society and promotion of sustainable society development ideas. Existing different levels of the society lack understanding about science and knowledge, which is an important factor that helps to ensure progress in all fields of life and sustainable development of the whole society. Information society development is too slow, computerization level of not only the whole society but also at educational and scientific institutions is too low. Science development is not properly emphasized, thus many talented scientists turn to other fields of activity, emigration of highly qualified specialists is intensive, and the intellectual potential of the society declines. The level of the society's ecological education and promotion of sustainable development ideas is unsatisfactory, incentives for research and design of advanced environment-friendly technologies are too weak.

### *Opportunities*

89. Science and knowledge may become one of the most important engines of sustainable development if the reform of the education and science system is further enhanced and continued. Education at all levels will give an opportunity to form an open-minded, creative and self-dependent person who feels responsible for the welfare of the country, democracy and preservation of cultural identity. Lithuania's membership in the European Union will allow more rapid reform and modernization of education systems, intensify participation in international science and knowledge exchange programmes, facilitate development of an information society. More active participation in EU and other international scientific research programmes will help to adapt experience of other countries in the design of modern, environment-friendly technologies and strengthen the scientific research base in a shorter period of time. A position of Lithuania as a Co-lead Party (together with Sweden) for the implementation of the Baltic Agenda 21 for the Education Sector and its positive experience in education reform presents a good opportunity not only to learn from the experience of other countries but also to strongly influence changes in education systems on international scale.

### *Threats*

90. With growing differentiation of wealth a larger part of the society may be restricted from higher levels of education. Contradictions that occur in the management institutions and the society in the field of on-going education reform may hinder further progress of the education system. If decisions regarding future trends of education and science reform are not made in time and required financial resources for the implementation of the reform are not allocated, it will pose a serious threat to the whole partly reconstructed education system and increase the social instability of the society. A gap may occur between strategic provisions and reality if education monitoring is not established and the public is insufficiently informed about the actual status of education. After becoming a member of EU, with increased possibilities to use experience and advanced technologies from other countries, a focus on science development may decrease in Lithuania. Such a development would impair intellectual potential of the state and accelerate emigration of most promising scientists.

### Preservation of Cultural Heritage

#### *Strengths*

91. Lithuania, being at a junction of cultures and enshrining traditions of cultural tolerance for many years, is distinguished for its valuable and significant historical-cultural heritage, individual interaction between different cultural traditions and its open expression. The main feature of Lithuania's cultural identity is its ability to nurture Christian European traditions and other cultural traditions while preserving the roots of the Baltic culture. Ethnic cultural discrimination or manifestation of intolerance does not exist in Lithuania. Perception and diversity of cultural heritage values promote interest in the development of cultural tourism and the use of private capital in the protection and management of cultural heritage. The State, protecting its national cultural identity, ensures the national status, protection and sustainability of Lithuanian language, sustains ethnic culture and local traditions, preserves cultural heritage and its cultural value, supports the efforts of international Lithuanian community in preserving the national identity, and encourages culture and education of other national communities living in Lithuania by legal, administrative and financial means. The diversity of expression, forms and dimensions demonstrates that Lithuanian culture is open to the world and the world's culture is open to Lithuania.

#### *Weaknesses*

92. With the advent of mass communication, the development rate and tendency of Lithuanian language culture cannot compete in the information society and acquires influence

from other languages. The cultural heritage is not properly investigated and unclosed, lacks systematic approach and protection. Laws regulating a cultural heritage protection policy are only partly coordinated. Successful protection of cultural identity in the context of globalization and spreading of aggressive mass culture expression is not ensured due to insufficient degree and effectiveness of the state culture in general and lack of financing for the protection and management of cultural heritage.

### *Opportunities*

93. Viable, distinctive and exposed Lithuanian culture enriching European and world culture forms the main preconditions to sustain a high demand of public cultural self-expression and ensure Lithuanian cultural identity. The possibility to have ethnic culture expression is ensured by improvement of the legal framework, increase of state support, implementation of the regional policy. Development of countryside tourism encourages more expressive sustainability, exposition and support of cultural values and traditions. Integration of cultural heritage into tourism, recreation development, landscape formation programmes and projects helps to guide decisions in terms of their protection and use, providing better conditions to attract financing. The country's participation in international cultural programmes provides opportunities to present national culture abroad. Improvement of institutional system of cultural heritage protection provides more favorable conditions for interaction between the state institutions, municipalities, legal and physical persons in the management of cultural heritage values. Strengthening of non-governmental cultural organizations provides favorable conditions to form the state cultural policy that meets the needs of society.

### *Threats*

94. Globalization, development of new communications, and increased mobility of people pose a threat to cultural grading, loss of ethnic culture authenticity. Lithuanian cultural identity is less expressed. A culture of historical ethnographic regions may decay under the influence of increasing urbanization, unfavorable demographic countryside processes, and change of lifestyle. Inadequate financing of culture, insufficient education of the society and, in particular, youth, about specifics of Lithuanian cultural heritage and its meaning will hinder the formation of favorable conditions for active public participation in creating and enshrining Lithuanian culture, and will influence the loss of unprotected cultural values. EU cultural policy promotes cultural diversity, however, only Lithuania itself carries out a responsibility for its cultural identity, identification, preservation, the development and dissemination of cultural values. Due to that and in contradistinction to economy, there is no other compensation if attention from the government to cultural identity and peculiarity is inadequate or diminishing.

## **Regional Development**

### *Strengths*

95. Equal distribution of the cities and other inhabited areas in the country's territory and good access facilitate rational setout of economic and social potential, form preconditions for faster growth of least developed regions by decreasing regional imbalances. The Law on Regional Development adopted by Seimas of the Republic of Lithuania on July 20, 2000 and the Master Plan of the Republic of Lithuania provide a good background for the implementation of territorially differentiated regional policy, improvement of economic and social conditions in least developed regions, protection of nature and cultural values, rational use of local resources. Most inhabited areas have sufficient internal territorial reserves for development, which helps them to decrease the invasion of urban territories into nature. The Long-term Economic Development Strategy of Lithuania until 2015 emphasizes problems related to unbalanced regional development. Some municipalities prepared and implement Local Agenda 21. A number of such municipalities increase.

### *Weaknesses*

96. A major part of investment was directed towards the most urbanized regions, in particular their centers, in the last decade. Thus, economic and social development in these regions has had the fastest pace and differences between development level and people's welfare in regions have significantly increased. In Lithuania many problematic territories with extremely low rates of employment and depopulation tendencies have formed. Possibilities for economic development of regions with such territories decrease. Regional Master and Strategic Plans are not prepared and approved in most of regions. Implementation of sustainable development principles is emphasized too little while preparing regional development plans.

### *Opportunities*

97. Consistent implementation of territorial administrative reform and decentralization of management will lay the foundations for effective implementation of regional policy and decrease of development disproportions. EU assistance during Lithuania's preparation for the EU membership and the membership itself will enhance opportunities for the growth of least developed regions and provide preconditions for the decrease of social and economic development differences in Lithuanian regions. Improvement of territorial planning will ensure more favorable conditions for investments and sustainable development of regions and inhabited areas. Rational use of territories for the construction of industrial, service oriented

objects and housing, increasing their multifunctionality, will help to reduce shifting migration, provide favorable conditions for faster social development and reduction of air pollution. Better financing of regions and municipalities will help to solve local economic, social and environmental problems more efficiently.

### *Threats*

98. Resistance of central government institutions to regions will have a negative influence on the commissioning of administrative functions. Investments and assistance from EU structural funds will be mainly allocated to mostly developed regions. This will increase disproportions in regional development. Concentration of economic growth in mostly urbanized regions and their centers will negatively affect the environmental state in these regions and cities. If the dimension of sustainable regional development policy is insufficient, regional capacities to use EU support funds are not developed and investment and EU assistance is not focused enough on problematic territories, there will be large zones of economic and social stagnation and ecological instability, depopulation and inhabited areas network decline tendency will grow, a balanced network of Lithuanian cities and other inhabited areas that was created historically will be deformed, shifting migration will intensify and a negative impact on environment will increase.

## **IV. SUSTAINABLE DEVELOPMENT VISION AND THE STATE MISSION**

99. The vision provides a general picture of Lithuania's future with special emphasis on such forthcoming changes and features, as well as their influencing factors, which reflect the process and results of development sustainability. Although the vision is not presented in certain time frame, formulation of the general vision and the vision of the main sustainable development components (environmental protection, economic and social development) is mostly based on the implementation period until 2020.

100. Successful implementation of the Sustainable Development Strategy can be ensured only if its main provisions and ideas are understood and supported by the whole society. Nevertheless, the role of the state institutions is very important. The state mission in sustainable development outlines the main objective provisions and course of actions of the state in implementation of the Strategy. The vision and mission are closely connected by their structure and approaches. However, the state general objectives and actions are more specifically formulated in the mission that helps to implement the main provisions of the vision. Sustainable development objectives are more precisely described in the next chapter.

### **Sustainable Development Vision**

101. Lithuania will be an equal member of European Union with its cultural identity preserved and successfully adjusted to globalisation objectives, has a sustainable development policy that ensures healthy environment, effective use of natural and intellectual resources, stable but moderate economic growth, overall welfare of the society and strong social guarantees being implemented. According to the main economic and social indicators, Lithuania will reach the current average level of EU countries by 2020, and according to environmental quality indicators, it will meet all EU standards and requirements of international conventions dealing with minimization of environmental pollution and input into global climate change.

102. Despite of rather rapid economic growth, the state of environment in Lithuania will meet EU standards. Implementation of advanced, effective, environment-friendly technologies and cleaner production methods in different spheres of production and services will help to decouple environmental pollution from economic growth, so that increase in environmental impact will be less than production growth. Lithuania will meet all international commitments in terms of global climate change and environmental pollution. A streamlined transport system, development of intensive public transport and multi-modal transport systems, innovative environmental monitoring systems will ensure good air quality even in the largest Lithuanian cities. Upgraded water supply, sewerage networks and waste water treatment plants, as well as a river basin management approach to water resources, will ensure good quality of water supplied to inhabitants, minimum negative impact on open water bodies which improves water quality. Implementation of regional waste management systems, introduction of primary waste sorting will reduce waste flows to the landfills significantly, and increase recycling of waste. Spontaneous renaturalization and expedient increase of Lithuanian forest area as well as other perennial vegetation areas, rational development of protected areas and the nature frame, as well as their integration into the international ecological networks, will help to protect landscape and biodiversity, slow down processes of soil erosion and strengthen ecological stability of territories.

103. Natural resources will be well protected and used in more rational and effective ways. Use of resources will be decoupled from economic growth. It will increase more slowly than production and services. Local and renewable resources will become more important and conditions required for the renewal of resources will be ensured. Extraction and use of rather abundant mineral resources will revive together with reviving construction and the construction industry. After decommissioning of Ignalina NP, the use of local bioenergy resources such as wind, solar, geothermal and others will become very important. These resources will form an increasing part of primary energy. Biological fuel produced from agricultural production, biodiesel fuel and bioethanol will satisfy a rather substantial part of transport energy needs. The amount of natural gas as a very clean organic fuel type will increase in the structure of imported energy resources, the amount of liquid gas in the transport sector. Use of recreational resources will grow mostly for the account of countryside

tourism and impact from this activity on environment will be within the ecological capacity of territories.

104. Moderate and stable economic growth will enable Lithuania to increase the GDP by 2,5-3 times and, according to the GDP per capita, reach the current EU average level by 2020. By the end of this decade, Lithuania will become a member of the European monetary union. This will ensure its macroeconomic stability. The economy based on science and knowledge as well as advanced and environment-friendly technologies will guarantee successful economic development and integration into European transport, communication and energy infrastructures in the future. The communication and informatics sector will have a dominant position and it will stimulate the development of other economic branches. Small and medium business will develop the fastest in the industrial sector, use of local and renewable resources as well as recycling will increase. Industry with sufficient capacity for production of transport fuel (biodiesel, bioethanol) from biological resources will be established. Modernization of highways and railways network and Klaipėda Port, with upgrade of the vehicles fleet will solve regional and internal connection problems by reducing negative impacts on the environment from transport sector. Implementing provisions of the Territorial Master Plan of the Republic of Lithuania formulated a network of hierarchic, polycentric inhabited areas in all regions, which will ensure favourable environmental, economic, and social development, and people's life conditions. Developing ecological agriculture and applying modern approaches to traditional branches of agriculture as well as reducing to a large extent (compared with most of EU countries) the use of chemicals, the agricultural sector will have less impact on the environment, produce healthy food products and raise competitive ability and successful entrance into the European and world markets. Flexible system of taxes and other economic levers combining economic, environmental and social objectives will create favourable preconditions for sustainable development of Lithuania.

105. According to social and population health indicators, Lithuania will reach the current average level of the European Union countries. Aging of the society will become a very important problem to Lithuania and to the rest of Europe. Nevertheless, increase of the birth rate and population will become positive along with improving welfare. Youth emigration will decline and rather large part of emigrated young people will return to Lithuania. With on-going policy for promotion of the development of problematic territories, disbalances of regions will significantly decrease and high level of employment and living standard as well as good health care will be guaranteed and depopulation processes of least developed regions will be prevented. All strategic decisions and decisions related to economic activities and territories planning will be taken based on the results of environmental and health impact assessment. Preconditions for mitigation of health inequity, improvement of health care accessibility and quality of services will be established. Improved public information and participation will increase public consciousness in protecting and strengthening of their health. A modern education system will guarantee such education,



which corresponds to the EU level. It will form a dynamic and responsible society, which actively participates in very important decisions at municipal and state levels. Improved working conditions, living standard and health protection will influence prolonged age up to the average in EU. Proper pension security will be secured by combining current and accumulative financing. Many people will have a possibility to work and earn guaranteed, and social support will be provided only to those who really need it. Strong emphasis will be paid to disability, poverty, and social exclusion prevention, extreme poverty will be eradicated. A rational system for housing, its improvement and energy efficiency increase will be established and available to everyone. Strong consideration will be given to preservation of Lithuanian ethnic regions, cultural identity of national minorities.

106. Protection and management of tangible cultural values will receive sufficient support from the state. This will help to preserve and revive valuable historical heritage for future generations. Protection and management of cultural values will become an integral part of territorial planning inside the country.

107. Active state regional policy in the field of regional sustainable development will promote more balanced development of Lithuanian regions. Strengthening of the development of problematic territories will significantly reduce regional imbalances, guarantee high employment rate and living standards as well as good health protection to all people, and ensure a healthy environment. Rational cooperation between the state, regional institutions, municipalities and society will base on the partnership principle. Local Agenda 21 projects will be prepared and implemented by all municipalities. Due to streamlined state regional policy, weak links of the inhabited areas network will be strengthened, optimal networks of regional and local centres will be established, and self-governance system will be expanded. Agricultural production will be successfully reformulated in rural regions, development of new businesses and services, countryside tourism will be encouraged and depopulation trends of these regions will be significantly diminished.

### **The State Mission**

108. Implementing a Sustainable Development Strategy the most important state mission is to coordinate and harmonize the main sustainable development components (environment, economy and social fields) and development of their different branches, provide opportunities to all social groups to be actively involved in the sustainable development process and use the results of progress made by common efforts, ensure compatibility of international, state, regional and local short-term and long-term interests and timely implementation of the main sustainable development principles.

109. Taking into account that the sustainable development concept has already become an ideological basis for developed countries, Lithuania's integration into EU and other Euroatlantic structures as well as international organizations will very much dependent on the progress in implementation of the main sustainable development principles.

110. In order to implement the Sustainable Development Strategy, the state must draw upon different legal, economic and organizational measures, the state and public institutions. Some European countries have already made constitutional amendments or adopted constitutional laws that enforce the main sustainable development principles at the highest juridical level. In order to ensure stability and accessibility of the state policy from a sustainable development point of view, the main sustainable development provisions of Lithuania should not only be legitimized in this Strategy but also integrated into special sectorial plans, programmes, regional and municipal planning documents, other relevant legal acts.

111. The main state mission in the field of environmental protection is to control and regulate the impact on environment and direct economic subjects and state institutions to the prevention of negative impact on the environment and human health instead of putting major efforts into elimination of negative impact consequences. Consistent implementation of EU directives and national laws regulating the impact on environment and human health, and increase of producer responsibility for environmental pollution are among the major tasks of the state. While preparing for decommissioning of Ignalina NP, institutions responsible for economic development and environmental protection must initiate and ensure timely preparedness of thermo electrical power plants to supply Lithuania with electricity with minimum increase of pollutant emissions. It is very important to effectively allocate state financing and EU assistance for modernization of the water supply and sewerage infrastructure, establishment of water resource management system based on the river basin principle as well as establishment of modern waste management system. Preparation of the program for increase of forest area in Lithuania and its implementation will facilitate the effective use of non-productive agricultural land but also add to missing elements of the Nature Frame, support integration of Lithuanian protected areas system into the European ecological networks by establishing required connections.

112. The state must ensure protection of natural resources, effective and more economical use of these resources by legal and economic measures. Pollution charges have to be restructured so that their size would depend not only on consumed amount of resources but also consumption efficiency. The state must support the broadest use of local renewable resources and recycled materials in every possible way. Municipalities must be given the better right to dispose of natural resources within their territories. In the future special attention should be given to more effective use of energy resources. Local renewable biological resources must meet up to 15% of Lithuanian energy demand. A strong legal base must be prepared and every kind of support must be allocated to develop agriculture for energy purposes and establish a recycling industry. This will provide possibilities to meet a similar part of fuel demand for the transport sector by producing biodiesel and bioethanol. As demonstrated by the experience of other countries, the main impediment for broader use of alternative energy sources (biofuel, wind, hydroenergy, etc.) is resistance by companies

producing and selling oil products. The state must urgently regulate legal and economic aspects of alternative energy production and utilization.

113. The main state mission in the economic sector from a sustainable point of view is to promote well-balanced development of different economic branches, reduce interdepartmental barriers by legal and economic means. The optimal distribution of the state budget allocations and EU assistance considering sustainable development provisions is one of the major tasks of the state. Investments and economic support must be directed not only towards the increase in economic production efficiency and quantitative growth but also towards the increase of ecological production efficiency and minimization of negative impact on environment and human health. Support in various fields of production must be given to enterprises and farms where advanced, environment-friendly technologies that use resources in cost effective way and cleaner production methods are being implemented. Development of ecological farms must be in particular encouraged in the agricultural sector. Promotion of recycling of raw materials and strengthening of recycling capacities must be among the more important tasks of industrial development. The largest direct and indirect support must be directed towards establishment of such branches of production and services as are receptive to science and knowledge and have lower negative impact on the environment, multi-modal logistic centres and technological parks. Special attention in the household sector must be given to energy efficiency increase, renewal of housing and household infrastructure. Constant attention must be paid to incoming and, above all, countryside tourism development. Gradually tax policy must be reoriented from profit taxes (income, profit, etc.) to taxes for damage (environmental pollution, inefficient use of resources, etc.) by broader application of responsibility (polluter pays) principle.

114. The main state mission in the social field is to provide each inhabitant of the country who is able and willing to work with a possibility to ensure a proper standard of life by their own work. The active employment policy must be implemented by developing permanent access to all education systems that could ensure proper labour force qualification required to meet needs in changing labour market. The state social policy, while cooperating with social partners, should take into account all inhabitants in the country, ensure proper development of social security from the main social risk factors, promote motivation for economic activity, provide social support only to those who need it the most. The main emphasis must be given to prevention of poverty and social exclusion. The pension reform must provide possibilities for more effective coordination of current financing with accumulative financing and assure prosperous old age. Implementation of housing program and availability of conditions for supply of comfortable and energy efficient dwellings is an important mission of the state. The state mission in the public health sector is to regulate and control impact on public health, ensure integration of health related concerns into decisions taken at all levels in all fields of activities. The state should constantly encourage such activities, which help to protect and improve public health, prohibit and limit harmful activities, ensure compensation of damage to public health, support implementation of

prophylactic programmes. Science and education must become one of the most important priorities of the state development. All Lithuanian citizens must be secured with a possibility to seek for desirable education. Upbringing of the civil activity, promotion of environmental education, environment and health friendly lifestyle must be better positioned in all education levels. Integration of science and scientific achievements into everyday life, formation of knowledge-based society, design and introduction of advanced environment friendly technologies must become one of the important state priorities. In the light of faster euro-integration and globalisation processes, a significant state mission is to preserve and enshrine Lithuania's cultural identity as well as ensure continuity of the national history.

115. The state must be concerned about its historical cultural heritage by improving the legal framework and institutional system of cultural values protection and management, create favourable conditions for investments into protection and use of cultural heritage. The state must give strong emphasis to revival and conservation of countryside traditions and heritage.

116. The state mission in the field of sustainable development of regions is to ensure harmonized development of all regions in order to reduce differences between economic development and people's welfare in the regions and preserve their identity. The territorial administrative governance reform must continue, regional and local institutional capacities to use possibilities and advantages of the EU membership in the most efficient way must be developed. The state must support the development of regional and local centres and strengthen the national system of territorial planning by legal, administrative and economic means. Self-government strengthening and development; support to Local Agenda 21s implementation, and strengthening of partnership with different groups and institutions of the society is also an important mission of the state.

## **V. SUSTAINABLE DEVELOPMENT OBJECTIVES, TASKS AND THEIR IMPLEMENTATION MEASURES**

117. Lithuanian sustainable development objectives and tasks were formulated taking into account principles of sustainable development described in the first Chapter. The general sustainable development objectives are as follows: to coordinate environmental protection, economic and social development concerns, ensure a clean and healthy environment, effective use of natural resources, overall economic welfare of the society and strong social guarantees, and, according to economic, social and eco-efficiency indicators achieve the current average level of European Union countries, according to environmental pollution indicators comply with the EU allowable standards, as well as implement requirements of international conventions limiting environmental pollution and input into the global climate change during the implementation period of the Strategy (until 2020).

118. The following distinction was made while formulating strategic objectives: short-term, mid-term and long-term objectives. Taking into account that during the implementation period of the Strategy, Lithuania's development will be mostly influenced by the EU integration processes, duration of different objectives is coordinated with the main phases of this process: short-term objectives cover the period until the EU membership and the first years of the membership (2005), mid-term objectives – the period until the end of the transitional period of the EU membership (2010), and the long-term objectives - until the end of the period covered by the Strategy (2020).

119. Following the general strategic objective, long-term economic and social development objectives and targets were mostly associated with the current EU indicators of these sectors. Taking into account, that indicators of environmental impact and environmental state (amount of emissions into the air per area unit or per capita, urban air quality, amount of waste per capita, etc.) are most often higher in EU than in Lithuania, long-term objectives are generally connected with eco-efficiency indicators of EU countries (consumption of energy and natural resources per GDP unit, amount of emissions into the air, industrial discharges or waste per GDP unit, etc.).

120. Taking into account plans to achieve current EU average level according to eco-efficiency indicators during the implementation of the Strategy, it is foreseen to increase eco-efficiency of different economic sectors by approximately two fold and secure that growth of the consumption of natural resources will be twice as slow as growth of production and services.

121. Formulating implementation measures of the Strategy they were directed towards the implementation of strategic objectives and tasks. The Strategy implementation measures, like objectives and tasks, were divided into three main phases, namely: implementation measures of short-term objectives and targets (until 2005), implementation measures of mid-term objectives and targets (until 2010) and long-term implementation measures – till the end of the implementation period of the Strategy (until 2020). Certainly some long-term measures will remain significant after the implementation period of the Strategy.

122. Considering the flexibility principle of the Strategy, achieved results, newly emerged objectives and tasks, a priority list of the Strategy implementation measures should be periodically revised.

123. Implementing the management (leadership) principle in order to ensure qualified, purposeful and effective management of the Strategy's implementation, strengthening of institutional capacities in different fields was strongly emphasized. Seeking to improve the management of sustainable development process and based on the subsidiarity principle, measures, promoting decentralization of decision making with more rights delegated to regions and municipalities, are foreseen in the regional development sector.

124. In order to implement the principle of equal opportunities, strong emphasis was made on formulation of measures decreasing unbalance of social (employment, education,

social security) and regional development. While implementing the Strategy it is important to ensure equal responsibility for outcomes of activities along with equal opportunities.

125. As one of the major obstacles in implementation of the Strategy is a cross-sector barrier, the coherence (integration) principle has a significant importance. Therefore, efforts were made in this Strategy to closer link and coordinate objectives, tasks and implementation measures of different sectors.

126. The Strategy focuses very much on the improvement of economic efficiency of environmental protection measures and implementation of the payback principle. On the other hand, it is foreseen to introduce such measures, which do not infringe the accessibility principle - expenses meant to maintain clean and healthy environment would not be shifted purely on tax-payers shoulders. They should be based on implementation of advanced economically and ecologically effective technologies that reduce net cost of environmental protection measures and supply of services. Privatisation of environmental infrastructure (waste management, water sector, etc.) is considered as one of the main measures, which can enable effective coordination of payback and accessibility principles in this Strategy.

127. The precaution (prevention) principle plays a very important role in regulating economic development, seeking not to exceed allowable limits of impact on environment and prevent the negative impact on human health. Introduction of advanced environment friendly technologies, cleaner production methods, broader use of renewable energy and other natural resources as well as secondary raw materials, optimization of territorial planning, promotion of environment friendly and healthy lifestyle are defined in this Strategy as the most effective pollution prevention measures. Environmental impact assessment of planned economic activity is considered as an important institutional preventive measure.

128. Integration of environmental concerns into different economic branches and more effective use of energy and other resources are strongly emphasized in this Strategy. While implementing the ecological efficiency (dematerialization) principle, introduction of advanced technologies and production methods that are effective in terms of the consumption of natural resources and use of secondary raw materials play a significant role. In this Strategy strong attention is given to measures related to implementation of substitution (transmaterialization) principle. It is foreseen to substitute materials hazardous to environment and human health used in industry, agriculture, and household with less hazardous or non-hazardous materials and substitute nonrenewable resources, and first of all energy resources, with renewable ones.

129. In this Chapter soil related problems are incorporated into the agricultural development sector, problems related to the use of resources are integrated into objectives and tasks of the development of economic branches, strategic objectives and tasks in terms of more effective protection of natural resources are incorporated into the Chapter on Biodiversity and Landscape Protection.

## **Environmental Quality**

130. **Long-term objectives** – to improve air quality management system, in order to ensure air quality corresponding to EU requirements in the whole territory of the country and to achieve twice as slow increase of amounts of pollutant and greenhouse gas emissions into the air than increase in production and services.

131. **Main long-term tasks are:**

131.1. To ensure that amount of pollutant and greenhouse gas emissions into the air per GDP unit is reduced by approximately 50% and, according to this indicator, to reach the current average level of EU countries.

131.2. While modernizing country's economy and constructing new objects to ensure implementation of the best available production methods and application of up-to-date technologies that are least harmful to environment and human health.

131.3. To promote that use of renewable energy resources in energy and transport sectors constantly increases and constitutes not less than 15% in the total primary energy balance by 2020.

131.4. To achieve that fuel produced and consumed as well as a larger part of car fleet meets the EU standards.

132. **Implementation measures of long-term objectives are:**

132.1 To promote introduction of most advanced environmentally friendly technologies, cleaner production and pollution prevention methods enabling to reduce air pollution and input into the global climate change.

132.2. To provide investment support to the development of alternative energy sources (wind, solar, geothermal energy, small-scale hydroenergy), economic incentives to promote use of biofuel for energy purposes and combined heat and power production.

132.3. To encourage renewal and modernization of vehicles fleet, public transport development, production and use of ecologically clean and biological fuel, application of stricter environmental requirements to road transport means.

133. **Mid-term objectives** – to use the state and private financing as well as EU assistance more effectively in order to meet objectives for reduction of emissions and greenhouse gases set up in international conventions and protocols and described in the EU Association Agreement after the decommissioning of Ignalina NPP.

134. **The main mid-term tasks are:**

134.1. To implement requirements for large combustion plants and fuel storage, reload and transportation facilities set up in EU directives.

134.2. To implement more strict regulation of emissions to air of acidifying pollutants, heavy metals and persistent organic pollutants.

134.3. While implementing the responsibility (polluter pays) principle in transport sector to enforce stricter control of emissions from vehicles.

135. **Implementation measures of mid-term objectives are:**

135.1. To revise the National Strategy of the Implementation of the United Nations Framework Convention on Climate Change approved by the Resolution No. 1236 of October 25, 1995 of the Government of Lithuania.

135.2. To define specific environmental targets for large combustion plants, to coordinate implementation measures and deadlines, and to introduce advanced technologies and treatment facilities for combustion products in thermo-electrical power plants.

135.3. In accordance with the deadlines set up in legal acts, to implement a plan and requirements for minimization of volatile organic compound emissions during fuel storage, reload and transportation.

135.4. To establish a system of vehicle pollution control and enforce economic and administrative measures, based on the polluter pays principle, to control pollution from the transport sector.

135.5. To introduce a system of allowances and develop emission trading.

135.6. To implement a modern system of air monitoring.

136. **Short-term objectives** – to finalize legal and information base, strengthen institutional capacity required for the implementation of sustainable development objectives in the field of air quality.

137. **Short-term tasks are:**

137.1. To improve an order of pollution emission inventory and reporting in industries.

137.2. To prepare and approve legal acts required for implementation of EU directive requirements in the field of air protection.

137.3. To develop legal and economic measures ensuring application of joint implementation and emission trading mechanisms in Lithuania, seeking to implement the requirements of Kyoto Protocol ratified by the Law No. IX-1203 of Seimas of the Republic of Lithuania on November 19, 2002.

137.4. To improve an order of issuing integrated pollution prevention and control permits.

137.5. To improve and modernize air quality monitoring system.

138. **Implementation measures of short-term objectives are:**

138.1. To introduce new greenhouse gas assessment methodology, to complete the inventory, prepare draft register and evaluate possible quantitative changes.

138.2. To prepare and approve the order of emission inventory and reporting in accordance with EU requirements.

138.3. To supplement the order of issuing integrated pollution prevention and control permits with standard requirements for greenhouse gas emissions.

138.4. To prepare a National Strategy of the Application of Joint Implementation Mechanism in Lithuania as foreseen in Kyoto Protocol of the United Nations Framework Convention on Climate Change.



138.5. In order to implement national pollution limits to prepare an Air Pollution Minimization Programme.

### *Water*

139. **Long-term objectives** – to establish a modern decentralized river basin water resource management system enabling to supply healthy drinking water meeting EU requirements to all inhabitants of the country and securing effective protection of water bodies and water ecosystems, rational use of water resources, high recreation potential as well as diversity of water ecosystems and their biological productivity.

140. **The main long-term tasks are:**

140.1. To decouple increase of water consumption from production growth and, by introducing advanced technologies and cleaner production methods, to achieve twofold decrease of water consumption per GDP unit.

140.2. To ensure that 80% of polluted wastewater is treated up to EU standards before discharged into surface water bodies.

140.3. To achieve that quality of surface water bodies meets the requirements of EU directives.

140.4. If compared with the year 2000, to reduce the inflow of organic substances and nutrients (nitrogen and phosphorus) into the Curonian Lagoon and the Baltic Sea by 20%.

140.5. To improve valuable freshwater fish spawning conditions and to encourage restoration and protection of salmon water bodies.

141. **Implementation measures of long-term objectives are:**

141.1. To introduce environmental management systems, advanced multi-use or closed water cycle technologies, cleaner production and pollution prevention methods allowing to save water resources and to minimize pollution in different industrial branches.

141.2. To upgrade and expand existing waste water treatment plants or to construct new plants meeting the EU requirements, introduce nitrogen and phosphorus removal in these plants, to upgrade and expand sewage collection system.

141.3. To implement pollution minimization program from agricultural sources by applying good agricultural practices, which reduce non-point pollution of water bodies.

141.4. To prepare and implement a minimization program for inflow of organic substances and nutrients into the Curonian Lagoon and the Baltic Sea.

141.5. To create favourable conditions for fish migration, to establish fish migration routes in dams, and to dredge the arms of the river Nemunas.

142. **Mid-term objectives** – to fulfil the EU requirements in the field of water consumption and protection, and secure economic effectiveness of water sector by effective use of the state, municipal, private financing and EU structural funds.

143. **The main mid-term tasks are:**

143.1. Following the EU Water Framework Directive, to implement integrated river basin management system at all levels.

143.2. To ensure that surface and underground water bodies are protected from materials that are hazardous to environment and human health.

143.3. To secure that all urban and rural population is supplied with drinking water meeting EU requirements.

143.4. To expand public drinking water supply network to the coverage of not less than 95% of urban and rural population and to ensure effective quality control of water from dug wells.

143.5. To reduce the amount of insufficiently treated wastewater twofold compared to 2000 levels.

143.6. To achieve the status of open water bodies is in accordance with the requirements of EU Bathing Waters Directive.

143.7. Based on the payback and accessibility principle, to prepare and implement a price policy for water supply and wastewater discharge.

**144. Implementation measures of mid-term objectives are:**

144.1. To establish a river basin water resource and their quality management infrastructure and an adequate information system, to train specialists and sign international agreements required for river basin management, and to establish joint commissions for international river basin management.

144.2. To implement minimization programmes of water pollution with hazardous substances and a system to control implementation of these programmes.

144.3. To upgrade and expand an infrastructure of the public drinking water supply network, to expand and renovate water supply networks, to construct water treatment plants for iron removal in 64 towns.

144.4. To implement necessary technical and institutional measures in order to supply rural population with healthy drinking water.

144.5. To prepare and implement an action programme for the implementation of EU Bathing Waters Directive requirements.

144.6. To upgrade a system for open water bodies, surface and ground water monitoring, laboratory analysis, monitoring data storage and assessment.

145. **Short-term objectives** – to create legal and institutional framework and strengthen institutional capacities, in order to implement a unified river basing water resource management system.

**146. Short-term tasks are:**

146.1. To restructure a management system of water resources and to establish an infrastructure of river basin management.

146.2. To establish an information system on use of water resources and quality assessment. To describe and legally define competence of central state institutions and separate river basin management centres.

146.3. To ensure supply of good quality drinking water to population of north-western regions of Lithuania where fluoride concentrations in drinking water are too high.

146.4. While establishing the river basin water management system to raise competence of specialists and the public, to create opportunities for broader participation of scientific institutions and the public.

146.5. To promote public participation in the implementation of river basin management programs.

**147. Implementation measures of short-term objectives are:**

147.1. To prepare an action plan for water resource use and protection.

147.2. To establish a center for capacity strengthening and dissemination of information on river basin water resources management system.

147.3. To transpose the remaining requirements of EU directives into the national legislation.

147.4. To legalize the main public bathing waters, endorse and control an order for their use, and to implement a monitoring programme of bathing waters.

147.5. To establish a system of public information and participation promotion in preparation and implementation of river basin management programmes.

147.6. To prepare a system of indicators for the integrated assessment of river basin water quality.

*Landscape and Biological Diversity*

148. **Long-term objectives** – to preserve landscape and biological diversity, nature and cultural heritage values, promote restoration of damaged natural elements, ensure rational use of landscape and biological diversity.

**149. The main long-term tasks are:**

149.1. To preserve landscape and biological diversity and peculiarities of the state and its ethnographic regions, ensure their rational use.

149.2. To develop the protected areas network and the Nature Frame by incorporating them into the European ecological networks; to increase the coverage of protected areas in Lithuania for up to 14-18% of the country's territory.

149.3. To increase accessibility of protected areas to the public, promote importance and objectives of protected areas.

149.4. To increase Lithuanian forest area by 3-5 percent; expand territories covered with other natural perennial vegetation.

149.5. To increase the ecological stability of agrarian landscape, reduce negative impact of agriculture on biological diversity.

149.6. To improve protection and rational use of cultural values.

149.7. To strengthen protection of landscape at the coastal zone and marine ecosystem biodiversity, coordinate their protection and rational use for public needs.

- 149.8. To ensure protection of natural hydrographical network and marine ecosystems.
- 149.9. To ensure ecological stability of karst region and other sensitive territories.
- 149.10. To ensure protection and rational use of recreational resources.
- 149.11. To encourage faster restoration of damaged territories.
- 149.12. To protect and to increase the area of natural urban landscape territories and historical green areas.

**150. Implementation measures of long-term objectives are:**

150.1. To integrate protection measures of biological and landscape diversity as well as cultural heritage into the development programmes of all economic branches.

150.2. To integrate Lithuanian protected areas into the European ecological networks; to designate an ecological network in the Nature Frame schemes at the national and regional levels.

150.3. To designate the Nature Frame in general municipal plans.

150.4. To set up cognitive tourism (by foot, bicycles, water, auto, horses, etc.) paths and tracks in the state parks; to establish a system of cognitive tourism tracks; to prepare ecological education campaigns.

150.5. To implement measures foreseen in the afforestation programme of non-productive land giving priority to the Nature Frame territories.

150.6. To introduce good agricultural practices; to implement protection measures for landscape, biodiversity and cultural heritage values in agrarian territories.

150.7. To compensate land owners for restricted economic activities and reduced benefit in protected areas.

150.8. To implement EU requirements in the field of coastline protection, integrated coastal zone development, to implement the Baltic Sea protection and management measures, and optimise the coastal land-use structure.

150.9. To implement protection measures of natural hydrographical network and marine ecosystems.

150.10. To implement measures foreseen in a programme for protection of karst region.

150.11. To implement measures of protection of wetlands and natural meadows and management of exploited and abandoned peat bogs.

150.12. To prepare and implement projects on increase and management of natural and subnatural territories providing ecological and recreational functions to urbanised territories.

**151. Mid-term objectives** – to establish a modern system for protection and use of landscape, biodiversity and cultural heritage in line with national interests and EU requirements.

**152. The main mid-term tasks are:**

152.1. To enhance and improve Lithuanian protected areas system and the Nature Frame, to ensure protection of key habitats.

152.2. To provide better opportunities for the public to get acquainted with protected natural and cultural values and to get involved into their protection.

152.3. To restore most severely damaged landscape elements, protect and increase esthetical values of landscape, to strengthen protection of traditional countryside landscape, decrease its visual pollution.

152.4. To improve biodiversity protection methods; to develop research on biodiversity, economic activity impact and protected areas regime.

**153. Implementation measures of mid-term objectives are:**

153.1. To revise the Lithuanian Biodiversity Conservation Strategy and Action Plan.

153.2. To prepare plans and regulations of protected area boundaries necessary for protection of key habitats, and to legitimate these territories. To identify the nature frame in county master plans.

153.3. To establish protected areas required for implementation of European Community ecological network NATURA 2000, to prepare a list of protected areas of European importance and to designate their boundaries.

153.4. To prepare and approve management plans of the state parks and nature management projects of other protected areas.

153.5. To complete Lithuanian protected areas cadastre by supplementing it with data on protected areas of European importance; to establish a protected areas information system.

153.6. To establish information and ecological education centres in all state parks considering their ecological capacity; to develop cognitive recreation and tourism.

153.7. To prepare and implement an effective system of compensation to private landowners for conservation of biological, landscape diversity and cultural heritage objects.

153.8. To supplement comprehensive education programmes and education modules for adults with information about protection, management and rational use of natural and cultural values.

153.9. To prepare and implement landscape and biodiversity research programs.

153.10. To implement landscape and biodiversity monitoring in accordance with the EU requirements.

153.11. To prepare and implement a monitoring programme of coastal dynamics.

153.12. To prepare and implement projects on recultivation of landfills and abandoned quarries, which do not meet environmental requirements, to dismantle or convert abandoned farm buildings for other purposes.

154. **Short-term objectives** – to evaluate the main changing trends in landscape and biodiversity, provide legal, economic and institutional preconditions for conservation and use of this diversity as well as nature and cultural values following sustainable development principles.

**155. Short-term tasks are:**

155.1. Using advanced methods to assess Lithuanian landscape and biological diversity and the main trends.

155.2. To provide legal and institutional preconditions for integrated protection and rational use of nature and cultural values.

155.3. To provide preconditions for conservation of key Lithuanian habitats.

155.4. To establish bird protection territories of European importance.

155.5. To promote the importance of landscape, biodiversity and cultural heritage conservation and rational use, to increase participation of public, municipalities, regional authorities and other social partners.

155.6. To ensure protection of green areas in urbanized territories and other natural areas.

**156. Implementation measures of short-term objectives are:**

156.1. To prepare a national study on landscape and biodiversity.

156.2. To prepare protected areas development programme considering requirements of European ecological networks and specifics of Lithuanian protected areas system.

156.3. To prepare nature management plans for the designated sites and potential European Community ecological network NATURA 2000 sites.

156.4. To establish a uniform institutional system for protection, management and use of nature and cultural heritage.

156.5. To adopt regional architectural regulations for protected areas, to prepare and publish traditional architecture catalogues of ethnic regions.

156.6. To determine the protection status of key habitats.

156.7. To amend provisions of the environmental monitoring database by the Order No. 106 of March 12, 2002 of the Minister of Environment legitimating a system of landscape and biodiversity indicators and setting up information collection methods.

156.8. To perform inventory and legitimate green areas of urbanized territories and other areas of recreational value; to involve public, municipal and regional authorities into protection and management of these territories.

156.9. To prepare a special management plan and action programme for the Baltic coastal zone.

*Waste Management*

157. **Long-term objectives** – to establish environmentally and economically effective non-hazardous and hazardous waste management system, reduce waste flows and negative impact from waste to environment and human health, ensure rational use of waste for secondary recycling and energy purposes.

**158. Long-term tasks are:**

158.1. To ensure that increase of waste amounts is much slower than growth of production, and, amounts of waste accumulated for production of one GDP unit do not exceed the average level of special production branches in EU.

158.2. To secure significantly slower increase of waste amounts than consumption expenditures.

158.3. To ensure that major part of industrial and household waste is sorted on sites of their generation, and recycling of secondary raw materials and their use for energy purposes increases up to the average level of EU countries.

158.4. To reduce input from waste landfills to global climate warming, increase their use for energy purposes, decrease biodegradable waste flows to landfills by 35% if compared with the amount in year 2000.

158.5. To reduce a risk posed by radioactive waste to environment and human health.

**159. Implementation measures of long-term objectives are:**

159.1. To introduce advanced technologies, cleaner production and pollution prevention methods enabling to save natural resources, to prevent waste generation and increase recycling in different industrial branches.

159.2. Cooperating with the public to promote production and use of non-hazardous to environment products that have longer durability, to enlarge introduction of environmental labelling of products and primary household waste sorting.

159.3. To implement modern biodegradable waste management methods based on composting, biogas production and use for energy purposes.

159.4. To construct modern radioactive waste deposits.

160. **Mid-term objectives** – to establish a modern household waste management infrastructure in all Lithuanian counties, hazardous waste management infrastructure cross-country, and expand supply of public waste management services.

**161. The main mid-term tasks are:**

161.1. To ensure public supply of waste management services to all physical and legal persons.

161.2. To create institutional and technical conditions for collection and use of not less than 50 % of packaging waste, including not less than 55% of paper and cardboard, 60% of glass, 25% of plastic and 40% of metal.

161.3. To promote recycling of local secondary raw materials and private capital investments in waste management and recycling.

161.4. To ensure safe handling of hazardous waste and treatment of accumulated amounts of hazardous waste.

161.5. To be ready for the implementation of projects on the use of waste for energy production.

161.6. To decrease biodegradable waste flows into landfills by 25% if compared with the amounts in the year 2000.

161.7. To be ready for the management of waste generated after decommissioning of Ignalina Nuclear Power Plant

**162. Implementation measures of mid-term objectives are:**

162.1. To close landfills those are not in compliance with EU requirements and to establish modern regional municipal waste management systems.

162.2. To establish hazardous waste collection and utilization (incineration, stabilization, deposition) system ensuring safe to environment and human health handling of hazardous waste.

162.3. To prepare a feasibility study and a programme of biodegradable waste management, start implementing this programme.

162.4. To prepare a feasibility study and programme of energy production from waste, to start implementing this programme.

162.5. To enhance current capacities of radioactive waste repository.

163. **Short-term objectives** – to establish organizational, legal and economic preconditions for effective waste management in terms of environment and economy.

164. **Short-term tasks are:**

164.1. To complete transposition of EU requirements into Lithuanian waste management legislation.

164.2. To improve waste inventory and control system, to enhance household waste recycling capacities.

164.3. To establish favourable economic preconditions for the enhancement of recycling capacities of secondary raw materials, including packaging, and the use of waste for energy purposes.

164.4. To promote the importance of waste sorting and handling to the public, to expand cooperation between the public, municipal, regional authorities and private capital in the field of waste management.

164.5. To strengthen capacities of waste management specialists.

164.6. To properly prepare for effective use of EU structural funds in preparation and implementation of projects on modern household and hazardous waste management systems.

165. **Implementation measures of short-term objectives are:**

165.1. To prepare projects on regional household waste management systems and initiate their implementation.

165.2. To prepare and start implementing the projects on construction of hazardous waste incineration plant and on a safe long-term hazardous waste landfill.

165.3. To improve legal and institutional framework required for introduction of the systems for chargeable products, packaging waste management and packaging deposit-return.

165.4. To certify hazardous waste managers; to improve a training system of waste management specialists.

165.5. To regulate waste import by legal and economic means – to promote recycling of local secondary raw materials.

165.6. To improve the legislation on radioactive waste management.



## **Economic Development**

166. Reduction of impact from economic branches to environment and human health while integrating environmental concerns into their development strategies, and improvement of their ecological efficiency are among the main priorities of the Strategy. It helps to prevent environmental pollution and other negative impacts rather than put all efforts to combat negative consequences from economic activities. Following the precaution principle, development of economic activities must result only in minimum negative impact without exceeding allowable limits of impact to environment. Here, environmental impact assessment of proposed economic activity must play an important role. The European Parliament and Council Directive 2001/42/EB of June 27, 2001 on environmental impact assessment of implementation of economic development programs and master plans must be implemented in Lithuania in due time.

### *Transport*

167. **Long-term objectives** – to coordinate development of all types of transport by giving higher priority to the transport with lower negative impact, increase energy efficiency of transport sector and use of alternative and more environment friendly fuels, reduce environmental pollution and input into the global climate change, and increase traffic safety, while establishing economically effective transport system.

168. **The main long-term tasks are:**

168.1. To increase economic and ecological efficiency of transport sector and to ensure that amounts of consumed fuel and atmospheric greenhouse gas emissions grow much slower than volumes of load and passengers transit.

168.2. To increase the use of less polluting environment (liquid oil gas and compressed natural gas, low sulphur heavy fuel oil for ships) and alternative fuel and to ensure that biofuel (biodiesel, bioethanol) comprises not less than 15% of fuel used by road transport until 2020.

168.3. To develop more environmentally friendly transport means with special emphasis on the development of railway and inland water transport and creation of multi-modal transport systems.

169. **Implementation measures of long-term objectives are:**

169.1. To promote modernization of transport means with a help of economic and legal measures by giving priority to those means, which are less fuel consuming and less polluting the environment.

169.2. To economically promote development of a network of petrol stations, which sell less environment polluting and biological fuel.

169.3. To implement measures for the infrastructure development of different types of transport and improvement of their interaction as well as programmes for the development of

a network of bicycle tracks foreseen in the Long-term Economic Development Strategy of Lithuania until 2015.

170. **Mid-term objectives** – to improve organization and regulation of traffic, reduce an input from transport to air pollution, limit noise and ensure that urban air pollution and noise do not exceed allowable norms.

171. **The main mid-term tasks are:**

171.1. To reduce transit transport flows through cities and, in particular, city centres.

171.2. To develop public transport sector by giving priority to less polluting and less noisy transport means.

171.3. To constrict control of motor transport pollution and noise.

171.4. To expand the use of biotransport (bicycles, role-skates).

171.5. To optimise urban transport flows reducing loads on urban centers and traffic jams.

171.6. To improve traffic safety and do not exceed the curent average level of EU countries according to a number of road victims, i.e. to reduce a numner of transport victims by approximately two times untill 2010.

172. **Implementation measures of mid-term objectives are:**

172.1. To construct main by-passes foreseen in the Master Plan of the Republic of Lithuania.

172.2. To enlarge the involvement of private capital in modernization of urban public transport systems.

172.3. To enlarge application of economic and legal measures reducing air pollution and noise from motor transport.

172.4. To upgrade and expand urban air pollution monitoring, to develop noise monitoring systems.

172.5. To modernize international airports, implement noise reduction measures and develop noise monitoring systems.

172.6. To establish an effective traffic safety control system in accordance to the EU requirements.

173. **Short-term objectives** – to create economic and legal preconditions for the development of more environment friendly and safer transport means, and broader use of less polluting (liquid and natural gas, low sulphur heavy fuel oil) and alternative (biodiesel, bioethanol) fuel.

174. **Short-term tasks are:**

174.1. To be ready for the increase of transport flow intensivity after becoming the EU member.

174.2. To increase the competitive ability of less polluting transport means (railway, inland water transport) and less environment polluting and alternative types of fuel.

174.3. To justify from economic point of view and legitimate the polluter pays principle in the transport sector.

**175. Implementation measures of short-term objectives are:**

175.1. To prepare an integrated programme for the increase of transport safety (taking in account the EU commitments to reduce a number of transport victims by two times until 2010).

175.2. To establish an economic and legal framework for the increase of competitive ability of environment friendly transport means and less environment polluting and alternative types of fuel.

175.3. To prepare programmes for urban public transport modernization and development of a network of bicycle tracks.

175.4. To prepare and implement public ecological education programs, which promote broader use of public and biological transport.

175.5. To legitimate taxes and administrative measures for control and restriction of pollution and noise from transport means.

*Industry*

176. **Long-term objectives** – to direct the development of industrial sector to advanced and environment friendly technologies, increase not only economic but also ecological efficiency of enterprises, save resources and minimize negative impact to environment.

**177. The main long-term tasks are:**

177.1. To increase economic and ecological efficiency of production and ensure that consumption of energy and water in industry per production of GDP unit is reduced by about twice, and, according to eco-efficiency indicators, to reach the current average level of EU countries.

177.2. To increase production based on new technologies up to 20-25% of a total amount of production and, according to this indicator, to come to the current average level of EU countries.

177.3. To substitute hazardous to environment and human health materials used in production with non-hazardous materials.

**178. Implementation measures of long-term objectives are:**

178.1. To promote, applying economic and legal measures, the development of industrial branches requiring science and knowledge rather than natural resources, to modernize production and to introduce as many as possible the newest technologies and cleaner production methods.

178.2. To expand scientific research and consultations in order to promote design, improvement and implementation of advanced, environment friendly production technologies, more efficient use of energy and other natural resources.

178.3. To promote economically efficient industrial branches based on knowledge and advanced technologies.

178.4. To implement a programme for substitution of hazardous materials to environment and human health used in production with non-hazardous materials.

179. **Mid-term objectives** – to enhance use of local renewable resources and recycling of secondary raw materials, develop equipment and installations minimizing impact to environment and production of multi-use packaging, enlarge implementation of cleaner production methods.

180. **The main mid-term tasks are:**

180.1. To develop production of biofuel and biological lubricants, i.e. to recycle of rape and grain production for energy purposes.

180.2. To increase recycling of local secondary raw materials and to ensure that Lithuanian companies are able to recycle amounts of secondary raw materials foreseen in the National Strategic Waste Management Plan.

180.3. To increase production of equipment and installations minimizing impact to environment and multi-use packaging.

180.4. To minimize negative impact of industry to environment and to ensure that cleaner production methods are introduced in not less than one third of Lithuanian industrial companies.

181. **Implementation measures of mid-term objectives are:**

181.1. To provide investment support for the establishment and development of companies producing biofuel and biological lubricants and recycling secondary raw materials.

181.2. To create favorable economic conditions for private capital participation in the development of infrastructure for the supply of quality local secondary raw materials to recycling companies.

181.3. To economically promote design and production of installations minimizing impact to environment and multi-use packaging.

181.4. To provide investment support to implementation of cleaner production methods in Lithuanian industrial companies.

181.5. To prepare regulations on use of hazardous to environment and human health materials in production and a programme for their substitution with non-hazardous materials.

182. **Short-term objectives** – to prepare legal, economic and institutional framework promoting implementation of advanced environment friendly technologies and equipment, efficient use of energy and other natural resources, recycling of secondary raw materials, and substitute hazardous materials used in production with non-hazardous materials.

183. **Short-term tasks are:**

183.1. To increase competitive ability of environment friendly products and enhance their production.

183.2. To strengthen an incentive approach of economic measures regulating the use of resources and environmental pollution.

183.3. To establish favorable economic and legal preconditions for expansion of companies producing biofuel and biological oil and recycling secondary raw materials.

183.4. To legally adjust the use of hazardous to environment and human health materials in production.

**184. Implementation measures of short-term objectives are:**

184.1. To prepare and implement public education programmes promoting broader use of fuel produced from renewable resources and products made from local secondary raw materials, to legitimate special labelling of these products.

184.2. To establish economic mechanisms promoting more efficient use of energy and raw materials in Lithuanian industrial companies, to manufacture non-hazardous to environment products and label them with certified labels (“Lily”), to promote use of these products to the public.

184.3. To improve a public procurement order which prioritizes sale of production from enterprises having environmental management certificates (ISO 14000).

184.4. To prepare methodics for assessment of impact from products to environment through their whole life cycle and to adjust them to Lithuanian companies.

184.5. To prepare rules for preparation of reports on sustainable development effectiveness, economic and legal incentive mechanisms for implementation of these reports in Lithuanian companies.

*Energy*

**185. Long-term objectives** – to form well balanced energy sector capable to compete in an open international energy market and ensure constant and safe supply of energy to all economic branches in Lithuania, increase energy production and distribution efficiency, expand use of local renewable and waste energy resources as well as ecologically clean organic fuel, comply with international commitments regarding the emission limits of pollutants and greenhouse gases into the air.

**186. The main long-term tasks are:**

186.1. To increase electricity and heat production and distribution efficiency, to reduce energy losses in distribution networks and emission of pollutants and greenhouse gas per produced energy unit.

186.2. To reduce country’s dependence on fuel import, to ensure that energy production from local renewable and waste energy resources constantly increases and comprises not less than 15% of primary energy balance until 2020, and rationally use waste for energy production.

186.3. To ensure that combined heat and power production comprises about 35% of electricity production.

186.4. To expand the use of cleaner organic fuel.

**187. Implementation measures of long-term objectives are:**

187.1. To decommission Ignalina NPP, dismantle reactors and ensure treatment of radioactive waste.

187.2. Using economic and organizational measures to promote energy production from local renewable (wind, solar, geothermal energy, small scale hydroenergy, biomass) and waste resources, to implement modern alternative energy production methods.

187.3. To support scientific research in the field of renewable energy sources and optimization of energy systems, to promote design, improvement and implementation of innovative energy technologies.

187.4. To upgrade and expand centralized heat supply systems, to renovate heat supply networks, create conditions for competition among heat producers and possibilities for consumers to regulate heat consumption.

187.5. To renovate an infrastructure of electricity supply (modernize electricity substations, partly renovate electricity transmission and distribution networks).

187.6. To expand natural gas distribution networks.

188. **Mid-term objectives** – to use EU, state support and private funds effectively, secure safe energy supply to all economic branches in Lithuania and do not exceed pollution limits after the decommissioning of Ignalina NPP.

189. **The main mid-term tasks are:**

189.1. To be ready for safe decommissioning of Ignalina NPP, underground deposition of radioactive waste and long-term storage of spent nuclear fuel.

189.2. Upgrade thermoelectrical power plants, secure electricity supply and do not exceed pollution limits after decommissioning of Ignalina NPP.

189.3. To ensure that local renewable and waste energy resources comprise not less than 12% in primary energy balance until 2010.

189.4. To increase efficiency of primary energy transformation in electricity and, in particular, centralized heat supply sectors, to reduce heat transmission losses.

189.5. To decrease vulnerability of economy if supply of energy resources from Russia is suspended or limited.

190. **Implementation measures of mid-term objectives are:**

190.1. To prepare and implement a complex of environmental measures in thermoelectrical power plants, to install new burners, combustion product treatment facilities in these power plants.

190.2. To expand combined heat and power production where economically feasible.

190.3. To integrate Lithuanian energy system into the EU energy system.

190.4. To establish required infrastructure, to train specialists for decommissioning of Ignalina NPP.

190.5. To prepare and start implementation of special long-term municipal heat sector development plans.

191. **Short-term objectives** – to establish organizational, legal and economic preconditions for effective operation of energy sector without exceeding allowable limits of impact to environment.

192. **The main short-term tasks are:**

192.1. To promote use of ecologically cleaner organic fuel – natural gas, low sulphur heavy fuel oil, and other type of fuel, to adjust taxes on natural resources and environmental pollution.

192.2. Using economic measures to increase competitive ability of renewable energy sources (wind, solar, geothermal energy, small scale hydroenergy, etc.), promote broader use of these sources.

192.3. To liberalize electricity and natural gas sectors by establishing preconditions for efficiency increase in energy sector.

192.4. To implement European Union environmental directives in energy sector.

**193. Implementation measures of short-term objectives are:**

193.1. To specify and amend existing and to prepare new legal acts ensuring the expansion of production and use of local renewable and waste energy resources.

193.2. To prepare legal acts and technical documents, which are required to increase energy consumption efficiency.

193.3. To identify main development directions in heat supply sector.

193.4. To implement pollution emission monitoring in the largest thermoelectrical power plants and boiler houses.

*Agriculture*

194. **Long-term objectives** – to implement more environment friendly farming not only in ecological but also conventional farms, intensively develop ecological farms, supply high quality healthy food products and raw materials required for fuel production to internal and external markets, protect and rationally use material and spiritual rural heritage, while developing economically effective and competitive agriculture.

**195. The main long-term tasks are:**

195.1. To intensively develop ecological grain and livestock production, to ensure that production from ecological farms constitutes not less than 15% of all agricultural production and selling of certified ecological products in internal market – not less than 7% of total amount of food products.

195.2. To increase cultivation of rape and cereals for production of biological fuel (biodiesel, bioethanol) and biological oils and to ensure that their total yield is sufficient to produce not less than 15% of fuel required to satisfy transport demands.

195.3. To ensure high quality and safety of agricultural products with special emphasis to ecological products.

195.4. To increase ecological stability of agricultural territories, to reduce impact from erosion and threat to biological diversity.

195.5. To protect and rationally use material and spiritual rural heritage.

**196. Implementation measures of long-term objectives are:**

196.1. To economically support the development of ecological farms, encourage scientific research and performance of consulting institutions in order to increase efficiency of ecological farming, to promote use of products cultivated in ecological farms.

196.2. To introduce good agricultural practices in conventional farms, economically encourage minimal use of mineral fertilizers and pesticides, increase cultivation of crops for the production of biological fuel and development of alternative field production.

196.3. To cultivate meadow and water protection zones, increase Lithuanian forest area by 3 per cent at the expense of non-productive land.

196.4. To prepare and implement a programme on protection of rural cultural heritage and its careful use.

197. **Mid-term objectives** – reduce impact from agriculture to environment with special attention to ecologically sensitive areas, increase competitive ability of average and small farms, supply Lithuania with healthy food products of high quality.

198. **The main mid-term tasks are:**

198.1. To reduce impact from agriculture to ecologically sensitive areas, to increase their stability.

198.2. To increase possibilities for sale of ecological products inside and outside of the country and ensure that all ecological agricultural production is sold at prices corresponding to their actual values.

198.3. To increase competitive ability of average and small farms; to ensure environmentally friendly farming in these farms.

198.4. To reduce negative impact from organic and mineral fertilizers and pesticides to environment and quality of agricultural production; to ensure quality control of local and imported agricultural products.

199. **Implementation measures of mid-term objectives are:**

199.1. To implement ecological and environmentally friendly conventional farming methods in ecologically sensitive areas (the karst region, hilly regions), to develop anti-erosion agricultural measures, cultivate anti-erosion seedlings.

199.2. To establish a uniform, stable supply, quality control and trading system of ecological agricultural products.

199.3. To encourage re-orientation of average and small-size farms to non-traditional alternative branches of field and livestock production and more profitable and environmentally friendly farming methods.

199.4. To prepare and implement a programme encouraging a minimum use of mineral fertilizers and pesticides and their effective control by economic and legal measures, to strengthen a quality control infrastructure of food products and raw materials.

199.5. To economically encourage construction of manure storage facilities and reconstruction of current storage facilities in line with EU requirements.

200. **Short-term objectives** – to create such economic and legal framework which is favourable to the development of ecological farms, protection of biological and landscape



diversity and cultural heritage, production and utilization of renewable energy resources, cultivation of good quality and safe agricultural products; strengthen capacity to compete in market economy conditions.

**201. Short-term tasks are:**

201.1. To increase competitive ability of ecological farms, encourage their intensive development.

201.2. To promote cultivation of rape and cereals for production of biological fuel, development of alternative field and livestock production branches.

201.3. To create preconditions for more effective protection of biological and landscape diversity and cultural heritage as well as increase their abundance.

201.4. To increase capacity of farms to produce good quality and save products and adjust their work to conditions of open competition.

**202. Implementation measures of short-term objectives are:**

202.1. To prepare programmes and projects for the development of ecological farms, to establish necessary mechanisms for their support from the state and EU funds.

202.2. To prepare programmes on expansion of crop areas cultivated for production of biological fuel and re-orientation of farms to alternative farming, create and implement economic incentives for their implementation.

202.3. To train specialists in the field of ecological agriculture, alternative grain and livestock production, to expand consultation services and institutions, encourage their more active performance.

202.4. Implementing the programme for the increase of forest area in Lithuania, to carry out an inventory of poor-value and abandoned land, to prepare projects on field and water protection plantations.

### *Housing*

203. **Long-term objectives** - to create a modern housing infrastructure, good and hygienic household conditions, to increase housing energy efficiency, to ensure modern and quality public services available to everyone, to reduce housing negative impact to environment.

**204. The main long-term tasks are:**

204.1. To increase energy efficiency of housing by approximately two times and, according to this indicator, to meet the current average level of EU countries.

204.2. To increase energy supply and distribution efficiency, to reduce energy losses in networks.

204.3. To ensure that the amount of household waste grows at a significantly slower rate than the expenditure of inhabitants.

204.4. To create conditions for not less than 65% of household waste to be sorted and delivered for secondary use.

**205. Implementation measures of long-term objectives are:**

205.1. To renovate buildings improving their thermal behaviour (isolation of walls, replacement of windows).

205.2. To upgrade thermal units in houses, install heat control devices and meters in apartments, renovate heat supply networks.

205.3. To cooperating with the public, to encourage and expand the use of long-term, non-hazardous to environment and multiuse packaging, primary sorting of household waste, improvement of household waste collection system.

206. **Mid-term objectives** – to establish an effective housing modernisation and maintenance system; rationally use the state, municipal and EU support funds as well as private means for housing sector development and quality maintenance.

**207. The main mid-term tasks are:**

207.1. To establish a harmonized system for housing modernisation and maintenance involving coordination activities of state, municipal and private institutions.

207.2. To promote and encourage active public participation in housing management.

207.3. To ensure effective use of the state, municipal and private funds and control their use in housing sector development.

207.4. To ensure that 80% of all Lithuanian inhabitants are connected to the high quality public water supply networks and rural population has a possibility to use good quality drinking water.

207.5 To ensure timely implementation of EU assistance and its effective use in the development of housing infrastructure.

**208. Implementation measures of mid-term objectives are:**

208.1. To create effectively managed regional water and heat supply, sewage discharge and waste management systems with a uniform tariff policy.

208.2. To attract private capital and implement best available international experience in the field of water supply, sewage discharge and waste management systems and centralized heat supply companies.

208.3. To establish a network of institutions for technical energy certification of dwellings.

208.4. To implement energy saving measures of immediate necessity all over Lithuania in housing (modernisation of thermal units in buildings, renovation of wall and roof junctures, insulation of windows).

208.5. To prepare and start implementing investment projects on renewal housing infrastructure.

208.6. To expand and renovate water supply networks, to implement technical and institutional measures to supply rural inhabitants with healthy drinking water.

209. **Short-term objectives** – to create economic and legal preconditions promoting renovation of housing and energy saving, to promote renovation and effective maintenance of housing infrastructure.

**210. Short-term tasks are:**

210.1. To create legal and economic preconditions encouraging renovation and energy saving in housing.

210.2. To legitimate polluter pays principle in the sector of public services.

210.3. To establish economic mechanisms to encourage economic and ecological efficiency of public services and ensure their accessibility.

210.4. To improve legal regulation of housing sector maintenance.

210.5. To create legal preconditions for active public participation in solving of housing management problems.

**211. Implementation measures of short-term objectives are:**

211.1. To set up and legitimate quality standards for heat and water supply, waste water discharges, waste management and housing maintenance services.

211.2. To set up economic and legal mechanisms promoting the establishment of home owners associations in apartment buildings and more active public participation in solving problems related to household.

211.3. To establish an effective financial support system based on social groups of inhabitants for promotion of investment projects of energy saving in houses.

211.4. To establish and legitimate mandatory economic mechanisms for accumulation of finances from home owners required for maintenance of apartment buildings.

211.5. To develop administrative capacity of specialists in the field of housing maintenance.

*Tourism*

212. **Long-term objectives** – to develop tourism and recreation in parallel ensuring preservation of natural and cultural peculiarities of Lithuanian regions, minimization of negative impact to environment, positive economic and social changes in rural areas, and create favourable conditions to better know the country and form its positive image.

**213. The main long-term tasks are:**

213.1. To link tourism development with the knowledge in Lithuanian history, statehood, ethno culture, natural and cultural values, and form positive image of the state.

213.2. To expand a network of specialized recreational territories in natural environment; improve an infrastructure of services for holidaymakers and tourists providing inhabitants of rural regions with a possibility to have more job choices and steady income.

213.3. To strengthen a national recreation and tourism support system giving priority to the development of ecological, cognitive and remedial tourism, promoting this business in regions with different recreation potential, supporting projects, which create conditions for rational use of natural and cultural recreational resources, in prioritised way.

213.4. Encouraging tourism development, diversity of services and growth of employment rate in tourism sector, ensure that tourism forms not less than 8% of the country's GDP, and load on recreational territories does not exceed their carrying capacity.

**214. Implementation measures of long-term objectives are:**

214.1. To establish an integral infrastructure of recreation and tourism services fully meeting growing demands of local and incoming tourism without exceeding carrying capacity of territories.

214.2. To establish a national representative cultural tourism route promoting creation of new working places in this route and implementation of nature protection projects.

214.3. To implement projects on route networks of regional state parks in Aukštaitija, Dzūkija, Žemaitija and Pajūris.

214.4. To establish tourism and recreation centres in small towns with proper conditions.

214.5. To create a system of financial levers promoting development of tourism business and its infrastructure.

215. **Mid-term objectives** – to develop countryside tourism, promote leisure and tourism infrastructure development in rural areas, ensure protection and rational use of natural and cultural values.

**216. The main mid-term tasks are:**

216.1. Effectively using state, municipal and EU support to develop leisure and tourism potential in rural areas.

216.2. To secure more even distribution of tourism infrastructure in the country's territory; to seek effective protection and optimal use of natural and cultural recreation areas with respect to their carrying capacity.

216.3. To ensure broader use a potential of protected areas, first of all national and regional parks, in order to develop ecological education and promote natural and cultural values.

216.4. To promote Lithuanian recreational recourses and tourism possibilities within and outside the country; to improve information about national natural and cultural values and their protection methods.

216.5. To promote bicycling and inland water transport, in particular in recreational and protected areas.

**217. Implementation measures of mid-term objectives are:**

217.1. To prepare a national support programme and investment promotion system for countryside tourism development.

217.2. To prepare special plans and development programmes of major recreational territories of national and regional importance (Pajūrys, Vilnius-Trakai, Kaunas-Jurbarkas, Ignalina-Molėtai, etc.), to foresee complex protection measures of natural and cultural heritage protection measures.

217.3. To prepare a project on water tourism route in river Nemunas, and a programme of its revival; to organize a cruise route at the coast of the Baltic Sea along with the construction of yacht piers in Palanga and Šventoji.

217.4. To establish information and ecological education centres in protected areas, first of all, national parks, and, taking into account their carrying capacity, develop cognitive recreation and tourism.

217.5. To set-up regional tourism organizations and information centres providing more comprehensive information about history, natural and cultural values of Lithuania.

217.6. To finalize construction of bicycle tracks “Baltijos takas” and “Rytų Europos takas” of Eurovela system, to develop a network of bicycle tracks in national and regional parks.

218. **Short-term objectives** – to improve legislative basis in order to ensure favourable conditions for recreation and tourism business, ensure that recreation and tourism development is within the carrying capacity of territories and does not pose a threat to environment.

219. **Short-term tasks are:**

219.1. To develop possibilities for use of recreation and protected areas for leisure and tourism, taking into account their ecological sensitivity and recreational capacity.

219.2. To expand planning and design activities of recreational regions by preparing integrated projects for the main potential recreational regions with respect to their recreational capacity.

219.3. To develop recreation and tourism business capacity.

219.4. To improve and encourage treatment in resorts as one of the most perspective possibilities of tourism development and health improvement enabling to increase the employment rate and income of inhabitants of resort areas.

219.5. To limit motor transport traffic in recreational territories, to increase use of bicycles, horses and water transport.

220. **Implementation measures of short-term objectives are:**

220.1. To draft a law on Lithuanian recreational territories and necessary amendments and revisions of other legislation with special emphasis on consistency between tourism development and sustainable use of environment.

220.2. To prepare Rules on preparation of special planning documents for recreational territories with specific regulations for use of these territories.

220.3. To prepare programmes for the development of a network of biotransport roads and tracks in suburban zones, recreational and protected areas.

220.4. To prepare and legitimate regional regulations on use of recreational resources and methodics on assessment of recreational resources.

220.5. To prepare cognitive tours to foreign travel agencies and journalists around Lithuania; to introduce them to the most valuable natural and cultural resources and achievements of their protection.

220.6. To foresee a set of lectures on the importance of environmental protection and sustainable development methods and measures in training programmes for tourism and excursion guides.

### **Social Development**

221. In social sector strong emphasis is given to employment, poverty and social exclusion problems. Taking into account, that implementation of the Strategy is impossible without active public support and participation; strong consideration is also given in this Strategy to public education, including environmental education and promotion of environment friendly lifestyle. Increase of the role of scientific research and more effective use of research results for the implementation of the main sustainable development principles is discussed under the social sector.

#### *Employment*

222. **Long-term objectives** – while developing economy of the country and implementing economic reform and restructurization, to accelerate the development of economic factors stimulating growth of employment rate and reducing differences between regions, to increase flexibility of labour market, reduce unemployment rate, ensure competitive ability and mobility of labour force, create preconditions and conditions for achievement of high employment rate.

**223. The main long-term tasks are:**

223.1. To consistently implement an active employment and human resource development policy, ensure that employment rate is up to 70% and unemployment rate does not exceed 6-7%, i.e., according to these indicators, Lithuania meets the current average level of EU countries.

223.2. To ensure such labour force qualification, which meets demands of the labour market and creates conditions for strengthening of employment capacity.

223.3. To increase employment opportunities in problematic regions and reduce regional differences between the employment and unemployment rate.

**224. Implementation measures of long-term objectives are:**

224.1. To implement an active and purposeful labour market policy, to increase the efficiency of labour market institutions and expand participation of social partners.

224.2. To train the qualified labour force, capable to adjust to market changes, to improve systems of professional education and life-long learning.

224.3. To prepare and implement the national plans and regional programmes of increasing employment.

224.4. To improve an employment, and labour market management system.

225. **Mid-term objectives** – to consistently increase the employment rate, ensure conditions for full employment; improve employment quality and productivity; involve more people, facing problems of integration or having different social obstacles to work, into the labour market.

226. **The main mid-term tasks are:**

226.1. In order to prevent unemployment, to increase efficiency of the active labour market policy measures for the decrease of long-lasting and youth unemployment rate.

226.2. To create favourable conditions to move from illegal to legal work.

226.3. To create favourable conditions to start business; encourage businessmen to establish “better” working places (competitive, better conditions to improve qualification, good payment, etc.)

226.4. To create favourable conditions for older people to stay active in labour market.

226.5. To increase capability of the labour force to adjust to changes.

226.6. To create favourable conditions for life-long learning.

226.7. To improve integration of people with social exclusion and with different integration problems into the labour market.

226.8. To ensure good and safe working conditions in accordance with EU standards; to consistently follow the equal rights principle while engaging people to work and making payments.

226.9. To encourage integration of social exclusion groups into the labour market.

226.10. To decrease black employment rate.

226.11. To ensure the right tendency and magnitude of employment promotion measures that allow ensuring such payment, which does not humiliate peoples’ dignity.

227. **Implementation measures of mid-term objectives are:**

227.1. To create a labour force policy monitoring system, to improve data bases and information processing and analysis systems.

227.2. To create good and safe work conditions, which meet the EU standards.

227.3. To create a stable and reliable system of insurance from unemployment.

227.4. To form labour market accessible to everyone, ensure equal employment opportunities to women and men, and establish workplaces for disabled people and former prisoners.

227.5. With the help of tax policy and measures of social support to the elderly, to reduce motivation for illegal employment.

227.6. To create more favourable conditions for the work of private employment intermediation institutions.

228. **Short-term objectives** – to create economic, legal and institutional preconditions for promotion of employment, establishment of new workplaces, retraining of unemployed people and keeping qualification of employed labour force, to ensure minimum social security in case of unemployment.

229. **Short-term tasks are:**

229.1. To secure better flexibility and mobility of the labour market.

229.2. To form favorable economic conditions for establishment of new workplaces, to develop flexible forms for organization of work and payments (remote, amateur, agency work, etc.).

229.3. To increase opportunities for labour force re-training, promote life-long learning.

229.4. To reduce the pressure of direct and indirect taxation on working people, cost of labour force to employer and motivation for black employment.

229.5. To urgently resolve problems of long-lasting and youth unemployment.

229.6. To diminish regional employment differences.

**230. Implementation measures of short-term objectives are:**

230.1. To develop flexible forms of work organization and payment (remote, amateur, agency work, etc.).

230.2. To improve public information about possibilities and measures for increase of employment rate.

230.3. To prepare mid-term and long-term state and regional prognosis on labour market demands and labour market development.

230.4. To stimulate partners of labour market (employers, professional unions, municipal institutions, non-governmental organizations) to increase employment rate at the local level.

230.5. To improve performance of state and regional administrations and its coordination in implementation of the policy on increase of employment.

230.6. To improve management of labour market institutions directing them to increase of employment rate and closer cooperation with social partners.

*Poverty and Social Exclusion*

231. **Long-term objectives** – to secure that poor people and groups of social exclusion not only have an appropriate amount of material goods or social services but also possibilities to acquire proper education, receive good quality health care services, own a dwelling which meets social standards and have healthy work conditions, a possibility to choose and influence major decisions in life.

**232. The main long-term tasks are:**

232.1. To form and implement social policy based on social justice and solidarity principles.

232.2. To decrease social differentiation and poverty, to reduce urban and rural differences of poverty levels.

232.3. To overcome regional imbalances in terms of all social development aspects.

232.4. To increase a part of GDP for social security by about two times and, based on this indicator, meet the current average level of EU countries.



**233. Implementation measures of long-term objectives are:**

233.1. To implement a national social security policy ensuring social coverage of all country's population and divert social security from the main social risk factors.

233.2. To plan and implement poverty and social exclusion prevention measures.

233.3. To implement, constantly revise and ammend a Poverty Reduction Strategy of Lithuania prepared in 2000 following its implementation programme for 2002-2004 approved by the Governmental Resolution No. 1753 of November 7, 2002.

234. **Mid-term objectives** – to improve guarantees provided by a pension system, direct social support to those inhabitants who need it the most, ensure minimum economic safety to people of social exclusion groups, eliminate ultimate poverty.

**235. The main mid-term tasks are:**

235.1. To improve pension insurance by coordinating current financing (the state social insurance) and accumulative (pension fund) mechanisms.

235.2. To ensure such expedience and magnitude of social support measures which do not humilitate dignity of people receiving this support.

235.3. While income of people increases, to ensure universally accepted modern system of consumption.

235.4. To create conditions for supply of housing to people from social exclusion groups through the development of necessary legal, economic and administrative measures.

**236. Implementation measures of mid-term objectives are:**

236.1. To establish a poverty and social exclusion monitoring system, necessary data bases and information processing and analysis systems.

236.2. To finalize the social support reform in order to ensure support to those who need it the most.

236.3. To reform the pension system closely coordinating current financing (state social insurance) and accumulative (pension fund) mechanisms.

236.4. To create mechanisms for supply of housing on soft terms to people from social exclusion groups.

236.5. To expand a network of social institutions, train social workers.

237. **Short-term objectives** – to create economic and institutional preconditions in order to ensure more effective approach to poverty and social exclusion problems with special emphasis on integration of mostly vulnerable social groups into the society, raise the competence of social workers.

**238. Short-term tasks are:**

238.1. To assist employable people from social exclusion groups to return to economicly active jobs.

238.2. To put greater emphasis on integration of disabled, elderly people and former prisoners into the society.

238.3. To better coordinate efforts of state, municipal and non-governmental institutions in minimizing poverty and social exclusion.

238.4. To improve information about social support possibilities and limitations.

**239. Implementation measures of short-term objectives are:**

239.1. To improve a legal framework of social security.

239.2. To improve information of social exclusion groups about their social rights and implementation possibilities.

239.3. To more efficiently use non-governmental resources and capacity for the improvement of social support, to create favorable conditions for functioning of these non-governmental systems of social support.

239.4. To create more favorable conditions for social insurance to farmers and self-employed persons.

239.5. To analyze reasons of a deep poverty and implement measures for its urgent eradication.

*Public Health*

240. **Long-term objectives** – to reduce risk to human health, protect and improve health of Lithuanian inhabitants, ensure high quality health care services, ensure health equity and improvement of quality of life.

**241. Main long-term tasks are:**

241.1. To reduce environmental hazard risk posed to human health.

241.2. To increase the average life expectancy.

241.3. To perform an active prevention of communicable and non-communicable diseases.

241.4. To prevent addictive disorders.

241.5. To ensure safe, good quality and effective personal and public health care services according to European Union requirements.

241.6. To form active society responsible for its health.

**242. Implementation measures of long-term objectives are:**

242.1. To implement environmental pollution reduction measures, substitute non-hazardous materials for hazardous to human health materials in production and household.

242.2. To carry out human health risk assessment of living and working environment risk factors.

242.3. To develop capacities of social risk and health risk groups to adapt to the environment by educating how to overcome health problems on their own.

242.4. To improve an early identification and control system of non-communicable diseases and their risk factors.

242.5. To prepare and implement integrated programmes on non-communicable diseases and traumas prevention.

242.6. To prepare and constantly implement prevention and control programmes on communicable diseases.

242.7. To prepare prevention programmes on drug addiction at schools, to expand long-term social and medical rehabilitation of drug abusers and people infected with HIV. To participate in the international drug addiction prevention programmes of European Union.

243. **Mid-term objectives** – to develop a modern and effective public health care system based on co-operation among social partners and ensure healthy lifestyle, healthy environment, accessible and proper health care.

244. **The main mid-term tasks are:**

244.1. To develop public health conception by integrating personal and public health systems.

244.2. To improve the prevention of health risk factors.

244.3. To develop sustainable system for maintenance and improvement of healthy living environment including housing.

244.4. To form, based on health surveys, an understanding of politicians, different specialists and the public about potential impact of environmental and economic activities on human health.

244.5. To promote active public participation in public and environmental health decision-making and implementation processes.

245. **Implementation measures of mid-term objectives are:**

245.1. To implement economic incentives in the field of prevention diseases.

245.2. To implement the State Programme on Trauma Prevention for 2000-2010 approved by the Governmental Order No, 423 on April 14, 2000.

245.3. To implement the State Tobacco Control Programme approved by the Governmental Order No. 954 on July 30, 1998 and the State Alcohol Control Programme approved by the Governmental Order No, 212 on February 25, 1999.

245.4. To prepare and implement a National Programme on Drug Control and Prevention of Drug Addiction, AIDS Prevention and Control Programme.

245.5 To implement National Mental Diseases Prevention Programme, approved by the Governmental Order No. 1441 on December 20, 1999.

245.6. To promote healthy lifestyle, increase physical activity of children, youth and other age groups.

245.7. To prepare and implement a revised National Environmental Health Action Programme.

245.8. To promote public health policy, its objectives and measures.

245.9. To inform the public and politicians about health impacts and risks of environmental factors.

245.10. To encourage and support initiatives of the society (community) in the strengthening of public health.

246. **Short-term objectives** – to establish economic, legal and organizational preconditions for public health promotion.

247. **Short-term tasks are:**

- 247.1. To form a legal system of public health care.
- 247.2. To improve public health management based on health information and knowledge.
- 247.3. To ensure quick response to public health threats.
- 247.4. To strengthen health and perform prevention of diseases giving priority to the improvement of children health.
- 247.5. To improve professional skills of civil servants and specialists.
- 248. Implementation measures of short-term objectives are:**
- 248.1. To develop a public health care legal base in accordance with European Union requirements.
- 248.2. To establish preconditions for an integrated environment and health information system.
- 248.3. To develop an information system for monitoring of the health status of inhabitants and health care system.
- 248.4. To investigate effectiveness of human health promotion.
- 248.5. To perform scientific research in the field of health impact of physical, social and economic environment.
- 248.6. To introduce a computerised registration and monitoring system for communicable diseases and their causes.
- 248.7. To implement the Programme of Epidemiological Care and Control of Communicable Diseases for 2003-2006 approved by the Order No. V-65 dated February 5, 2003 of the Minister of Health.
- 248.8. To implement the National Environmental Health Action Programme for 2003-2006.
- 248.9. To prepare a National Strategy and an Action Plan on Food Safety, Quality and Nutrition Improvement.
- 248.10. To regularly inform the public about public health problems, methods for health promotion and disease prevention, to promote knowledge about healthy lifestyle and prevention of diseases.
- 248.11. To establish a system of training and re-qualification of public health specialists.
- 248.12. To integrate measures for children health promotion into the on-going public health programmes; to prepare and implement special programmes for the improvement of children health.

*Education and science*

- 249. **Long-term objectives** – to educate independent, active and responsible members of society, develop the intellectual potential of the society so that knowledge and science may

become a principal force ensuring sustainable implementation of economic, social and environmental objectives.

**250. The main long-term tasks are:**

250.1. To ensure accessibility to various levels of education and ensure that 95% of Lithuanian children acquire quality primary education, 95% of pupils graduated from primary school acquire secondary education and a vocational qualification which is in demand in the labour market, while 60% of Lithuanian young people acquire tertiary education.

250.2. To create a continually learning society (life-long learning) and accessibility to continuing education for those who decide to change or improve their qualification.

250.3. To train highly qualified specialists in different fields who are well aware of Lithuanian, EU and global development tendencies, and ensure that these specialists are capable of competing in internal and international labour markets as well as contributing to social changes.

250.4. To encourage the promotion of sustainable development ideas at all education levels.

250.5. To ensure systematic development of science and technologies creating preconditions for development of an information society based on science, advanced and environmentally-friendly technologies and innovations.

**251. Implementation measures of long-term objectives are:**

251.1. To regulate principles and objectives of teaching appropriate to sustainable development at different levels of education legislation, and seek that education encourages development of an information society.

251.2. To regularly revise and renew education programs at different levels taking into account national priorities and the objectives of eurointegration and globalization processes.

251.3. To prepare and implement teacher education programmes which integrate sustainable development issues and are based on current science and research.

251.4. To develop and implement methods of active learning, promote integrated learning and interdisciplinary studies, based on actual economic, social and environmental problems.

251.5. To carry out scientific research in education content and methods and monitor the course of “education for sustainable development”.

251.6. To enhance flexible forms and methods of study that provide working people the possibility to reach and pursue all levels of education (evening classes, distance learning, non-consecutive studies, intensive studies, extra-departmental post-graduate studies, etc.).

251.7. To provide access to formal and non-formal life-long learning to all members of society.

251.8. To monitor and assure the quality of studies, improve regulation on quality assessment with reference to sustainable development needs of society and changes in the labour market.

251.9. To enhance scientific research and co-ordination of development and implementation of advanced and environment-friendly technologies, more effective use of energy and other natural resources.

251.10. To pursue research on national strategic development, analyze and assess on-going changes, foresee sustainable development trends.

252. **Mid-term objectives** – to ensure rapid development of education, science and technologies, to ensure that education, science and technologies increase the international competitive ability of Lithuania in all fields of life and encourage Lithuania's sustainable development.

253. **The main mid-term tasks are:**

253.1. To optimize secondary school mapping and expand the network of institutions of higher education, to strengthen articulation between secondary and higher education schools.

253.2. To ensure that all teachers have adequate knowledge of sustainable development.

253.3. To encourage cooperation between science, technology and business institutions in the development of advanced and environmentally-friendly technologies.

253.4. To ensure integration of Lithuanian higher education institutions into a joint system of European Union higher education institutions.

253.5. To seek that knowledge and science become important factors which help to ensure rapid economic and social development, effective use of natural resources, a clean and healthy environment, advance the creation of a knowledge-based society.

253.6. To accelerate integration of Lithuanian science and technology development institutions into the EU scientific research and technology development.

253.7. To enhance the efficiency of scientific research and international competitive ability.

253.8. To effectively modernize the education and research infrastructure, increase energy efficiency of buildings, using national, municipal and EU financing.

254. **Implementation measures of mid-term objectives are:**

254.1. To reform the network of education institutions.

254.2. To substitute active education methods based on self-sufficiency, action and responsibility for traditional methods of passive education.

254.3. To increase participation in international scientific and educational programmes, and scientific research and advanced technology development programmes, through funding and administrative means.

254.4. To prepare and implement investment projects in the renewal and improvement of provision for scientific research.

254.5. To increase the level of computerization in secondary and higher education, improve learning methods.

254.6. To establish business incubators, technology centers and parks.

254.7. To perform scientific research for the purpose of sustainable development.

254.8. To renovate and reconstruct secondary and higher education school buildings and scientific institutions.

255. **Short-term objectives** – to create economic and legislative preconditions for rapid reform and development of education and science, to strengthen the influence of education and science on sustainable development of society, to improve environmental education of the public.

256. **Short-term tasks are:**

256.1. To prepare an Implementation Programme for the National Education Strategy for 2003-2012 adopted by the Resolution No. IX-1700 dated July 4, 2003 of Seimas of the Republic of Lithuania.

256.2. To improve tertiary education programs and the regulation of their accreditation.

256.3. To encourage the integration of studies and science.

256.4. To prepare and implement a system for the assessment and promotion of scientific research.

256.5. To more closely link the content of education and studies with sustainable development ideas, improve environmental education of the public.

256.6. To create economic and technical preconditions for establishment of technological centers and parks.

256.7. To create conditions for growth of non-budgetary financing of science and technology development.

257. **Implementation measures of short-term objectives are:**

257.1. To clarify education, science and technology development trends, continue the reform of the education and science system, to prepare and adopt new regulations in line with education and science legislation.

257.2. To prepare and begin implementing the national education programme of sustainable development which meets general provisions of the project Baltic 21\*.

257.3. To improve teachers' training, qualification and supplementary qualification programmes, teach them about sustainable development of society and creation of knowledge-based society.

257.4. To prepare study programmes in line with international requirements, implement the EU system of study credits.

257.5. To prepare and begin implementing a Lithuanian business incubator, a programme for the development of a network of science and technology parks, to generate material resources for their establishment.

257.6. To create legislative and economic preconditions encouraging use of private resources in the development of science and technologies.

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\* Project Baltic 21 – is a project on sustainable development of the Baltic Sea region approved by the Council of the Baltic Sea States in 1998.

257.7. To prepare and start implementing monitoring of science and technology development institutions and establish a system of indicators showing their efficiency.

*Preservation of Cultural Identity*

258. **Long-term objectives** – to preserve and revive Lithuanian cultural identity integrating inherited Baltic and general European cultural values, which reflect identity and peculiarities of ethnic regions, to ensure its sustainability, spreading and competitive ability in modern environment of the world cultures, preserve Lithuanian language, Lithuanian ethnic and regional culture, Lithuanian historical cultural heritage and cultural distinction of ethnic communities living in Lithuania.

259. **The main long-term tasks are:**

259.1. To direct perception of Lithuanian citizens about values towards Lithuanian culture, help them to recognize Lithuanian cultural identity and distinction.

259.2. To educate sustainable rural community capable of preserving the material and spiritual heritage of Lithuanian countryside based on the national cultural values.

259.3. To ensure Lithuanian language preservation and continuity.

259.4. To preserve ethnic culture and local traditions, protect cultural heritage and its values.

259.5. To support efforts of foreign Lithuanian communities in preserving national identity.

259.6. To support culture and education of ethnic communities living in Lithuania.

260. **Implementation measures of long-term objectives are:**

260.1. To update a legal base required for protection of Lithuanian language, to implement programmes of research and preservation of the Lithuanian language.

260.2. To prepare and implement long-term programmes on the development of ethnic culture.

260.3. To implement the most valuable measures enhancing recognition of cultural heritage importance, to improve an inventory and protection of cultural heritage values.

260.4. To implement support programmes to foreign Lithuanian communities and national minorities in Lithuania.

260.5. To plan and implement monitoring of protected cultural values.

260.6. To enhance public education by including knowledge about cultural values and their protection methods into school, college, and university programmes.

260.7. To prepare and implement a programme of the revival and development of ethnic regions.

261. **Mid-term objectives** – to revive cultural heritage, strengthen direct responsibility of state institutions and the public for protection of cultural heritage.

262. **The main mid-term tasks are:**



262.1. To ensure that cultural heritage protection and management is considered as an integral part of all national strategies, programmes and territorial planning documents.

262.2. To encourage as active public participation as possible in the protection of peculiarities of Lithuania and its ethnic regions.

262.3. To ensure that use of cultural values is directed towards growth of economy, increase of employment and improvement of environmental quality in the regions.

262.4. To improve a register of cultural values including it into a register of cultural heritage sites and territories and establishing a territorial and aksiological system of protected cultural values.

262.5. To systematically analyse the state of cultural identity and improve interaction of culture institutions in the field of cultural heritage preservation and identity strengthening.

262.6. To develop a regional culture policy, protect regional distinctions of cultural heritage.

**263. Implementation measures of mid-term objectives are:**

263.1. To include preservation of cultural identity and cultural heritage values as one of the most important sustainable development conditions into the rules and methodology for preparation of territorial planning documents and long-term strategies.

263.2. To inform the public about remaining cultural values, ethnic peculiarities, local traditions through the national and local massmedia, in order to have broader public and, in particular, youth involvement into their protection and preservation.

263.3. To adopt legal acts promoting investments for preservation and strengthening of cultural identity.

263.4. To prepare and implement long-term projects in line with the tourism and recreation development strategy required to maintain continuity of peculiarities and local traditions of Lithuanian ethnographic regions.

263.5. To prepare specific regional cultural heritage protection and management programmes as an integral part of regional development programmes.

263.6. To arrange a cultural heritage inventory, prepare a register of Lithuanian national and local cultural values.

264. **Short-term objectives** – to link, by legal and institutional means, Lithuanian cultural identity preservation and strengthening policy with formation of information and knowledge-based society, changes of economy development policy and eurointegration processes.

**265. The main short-term tasks are:**

265.1. To establish a linkage between protection of cultural heritage values and nature protection concerns in order to maintain and enshrine general peculiarity and quality of landscape diversity.

265.2. To ensure that priorities based on aksiology and a system of values are defined in heritage protection.

265.3. To develop forms of cultural heritage territorial protection identical to protected natural values, to ensure protection and revival of rural cultural heritage.

265.4. To establish a linkage between strengthening of Lithuanian cultural identity and development of information and knowledge-based society.

265.5. With a help of economic and other means of integration into the society's life, to closer link protection, exposure of cultural heritage and traditions with tourism and recreation development plans.

265.6. To create legal and economic conditions to ensure proper performance of cultural institutions, conservation and restoration of cultural values, to harmonize cultural reform objectives, cultural heritage protection and control system with EU objectives and requirements.

**266. Implementation measures of short-term objectives are:**

266.1. To include an integrated protection of natural and cultural heritage values into the environmental protection programmes, provisions and regulations of protected areas.

266.2. To introduce a programme of the Lithuanian language information system.

266.3. To prepare methodical provisions for the accurate definition of cultural values system based on axiology and priorities for protection of cultural values. To renovate buildings of cultural institutions, implement measures of conservation and restoration of cultural values.

266.4. To prepare cultural heritage legislation in line with EU requirements, to harmonize laws related with the cultural heritage protection.

266.5. To specify general provisions of cultural policy, prepare long-term integrated strategy of cultural and natural heritage protection and management.

266.6. To create an investment system for cultural heritage protection.

266.7. To plan measures for revival and protection of cultural heritage and rural traditions while preparing rural development programmes.

## **Regional Development**

267. **Long-term objectives** – to diminish regional disproportions of life quality and ensure territorially differentiated regional development of the country in order to thoroughly use regional distinctions and preserve their peculiarities.

**268. The main long-term tasks are:**

268.1. To reduce differences of major social, economic and life quality parameters between regions of the country, special attention giving to the development of problematic territories.

268.2. To ensure territorially differentiated regional development of the country, taking into account peculiarities of natural conditions, current economic, social and environmental state of regions.

268.3. To form and enforce a hierarchic policentral network of Lithuanian inhabited areas, to preserve and enshrine regional peculiarity of inhabited areas, to rationally regulate concentration-depopulation tendencies of inhabitants.

268.4. To ensure good environmental quality meeting the EU requirements.

268.5. To create favorable conditions for the development of self-governance and increase of human resource competence in the regions.

268.6. To promote sustainable development of rural communities, economic growth of the countryside, employment of people and preservation of rural cultural traditions.

**269. Implementation measures of long-term objectives are:**

269.1. To implement regional development plans supporting the development of problematic territories.

269.2. To prepare and periodically revise regional development plans and municipal strategic development plans based on sustainable development principles.

269.3. To prepare and implement regional programmes for increase of employment rate and reduction of poverty.

269.4. To implement regional territorial planning measures defined in the Master Plan of the Republic of Lithuania.

269.5. To establish regional waste management systems, to implement effective environmental protection measures considering specifics and most important environmental problems of regions.

269.6. To provide more power to regional and municipal authorities, prepare and implement county and municipal staff training programmes.

269.7. To support re-orientation of rural population to non-traditional activities and development of ecological agriculture.

**270. Mid-term objectives** – to implement active regional policy based on sustainable development principles, optimize regional division of the country, strengthen regional and municipal institutions, accelerate solution of economic and social development concerns of problematic territories, and prevent depopulation processes.

**271. The main mid-term tasks are:**

271.1. To strengthen weak links of inhabited area network, to develop a network of state and municipal institutions, form optimal network of inhabited areas and regions.

271.2. To accelerate strengthening of economic and social potential of problematic territories, to improve life quality in these territories.

271.3. To rationally use internal territorial reserves of inhabited areas saving resources of natural and cultural environment.

271.4. To ensure favorable conditions for investments into the economy of least developed regions.

271.5. To strengthen the management of economic and social processes in county administrations and municipalities.

271.6. To encourage more active public participation in regional and municipal management, to develop information infrastructure, create knowledge-based society.

**272. Implementation measures of mid-term objectives are:**

272.1. To finalize territorial-administrative reform of Lithuania.

272.2. To prepare and implement programmes on development of problematic territories.

272.3. To establish business information centers in least developed regions, to promote business incubators, establishment of science and technology parks.

272.4. To effectively administer and implement the EU support funds.

272.5. To establish a system of permanent training of specialists from regional and municipal institutions.

272.6. To develop a network of regional scientific and education institutions, implement advanced information and production technologies.

273. **Short-term objectives** – to establish legal and institutional basis necessary to consider sustainable development tasks and implement a reform of territorial administrative units, to plan effective use of EU support funds, develop territorial planning.

**274. Short-term tasks are:**

274.1. To strengthen administrative capacities of regional institutions in the field of sustainable development, increase their independence.

274.2. To encourage timely preparation of projects in priority fields of regional development for financing from EU support funds.

274.3. To ensure rational use of regional local natural resources.

274.4. To encourage territorial planning of least developed and specific regions of the country using integrated approach to economic, social development and environmental targets.

274.5. To promote preparation and implementation of Local Agenda 21 in municipalities, encourage their cooperation.

274.6. To strengthen cooperation of all state institutions responsible for sustainable development of regions.

**275. Implementation measures of short-term objectives are:**

275.1. To finalize preparation of regional Master Plans, to define priority development tendencies of problematic territories.

275.2. To organize training of county and municipal civil servants employed on a contract basis, strengthen their capacity in preparation of plans, programmes and projects for implementation of EU support funds.

275.3. To provide methodic and financial support for preparation and implementation of Local Agenda 21.

## VI. CONCLUDING PROVISIONS

## **Strategy Implementation and Control**

276. The main objectives and tasks of different terms are formed and most important implementation measures in various sectors (environmental protection, economic development, social development) and their branches are planned in this Strategy. First of all, seeking to successfully implement this Strategy, national programmes have to be specified and amended with measures included in the Strategy. The planned measures for regional sustainable development have to be included into regional development plans. In addition, an effective monitoring system of the Strategy's implementation, providing an opportunity to regularly assess achieved progress and identify obstacles and problems, has to be created. Based on monitoring results supplementary measures to ensure implementation of the strategic objectives have to be planned and implemented. Considering on-going external and internal changes, the Strategy has to be regularly revised and amended.

277. Seeking to ensure coordination of sustainable development process at the highest level, a National Commission of Sustainable Development chaired by Prime Minister of the Republic of Lithuania was formed in 2000 in Lithuania. The Commission is composed from representatives of ministries, the President's Office, other institutions and public organizations.

278. Special scientific institutions and scientific subdivisions are working in many countries seeking to monitor the implementation of the Strategy and perform more thorough analysis of on-going changes and causalities. Based on performed analysis, they provide state institutions with suggestions and recommendations on improvement of the Strategy and its implementation; participate in preparation of sustainable development reports and other official documents. The establishment of such a scientific subdivision (a group of scientists) in Lithuania is also recommended.

279. Biennial sustainable development reports shall be discussed in the National Commission on Sustainable Development and submitted to the United Nations and EU institutions as well as presented to the public.

280. The Statistics Department at the Government of the Republic of Lithuania shall publish the main sustainable development indicators in the Statistic Yearbook of Lithuania and, depending on specifics, in other publications in accordance with the set order.

## **Sustainable Development Indicators**

281. In order to effectively monitor the implementation of the Strategy, rather simple quantitative sustainable development indicators have to be defined. These indicators must be directly linked with objectives and targets outlined in the Strategy and provide a possibility for regular assessment of achieved progress.

282. A list of national sustainable development indicators provided below was prepared taking into account indicators recommended in EU documents and the national specifics of Lithuania.

283. Today different classifications of sustainable development indicators are proposed. In this Strategy they are grouped according to three main sustainable development sectors: environmental quality, economic development and social development. Such type of grouping is rather conditional as quite many of presented indicators are cross-sectorial describing an interaction between sectors. Regional development indicators are specified in a separate group. They reflect situation in smaller territorial administrative units.

**284. State of environment:**

284.1. *Emission of greenhouse gases in CO<sub>2</sub> equivalent*; total (mln. t.) and per area unit (km<sup>2</sup>) as well as per GDP unit (in total and according to the branches of economic activities).

284.2. *Emission of acidifying compounds (SO<sub>2</sub>, NO<sub>x</sub>), ground level ozone precursors (NO<sub>2</sub>, non-methane volatile organic compounds)*; total (thousand t.) and per area unit (km<sup>2</sup>) as well as per GDP unit (in total and according to economic activities).

284.3. *Urban air quality*; number of days per year when concentrations of nitrogen dioxide, solid particles and ground level ozone do not exceed allowable limits.

284.4. *Amount of discharged wastewater (thousand t.), a part of wastewater treated according to EU standards (in percents)*.

284.5. *Quality of surface water bodies*; concentrations of organic materials, nitrogen and phosphorus compounds in rivers, lakes, Curonian Lagoon, the Baltic Sea coastal zone.

284.6. *Groundwater quality*; concentrations of nitrates and ammonia (mg/l).

284.7. *Inflow of organic material, nitrogen and phosphorus compounds into the Baltic Sea*; thousand t.

284.8. *Coverage of protected areas*; thousand ha and % from total area of cultivated land.

284.9. *Forest area*; thousand ha and % from total area of Lithuania, ha per capita.

284.10. *Coverage of re-cultivated areas*; thousand ha and % from total area of land necessary to re-cultivate.

284.11. *Area of eroded land*; thousand ha and % from area of agricultural land.

284.12. *Amount of household waste*; total (thousand t.), kg per capita and ratio with average expenditures of consumption.

284.13. *Amount of sorted household waste during the primary sorting*; thousand t. and % from total amount of household waste.

284.14. *Amount of industrial waste*; total (thousand t.) and per GDP unit (in total and according to the branches of economic activities).

284.15. *Non-hazardous waste recycling intensity*; amount in thousand tons of recycled paper, glass, plastic and metal waste, and % from total amount of accumulated waste.

284.16. *Amount of biodegradable waste disposed in landfills*; thousand t. and % from total amount of biodegradable waste.

284.17. *Amount of hazardous waste*; total (thousand t.) and per GDP unit (in total and according to branches of economic activities).

284.18. *Public waste management service supply*; % from total number of population.

**285. Economic development:**

285.1. *Gross domestic product at comparative prices*; mill. Lt; *GDP increase*, in percents (in total and according to branches of economic activities).

285.2. *GDP per capita*; Lt.

285.3. *Amount of final energy consumed in production*; total (thousand tons by oil equivalent) and per GDP unit (in total and according to branches of economic activities).

285.4. *Amount of water consumed in production*; total (thousand t.) and per GDP unit (in total and according to branches of economic activities).

285.5. *Distribution of cargo and passenger transfers according to modes of transport*; thousand tone kilometres, thousand passenger kilometres and in percents.

285.6. *Investments into the development of different modes of transport*; mill. t. and % according to modes of transport.

285.7. *A part of biofuel in total amount of fuel consumed in transport sector*; thousand t and %.

285.8. *Density of motor vehicles*; number per 1000 inhabitants.

285.9. *Density of cars*; number per 1000 inhabitants.

285.10. *Number of cars older than 10 years*; %.

285.11. *Number of road accidents per year*.

285.12. *Road network*; km of roads per 100 km<sup>2</sup>.

285.13. *Railway network*; km of railway per 100 km<sup>2</sup>.

285.14. *Number of enterprises where cleaner production methods are introduced*; units and a part of total number of enterprises in percents.

285.15. *Number of factories certified according to ISO 9000*; units and a part of total number of factories in percents.

285.16. *Number of factories certified according to ISO 14001*; units and a part of total number of factories in percents.

285.17. *Production based on advanced technologies*; % from GDP produced in industrial sector.

285.18. *Part of renewable energy in total primary energy consumption*; %.

285.19. *Part of electricity produced from renewable energy sources in total electricity consumption*, %.

285.20. *Amount of electricity produced in combined cycle regime*; %.

285.21. *Area of crops for production of biofuel*; thousand ha and % from total area of farming land.

285.22. *Area of ecological farms*; thousand ha and % from total agricultural land.

285.23. *Use of pesticides*; total amount according to active substance and kg/ha.

285.24. *Use of mineral fertilizers*; total amount according to active substance and kg/ha (in total and according to substances (NPK))

285.25. *Amount of water consumed in housing*; total (thousand t) and liters per inhabitant per day.

285.26. *Occupancy of public drinking water supply network*; a part of inhabitants supplied with drinking water from public drinking water supply network in percents.

285.27. *Occupancy of public sewage collection network*; a part of inhabitants connected to public sewage collection system in percents.

285.28. *Amount of heat consumed in housing*; mill. t. by oil equivalent.

285.29. *Part of household expenditures for utility charges*; % from average household income.

**286. Social development:**

286.1. *Economic activity and employment rate*; % from employable people.

286.2. *Unemployment and long-term unemployment rate*; % from labour force.

286.3. *Rate of expenditures for social security*; % from GDP.

286.4. *Poverty rate*; number of people in percents living below the poverty level.

286.5. *Indicator of inequality of people income*; income differentiation coefficient.

286.6. *Average life expectancy*; years (in total and according to genders).

286.7. *Growth of population*; %.

286.8. *Mortality rate from respiratory system diseases*, per 100000 inhabitants.

286.9. *Mortality rate from circulatory system diseases*, per 100000 inhabitants.

286.10. *Mortality in transport accidents*, per 100000 inhabitants.

286.11. *Mortality of newborns up to 1 year age*; number per 1000 newborns in given year.

286.12. *Average living space per capita*, m<sup>2</sup>.

286.13. *Proportion of population living in housing of inadequate quality*; %.

286.14. *Proportion of population incessantly supplied with safe drinking water*; %.

286.15. *Proportion of population drinking inadequate quality drinking water*; %.

286.16. *Mortality from accidents at work*; number of people killed per year.

286.17. *Allocations to education and science*; part of GDP in percents.

286.18. *Allocations to culture*; part of GDP in percents.

286.19. *Investments into science and technology development*; mill. Lt.

286.20. *Number of students*; total number of graduated students in given year and their part from young people of that age in percents.

286.21. *Number of pupils at secondary schools*; total number of pupils graduated in given year and their part from people of that age in percents.

286.22. *Number of pupils at vocational schools*; total number of pupils graduated in given year and their part from people of that age in percents.

**287. Regional development:**



- 287.1. *GDP of a region per capita and its ratio with the national average; %.*
- 287.2. *Foreign investment; mill Lt and a part from total foreign investments in the country in percents.*
- 287.3. *Part of employable population; % and ratio with average of the country.*
- 287.4. *Unemployment rate; % and ratio with average of the country.*
- 287.5. *Part of people living below poverty level; % and ratio with average of the country.*
- 287.6. *Emission of pollutants in the region; t/km<sup>2</sup> and ratio with the national indicator.*
- 287.7. *Forestry area in the region; %.*
- 287.8. *Number of municipalities where process of Local Agenda 21 has been initiated; units and a part from total number of municipalities in percents.*
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