

FINNISH GOVERNMENT PROGRAMME FOR SUSTAINABLE DEVELOPMENT
Council of state Decision-in-Principle on the promotion of ecological sustainability

1. Finnish Government framework policy on sustainable development
2. Strategic sectoral objectives and lines of action
 - 2.1 Finland's role in international cooperation
 - 2.2 Products, production and consumption
 - 2.3. Energy economy
 - 2.4 Regional structure, urban structure and transport
 - 2.5 Rural areas and use of renewable resources
 - 2.6 Research and education
3. Programme implementation, monitoring, and assessing the progress of sustainable development
 - 3.1 Implementation of the programme
 - 3.2 Monitoring the programme
 - 3.3 Assessing the progress of sustainable development

COUNCIL OF STATE DECISION-IN-PRINCIPLE ON THE PROMOTION OF ECOLOGICAL SUSTAINABILITY

Following deliberations in informal evening sessions of Cabinet and review by the Cabinet Finance Committee, the Council of State has made a Decision-in-Principle concerning the preparation and implementation of the following measures to promote ecological sustainability.

The Decision-in-Principle has three parts. The first part describes the Government's framework policy for the promotion of ecological sustainability and the economic, social and cultural preconditions for achieving this end.

The second part defines the strategic objectives and lines of action for key sectors of sustainable development. These sectors were selected with an emphasis on ecological sustainability.

The third part deals with the implementation and monitoring of the programme and methods of assessing the progress of sustainable development.

The Decision-in-Principle was formulated on the premise that no separate appropriations or additional funding from the State Budget will be required for the implementation of the programme.

1. FINNISH GOVERNMENT FRAMEWORK POLICY ON SUSTAINABLE DEVELOPMENT

The Government's programme for sustainable development is designed to promote: A) ecological sustainability and B) the economic and C) social and cultural preconditions for achieving this end.

A. With the goal of promoting ecological sustainability, the Finnish Government will:

1. strive to slow down climate change in all sectors and spheres of activity;
2. promote the use of energy sources which contribute to the reduction of emissions and increase efficiency in the production and use of energy;
3. promote changes in production and consumption patterns as well as minimize the exploitation of nonrenewable resources;
4. endeavour to preserve biological diversity and safeguard the generative capacity of renewable resources, such as forests and land resources;
5. safeguard the present high standard of environmental protection and environmental health in Finland;
6. exert influence so that the limits of ecological sustainability are not exceeded in the long term.

B. With the aim of establishing the economic preconditions for ecological sustainability, the Government will:

1. promote stable and balanced economic growth both in quality and in content, creating secure prospects for future generations;
2. promote economic activity that increases financial and human capital while simultaneously safeguarding natural capital;
3. promote voluntary, market-driven instruments that improve the ecological sustainability of products and production methods;
4. improve consumers' opportunities for selecting eco-friendly products and promote more diverse commercial utilization of renewable resources;
5. support the research, usage and commercial applications of environmentally sound technology;
6. modify taxation in a direction that supports employment and reduces environmental loads.

C. With the aim of establishing the social and cultural preconditions for ecological sustainability, the Government will:

1. strengthen the joint learning and innovative processes of different social actors, thereby augmenting Finland's capacity for meeting the challenge of sustainable development;
2. promote public initiative and participation and the opportunity for the public to influence issues and support local projects for sustainable development;
3. promote general welfare, with special attention to employment, prevention of social exclusion and the living conditions of the elderly;
4. strengthen the knowledge base, expertise and skills needed for sustainability;
5. improve the health, amenity and social viability of occupational, residential and living environments and advance the health and physical fitness of the general population;
6. safeguard cultural diversity, cultural heritage and cultural identity.

2. STRATEGIC SECTORAL OBJECTIVES AND LINES OF ACTION

2.1 FINLAND'S ROLE IN INTERNATIONAL COOPERATION

Strategic objectives

Sustainable development goals will acquire heightened importance in global cooperation, bilateral cooperation, in the work of international organizations and in Finland's relations with the developing countries.

Key environmental issues will be regulated by the provisions of international conventions.

The balanced development of the European Union and measures taken by the EU will help Finland to attain its sustainable development objectives.

EU enlargement, the EU's Northern Dimension and cooperation between nations surrounding the Baltic Sea will also help to promote stable, sustainable development in Finland's neighbouring areas.

Lines of action:

1. Sustainable development and the consolidation of environmental institutions will be supported in conjunction with UN reforms.
2. International conventions supporting sustainable development and environmental protection will be implemented diligently.
3. Negotiations on international conventions on sustainable forestry, chemicals supervision and biosafety will be promoted.
4. The integration of cross-border investment, trade and environmental policy in a manner that is mutually supportive and favourable to sustainable development will be promoted.
5. Sound administration of health and environmental affairs and stable social and economic development will be promoted in the developing countries and in Finland's neighbouring areas.
6. Finland will take an active role in the European Union in the promotion of sustainable economic development, employment, quality of life and environmental protection, in accordance with the objectives

outlined by Finland concerning the Agenda 2000 proposal and the aims of the Treaty of Amsterdam.

7. Finland will support the development of the European Union's Northern Dimension, with the aim of promoting the sustainable use of natural resources, reducing environmental loads and improving nuclear safety and the environmental sustainability of energy supply networks and transport infrastructure.

8. Finland will support the consolidation of the European Union's leading position in efforts to solve global environmental problems and will strive to place a greater emphasis on environmental issues in the Community's development cooperation and its relations with third countries.

9. Funding will be allocated for the reduction of transboundary pollution in Finland's neighbouring areas and emissions into the Baltic Sea, and for the advancement of related administration and legislation.

10. Finland will work towards achieving the objectives of the Nordic Strategy for the Environment 1996-2000, with an emphasis on sectoral cooperation, cooperation with neighbouring areas, and influential participation in the international arena, particularly in the EU.

11. Finland will continue to participate in Europe-wide cooperation aimed at supporting sustainable development.

2.2 PRODUCTS, PRODUCTION AND CONSUMPTION

Strategic objectives

Finland's overall eco-competitiveness and that of enterprises based in Finland will be improved.

Production and consumption will be steered in the direction of products with a minimum environmental impact during their life-cycle.

Improved prospects will be offered for production methods and consumer choices which support sustainable development.

The life-cycle approach will be emphasized in the construction of buildings and the production of building materials and construction components.

Lines of action

1. Environmental loads from production and consumption will be brought in line with nature's carrying capacity using administrative and economic instruments.

2. Efficient usage of natural resources will be promoted in the production of goods and services.

3. Use of voluntary environmental instruments will be promoted, such as agreements between the business community and the authorities, environmental management systems, and environmental labelling.

4. Environmentally sound technology will be promoted.

5. Consumers and producers will be provided with information on the environmental impact of consumption and the life-cycle effects of products .

6. The capacity of small and medium-sized industrial enterprises to reduce environmental loads will be

improved.

7. Environmentally sound choices will be encouraged in all public procurement and public-sector activities.

8. Environmental awareness will be promoted among consumers and producers in the construction industry, and new tools will be developed for assessing the environmental impacts of construction.

2.3. ENERGY ECONOMY

Strategic objectives

Finland will satisfy its energy requirements using efficient, cost-effective, and ecologically sound technology.

Finland will fulfill the commitments of the UN climate convention (UN/FCCC) and international climate change policy.

Finland will ensure that the impact on climate, environment and human health arising from the production and consumption of energy is minimized and that accident risks are mitigated.

Finland's energy cluster will be internationally competitive and thereby support employment.

Finland will take an active role in developing international rules and regulations on energy policy in line with its national environmental objectives.

Lines of action:

1. The structure of energy production will be developed in a direction that involves reduced emissions of carbon dioxide, in compliance with international climate change policy and the objectives of the UN climate convention.

2. Finland will support common and coordinated EU policies and measures aimed at slowing down climate change.

3. Finland will take part in international cooperation aimed at promoting the use of natural gas.

4. The efficient functioning of the energy market will be promoted.

5. Efficient use and conservation of energy will be promoted.

6. The use of renewable energy sources will be promoted.

7. The high standard and competitiveness of energy technology will be maintained.

8. Finland will strive to secure a sufficiently diversified and advantageous energy procurement capacity.

9. The secure supply of energy will be ensured.

2.4 REGIONAL STRUCTURE, URBAN STRUCTURE AND TRANSPORT

Strategic objectives

Changes in regional structure will evolve in an ecologically, economically and socially manageable manner.

Urban and rural policy will support the balanced development of human settlements.

Urban structure will provide an efficient, healthy and pleasant environment in which to live and which fosters the social well-being of the community.

The quality of urban environments will further improve and the use of nonrenewable resources will be reduced.

Urban planning and transport planning will aim to reduce the need for commuting and, in tandem with economic instruments, will advance the use of environmentally less harmful forms of transport.

Lines of action:

1. Regionally balanced development will be promoted through national and EU-funded programmes, and related environmental impact assessment will be upgraded.
2. Integration of the urban fabric and business structures supporting this will be promoted through legislation and by intensifying cooperation between local authorities in the spheres of master planning and land-use policy.
3. The rising volume of traffic will be stemmed by means of efficient land-use planning, taxes and other charges, and by offering new alternatives to replace motorized commuting. Competitive commuting alternatives will be offered by raising the standard of public transport and by providing improved opportunities for non-motorized traffic.
4. Dialogue on urban planning will be strengthened between the public and the administrative authorities and local initiatives for sustainable development will be supported.
5. An effort will be made to create an efficient, varied and healthy urban structure that caters for all population groups.

2.5 RURAL AREAS AND USE OF RENEWABLE RESOURCES

Strategic objectives:

Urban and rural areas will engage in mutually supportive interaction.

Rural business will be based on sustainable use and management of nature and natural resources.

Nature's generative capacity, the diversity of rural environments and the quality of the residential environment will be preserved, creating a basis for the diversification of business and industry.

Use of renewable resources replacing the use of nonrenewable resources is increased.

Opportunities will be improved for the forest cluster to implement the principles of sustainable forestry.

Lines of action:

1. Opportunities will be improved for the development of rural business, rural services and village centres.
2. Action will be taken to safeguard the yield of commercial forests, to preserve the biological diversity of forest environments, and to diversify the utilization of forests.
3. A higher grade of wood processing will be promoted and efforts will be made to diversify cultivated tree species and the use of timber.
4. Conditions will be made favourable for the production of clean, healthy, and ethically sound food products.
5. Every effort will be made to achieve a significant reduction in nutrient emissions from agriculture and fish farming, which contribute to the eutrophication of waters. Rehabilitation of water resources will be promoted.
6. Resources will be made available for the care and upkeep of traditional rural landscapes and habitat types of outstanding importance.

2.6 RESEARCH AND EDUCATION

Strategic objectives:

Research and education will comprehensively support the attainment of ecological, economic, social and cultural sustainability.

Multidisciplinary research will form the knowledge base for future social models, strategies of change and lifestyle choices that support the goal of sustainable development.

Research will support the development of tools and instruments designed to promote sustainable development.

Finland will strive to become one of the world's leading experts on environmental technology.

Lines of action:

1. Research programmes will be carried out as a cooperative effort between research and financial institutions, with the aim of further investigating the effects of far-reaching environmental problems on Finland's environment, economy and society.
2. Resources will be provided for research aimed at developing means of achieving changes required by sustainable development in lifestyles, social institutions, the economy, steering instruments and decision-making models.
3. Demand and incentives will be secured for innovations and environmentally sound technological progress.
4. Finland's knowledge base and monitoring capabilities will be improved through international cooperation, and more information will be amassed on topics such as various forms of capital and the

ways in which they interact, the economics of natural resources, and prospects for improving resource productivity.

5. Material flow accounting will be developed for monitoring the usage of natural resources as part of the national accounting system.

6. Cooperation will be intensified between the education, research and environmental sectors and the results will be assessed in the light of sustainable development.

3. PROGRAMME IMPLEMENTATION, MONITORING, AND ASSESSING THE PROGRESS OF SUSTAINABLE DEVELOPMENT

3.1 Implementation of the programme

The ministries take this programme into account in the preparation of reports, strategies and action plans, and also in their other activities. The ministries are taking action to commence drafting any legislative provisions that may be necessary for the implementation of the Council of State Decision-in-Principle.

Interministerial cooperation will be stepped up and cooperation between the ministries and non-governmental bodies will also be intensified. The ministries will initiate various schemes and projects to promote sustainable development in cooperation with the various bodies collaborating in the implementation of this programme.

3.2 Monitoring the programme

Each administrative sector of administration will submit a report to the Finnish National Commission on Sustainable Development by summer 2001. The report will describe the progress made towards the attainment of sustainable development objectives and the impact of the programme within the administrative sector of jurisdiction. The reports will also assess the need for follow-up measures and any revisions that need to be made to the programme.

The Commission on Sustainable Development will monitor the progress of sustainable development and the implementation of the different programmes that are being put into effect by various organizations and institutions. Extragovernmental actors are asked to assess the implementation status of their own programmes and sustainable development in general by summer 2001.

As a cooperative effort between the institutions and actors involved in promoting sustainable development, improvements will be made to the methodology, terminology and content of methods for assessing the various dimensions of sustainable development and the connections between them.

On the basis of the reports submitted by various administrative sectors and other preparatory work, an overall assessment will be made of the efficacy of the programme and the status of sustainable development in Finland. The assessment will be prepared for submission at the Earth Summit +10 in 2002, the 10-year follow-up to the United Nations Conference on Environment and Development held in Rio de Janeiro.

3.3 Assessing the progress of sustainable development

Methods of assessing the progress of sustainable development are being devised using national indicators

which are currently under development, as well as existing methods used in the national accounting system. Assessment methods developed by international bodies (UN, EU, OECD, etc.) can also be used where relevant.

'Natural Resources and the Environment', a review published in conjunction with the State Budget, will disseminate information and serve as an instrument of Government policy on sustainable development.

Helsinki, June 4, 1998

Pekka Haavisto
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FINNISH GOVERNMENT PROGRAMME FOR SUSTAINABLE DEVELOPMENT

Council of State Decision-in-Principle on the Promotion of Ecological Sustainability

PREAMBLE

PREAMBLE TO THE COUNCIL OF STATE DECISION-IN-PRINCIPLE

CONTENTS:

1. Preamble to the framework policy on sustainable development
 - 1.1 Background to the programme
 - 1.2 Other programmes
 - 1.3 The concept of sustainable development
 - 1.3.1 Ecological sustainability
 - 1.3.2 Economic sustainability
 - 1.3.3 Social and cultural sustainability

2. Sectoral principles
 - 2.1 Finland's role in international cooperation
 - 2.1.1 Global cooperation and relations with the developing countries
 - 2.1.2 Cooperation in the European Union
 - 2.1.3 Cooperation with Nordic countries and neighbouring areas
 - 2.2 Products, production and consumption
 - 2.2.1 Consumption
 - 2.2.2 Industrial production and construction
 - 2.2.3 Products
 - 2.3. Energy economy
 - 2.3.1 Principles of energy policy
 - 2.3.2 Sustainable development, climate change and environment
 - 2.4 Regional structure, urban structure and transport
 - 2.5 Rural areas and use of renewable resources
 - 2.6 Research and education

3. Principles of programme implementation, monitoring, and assessing the progress of sustainable development
 - 3.1 Implementation of the programme
 - 3.2 Monitoring the programme
 - 3.3 Assessing the progress of sustainable development

4. Effects of the Council of State Decision-in-Principle

1. PREAMBLE TO THE FRAMEWORK POLICY ON SUSTAINABLE DEVELOPMENT

1.1 BACKGROUND TO THE PROGRAMME

The United Nations Conference on Environment and Development (UNCED, 1992, Rio de Janeiro) approved the Rio Declaration containing the basic principles of sustainable development and Agenda 21, an action programme for the 21st century for the implementation of the objectives. UNCED participants also approved a set of global forest principles and signed an international convention on biological diversity and a framework convention on climate change. The participants also agreed to begin a round of talks on the prevention of desertification.

Agenda 21 contains 40 chapters in all, covering the broad economic and social problems contributing to environmental degradation and the depletion of natural resources, the utilization of natural resources, key environmental problems, the status of various societal groups in issues related to the environment, development and environmental protection, as well as measures that need to be taken to speed up progress towards sustainability.

Up to now, public debate and action on sustainable development have tended to focus on ecological sustainability and its economic effects. At the same time, however, the importance of social and economic sustainability has increased and become all the more clearly apparent. People have started to consider exactly what the various dimensions of sustainable development are, and how they interact.

The concept of 'sustainable development' has been interpreted in further detail at other UN summits and conferences held after the UN Conference on Environment and Development, such as the World Conference on Human Rights in Vienna, the International Conference on Population and Development in Cairo, the World Summit for Social Development in Copenhagen, the Fourth World Conference on Women in Beijing, the UN Conference on Human Settlements (HABITAT II) in Istanbul and the World Food Summit in Rome. The Special Session of the UN General Assembly (UNGASS) on sustainable development in 1997 also emphasized that ecologically sustainable development is inseparable from its social and economic dimensions.

The Government Programme on Sustainable Development is Finland's third comprehensive document outlining national measures to be taken to promote sustainable development. In 1990, the Council of State presented a report entitled 'Sustainable Development and Finland' to the Finnish Parliament. A second report was prepared by the Finnish National Commission on Sustainable Development in 1995, 'Finnish Action for Sustainable Development'. Prime Minister Paavo Lipponen's Government's policy statement specifies that the Finnish Government will draft a national programme for the implementation of the Convention on Biological Diversity and Climate Change approved by UNCED in Rio de Janeiro and a national action programme for sustainable development.

Various countries around the world are taking independent action to achieve sustainable development, in which they are supported by international organizations. Many countries already have a programme for sustainable development, and the Special Session of the UN General Assembly in 1997 set the target that all countries should have such a programme by the year 2002. The Finnish Government's programme for sustainable development thus comes well ahead of this internationally agreed deadline.

Finland is currently participating in the formulation of a programme for sustainable development in the region of the Baltic Sea. Baltic 21 will comprise a set of key recommendations from sector-specific action programmes and various cross-sectoral projects. The programme will be completed in 1998.

Achieving sustainable development requires the input of all social actors. In Finland the central associations of local authorities, trade and industry, the Sámi Parliament and numerous NGOs have drafted their own programmes of sustainable development. The Central Union of Agricultural Producers

and Forest Owners is in the process of preparing a separate programme, and a rapidly increasing number of local authorities and regions have likewise prepared their own programmes. Projects for sustainable development are currently in progress in roughly 190 municipalities, accounting for 70% of the Finnish population. Sustainable development projects are also being put into effect by provincial and regional governments.

1.2 OTHER PROGRAMMES

The Finnish Government Programme for Sustainable Development is supplemented by various documents and programmes which interpret and emphasize sustainable development objectives from their own specific perspectives. Some of these programmes have cross-jurisdictional scope and have been prepared as an interministerial cooperative effort.

This programme draws on the content of the Council of State's report on energy policy, the proposal for a national action plan 1997-2005 for biological diversity in Finland drafted by the Finnish National Commission on Biological Diversity, the work of the National Climate Committee and the national programme for environmental health.

Other important Government policy documents supplementing this programme include:

- Council of State's futures reports (1996 and 1997);
- Council of State's report on public health (1996);
- Council of State's report on trade and industry policy (1996);
- Council of State's report on Economic and Monetary Union (1997);
- Council of State's report on regional development (1997);
- Government programme on equality (1997).

Other important programmes and projects supplementing the Government Programme for Sustainable Development include the national information society strategy; various environmental programmes, such as those for forestry, agriculture and transport; the water protection targets to 2005; the national waste plan until 2005; the Ministry of Agriculture and Forestry's strategy for the sustainable use of renewable natural resources in Finland; programmes on health and social welfare, such as the revised 'Health for All by the Year 2000' strategy for co-operation and the memorandum submitted by the committee drafting objectives and strategies related to policy on ageing and the elderly, the growth and employment strategy and other employment programmes; the Decision-in-Principle on the improvement of road safety; development plan for education and university research for 1995-2000; the National Board of Education's programme for the promotion of sustainable development (1998-2000), and the development strategy 'Finland: a knowledge-based society' issued by the Science and Technology Policy Council. Key documents related to cooperation with the developing countries include the Government Principle-in-Principle on development cooperation (1996) and the Government strategy on developing countries which is currently being formulated. A national forest programme is also being prepared.

1.3 THE CONCEPT OF SUSTAINABLE DEVELOPMENT

The World Commission on Environment and Development (the 'Brundtland Commission', 1987) defines

sustainable development as follows: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Broadly interpreted, then, the aim of sustainable development is for people to learn to live in harmony with nature and their fellow human beings.

The three founding elements of sustainable development that are emerging in debate around this topic are: ecological, economic and socio-cultural sustainability.

As our knowledge grows and conditions change, the concept of sustainable development is beginning to acquire new interpretations in public debate. Finland must therefore consider which challenges posed by sustainable development are the most urgent and what are the means by which we can exert an influence, not only nationally, but also in cooperation with our neighbouring areas and in other forms of international cooperation. At the same time, we must offer opportunities for local and individual action for sustainable development and prepare ourselves for a thorough-going change embracing the whole of society.

Reconciling the various dimensions of sustainable development is a difficult challenge because of the ambiguity of the concept and because it can acquire different meanings depending on the time, place and the sphere of activity to which it refers. The concept of sustainable development as it is interpreted here marks one step forward in efforts to formulate a precise definition of ecological sustainability and the economic, social and cultural preconditions for achieving this end.

It is difficult, at least in the short term, to prevent conflicts from arising between various sustainable development objectives. In the long term, however, and in the process of implementing this programme, it is imperative that we endeavour to formulate a precise definition of the ecological, economic and socio-cultural dimensions of sustainable development, and the points where they intersect and interact. All three dimensions of sustainability and alternative courses of action will be reviewed systematically and their respective objectives will be reconciled.

Sustainable development objectives will be integrated, defined in further detail and standardized in cooperation between different institutions.

1.3.1 Ecological sustainability

The basic condition for sustainable development is the preservation of biological diversity and the viability of ecosystems as well as the long-term reconciliation of economics and other human activity with the environment's carrying capacity. In addition to national measures, international cooperation is of crucial importance in efforts to attain ecological sustainability.

Ecological sustainability entails compliance with the 'precautionary principle', which states that action to prevent environmental degradation cannot be postponed on grounds of lack of scientific evidence. Before any action is taken, the risks, adverse effects and costs must be assessed. Other important principles relevant to ecological sustainability include the pre-emptive prevention of adverse environmental impacts and pollution prevention at source. Wherever possible, the polluter should cover the expense of environmental damage. These basic principles and ground rules provide a workable framework for the practical implementation of sustainable development.

Slowing down climate change to a safe level that can be endured both by ecosystems and society is the most urgent global challenge we face today. Unless concerted action is taken to curb emissions, unpredictable and irremediable changes are likely to occur in our living conditions, economic situation and ecosystems all over the world, and the ramifications will be felt by many generations to come. Economic precautions must be taken and other adjustments must be made to prevent climate change without delay.

Slowing down climate change to a speed that can be withstood by ecosystems first entails a reduction in the present volume of emissions. The basic principle in international cooperation is equitable burden sharing which is used to determine the scale and timing of actions to reduce emissions, while taking into account the different conditions prevailing in different countries. In the name of fairness, it must be acknowledged that initially the main responsibility for preventing emissions lies with the industrialized countries.

The second main challenge posed by ecological sustainability is to safeguard biological diversity in activities affecting natural environments. The depletion of biological diversity is the result of mechanical intervention in the natural environment and the discharge of substances which exert a harmful effect on natural ecosystems. Every action that pollutes the environment has a cumulative effect which can have serious consequences for biodiversity.

These and other environmental pressures are contributing to the depletion and endangerment of species and natural habitats. The earth's biological diversity is being drained rapidly every year. Fortunately, risks that threaten Finland's biodiversity have been mitigated to the extent that it now seems possible to preserve Finland's biological diversity, at least at the present level, in the coming decades.

As far as biological diversity is concerned, achieving sustainable development first and foremost calls for the discontinuation of polluting production methods and consumption habits. With this end in mind, development projects on biological diversity involve broad cooperation between advanced industrialized countries and the developing countries.

The third challenge faced by the industrialized countries in pursuit of ecological sustainability is the sustainable use of natural resources, particularly the target of achieving a long-term reduction in the volume of natural resources and energy consumed per production unit. The sustainable use of natural resources entails the economical use of nonrenewable resources, while at the same time making an intensified effort to discontinue their use in favour of renewable resources. Commercially exploited nonrenewable resources should be utilized for as long as possible once taken into use. This can be done through reuse, recycling and efforts to minimize waste. Renewable resources should be used within the limits of their productive and regenerative capacity. The level of pollution originating from the use of natural resources must not exceed the environment's carrying capacity. The equitable sharing of benefits from natural resources must also be taken into consideration, as must the needs of future generations.

Technological progress holds one of the keys to the sustainable use of natural resources. If we consider the life-cycles of goods produced in the industrialized countries, their ecological effects extend all over the world, starting from raw material procurement through to consumption. The industrialized countries and, to a growing degree in the future, the developing countries, must take joint responsibility for developing production technology which improves the productivity of natural resources and is suitable for use in the developing countries. The developing countries should be able to bypass the most wasteful stages of development that industrial societies are now leaving behind them.

By international standards, Finland's environment is, for the greater part, in fairly good condition. Biological diversity can be preserved thanks to ecologically advanced regional and land-use planning and sustainable use and management of forests and other natural resources. For further progress to be made, however, more scientific research is needed to avoid friction between conflicting goals. Nature reserves and land-use planning play a vitally important role in safeguarding nature's biological diversity. Research and education on biodiversity is being augmented and we are acquiring new knowledge on the management and ecological rehabilitation of natural habitats.

Finland has been successful in combatting the acidification of its forests and waters. Measures to combat the eutrophication of water resources are being implemented and intensified. When human settlements are built, it is important for sustainability that their environmental and social effects should be controlled

more efficiently and that environmental protection be further improved. Other adverse environmental health effects, such as noise, atmospheric pollution and safety risks, should likewise be reduced. It is also critical, even for Finland's environment, to reduce transboundary pollution from neighbouring areas, both through actions taken at source and through international cooperation.

1.3.2 Economic sustainability

Economic sustainability means balanced and stable growth that is not reliant on long-term indebtedness or squandering of reserves. A sustainable economy is a basic precondition for many other key activities in society. An economic policy that consistently pursues sustainability provides a sound basis for maintaining and improving the welfare of the nation. A soundly anchored economy will help society to meet the challenges of the future, such as the growing need of funding for social security and health care expenditure as Finland's demographic structure progressively grows older. A sustainable economy is the foundation of social sustainability. Mechanisms that are geared towards social sustainability also contribute to alleviating some of the difficulties that are likely to arise in the rapidly changing global economy. Thanks to its sound, far-sighted economic policy, Finland is well on the way to returning to an economically sustainable path of development.

Economically sustainable development presupposes that, in global terms, goods and services can be offered so that they place less of a burden on the environment and consume a lower quantity of natural resources and energy. Economic sustainability also means preserving our national assets and safeguarding opportunities for their accrual. In addition to man-made assets, Finland's natural environment and natural resources are a critical production input and form of capital in their own right. Their preservation must therefore be safeguarded.

Another typical feature of a sustainable economy is that the environmental impacts and health effects of production and consumption should be transferred into the prices of products, and economic instruments should be used as a means of steering society in the direction of sustainable development. The main focus of economic regulation should, as a concerted international effort, be placed on the taxation of energy consumption and all activities which have adverse environmental effects. It is imperative that the taxation system be revised to promote employment. The economic and social effects of these reforms should then be followed up and reviewed.

It is becoming increasingly apparent that sustainable economic development springs from investment in human capital: education, research and development and the innovations and expertise that grow out of them. The efficient, economical utilization of resources and the introduction of high-tech innovations are acquiring growing importance.

Forests, being a renewable resource, provide an excellent basis for a sustainable economy. More value can be added and more jobs created by raising the grade of wood processing. Finland's forests and rich natural diversity provide ample opportunities for new products and services through the use of local, small-scale, labour-intensive resources.

Our clean environment lends itself to the cultivation of healthy, unpolluted food products. Further investment in the quality of Finnish foods and organic farming is needed in the development of agriculture and the food industry.

International obligations on the prevention of climate change require that production must be continually developed to consume fewer resources and utilize energy more efficiently. Finland's main branches of industry have already attained a comparatively good standard of efficiency in the use of energy and natural resources. Nevertheless, Finland's production structure historically consists mainly of industries which consume a high volume of natural resources and energy. In the long term, then, these industries

too must develop processes that utilize natural resources more efficiently and reduce material wastage throughout the product's life-cycle. In the long run, the diversification of the production and service structure and the development of local services will also be essential for the attainment of ecological sustainability.

The environmental awareness and expectations of the consumers and marketplace are growing rapidly, in view of which, new eco-conscious products and services that conserve energy and nonrenewable resources must be offered to answer this demand. The ability to capitalize on the international market for environmental technology and resource-saving technology is a vitally important aspect of economic sustainability; this will also promote Finland's overall economic competitiveness.

1.3.3 Social and cultural sustainability

The main target for social and cultural sustainability is for society to be able to assure a sound basis for public welfare from one generation to the next. Population growth, poverty, food supply, health care, gender equality and education are global challenges on the path to social sustainability, which, in turn, have an appreciable influence on ecological and economic sustainability. Meeting these challenges calls for a firm and committed effort both from national governments and international cooperation.

Sustainable development depends to a considerable extent on the degree to which economic and social development promotes the welfare of the population at large. The basic welfare of citizens is a fundamental precondition for the promotion of ecological sustainability and its acceptance by society.

The citizens of Finland have good opportunities for securing a basic standard of welfare, a decent livelihood and for personal self-betterment. Finland is listed as one of the leading countries on the UNDP human development index. Economic growth has enabled Finland to build a welfare state characterized by fundamental social rights, basic social security for all, a reasonable standard of social security and a commitment to equality between different regions and population groups. The promotion of gender equality is among the most outstanding features of the Finnish welfare state.

Upholding the founding pillars of our welfare state requires that we anticipate and react flexibly to the changing circumstances. Finland has a long-established tradition of national and local democracy, which provides a sound basis for public influence and participation. Finland is a safe society which enjoys a considerable measure of social equality. The standard of living is high and the gap between low and high income earners is among the world's narrowest. The education system is efficient and comprehensive at all levels. Frequent cross-institutional cooperation reflects the efficiency and capabilities of our social institutions, which enjoy a reasonably high degree of confidence from the public. The public also has confidence in Finland's prospects for future social development.

The most urgent of today's social challenges is unemployment and the social exclusion and inequity to which it has given rise. Having a job is essential not only for securing a livelihood, but also for personal fulfilment and social relations. Combatting social exclusion and social inequity with a sound employment policy and efficient social services is a means of promoting individual welfare, social viability and general security for all. Promoting employment is an integral part of Finland's economic and growth policy. With a well-planned policy, it should be possible to simultaneously achieve employment targets and environmental objectives in a cost-effective manner, without any conflict arising between these two goals.

The consequences of increased domestic migration in recent years, specifically the problems encountered by the migrants and communities experiencing a substantial volume of in-migration or out-migration, need to be addressed by regional, urban and rural policy.

The ageing of Finland's demographic structure calls for action to improve the quality of life of the elderly population and preventive action to ensure that pension and health care expenditure does not rise to an unsustainable level in the future. Health and fitness is promoted through public health policy and health care services. Good public health is important in many respects, not least economic development.

The key question is: what can society do to help people take charge of their lives and take responsibility for their actions, and what can be done to promote sustainable lifestyle choices and learning? By providing education, training and opportunities for participation, people can be made to understand the consequences of their actions. Non-governmental actors, too, have an important role to play in efforts to change consumption habits and in voluntary initiatives.

People are gradually becoming aware that culture and the behavioural models that it generates are important for sustainable development. Culture is complex, consisting of an abundance of diverse subcultures. What we call 'culture' embraces values, national patterns of behaviour, international interaction, various environments and everyday routines, among many other things. Measures taken to promote sustainable development must be designed with due consideration to the opportunities and limits of their cultural context.

Preserving the identity and viability of Sámi culture and of other minority cultures is crucial to cultural sustainability. Cultural sustainability is also being advanced by promoting the viability of the Finnish arts and the unique regional features of Finnish culture, such as folklore, traditional landscapes, buildings and other environments of outstanding historical value. A close bond between man and nature is among the characteristic features of Finnish culture. By virtue of 'everyman's right' (unrestricted right of passage in forests and countryside), all Finns are guaranteed the right to enjoy nature and its offerings.

2. SECTORAL PRINCIPLES

2.1. FINLAND'S ROLE IN INTERNATIONAL COOPERATION

The most important international challenges on the path to sustainable development relate to the introduction of new production methods and consumer habits in the industrialized countries and to raising the standard of living in the developing countries on a sustainable basis. The industrialized countries continue to account for the largest percentage of pollutant emissions and the heaviest consumption of natural resources. Pollution and consumption of natural resources will steadily increase in the developing countries, too, as their populations grow and the standard of living rises. The globalization of the economy is escalating. Commercial enterprises and other organizations are expanding their operations internationally. International cooperation, both between governments and other institutions, is designed to create new opportunities and to reach agreement on common goals and models of action.

The equitable and sustainable use of the world's limited natural resources is an issue that is inherently connected with that of environmental security and environmental refugeeism. The health of the local and global environment is a vital factor contributing to international security and welfare.

The United Nations has played a leading role in formulating the global agenda for sustainable development. Particularly the agreements made at the UN Conference on Environment and Development (UNCED) in 1992 are currently steering international cooperation on sustainable development. Sustainable development objectives have since been defined and reinforced in further detail at numerous other UN special conferences. Finland views it as critical that sustainable development objectives be implemented comprehensively in every available forum. The implementation of the obligations agreed at UNCED were assessed at the Special Session of the UN General Assembly (UNGASS) in 1997. The Special Session agreed on setting up an Intergovernmental Forum on Forests, on launching initiatives on freshwater, energy and eco-efficiency, and on the continuation of work by the Commission for

Sustainable Development (CSD). The Session also agreed that climate change is one of the most urgent challenges facing mankind today. Sustainable development is taken into account in developing the work of the UN and in engaging international organizations in mutually supportive exchange. For instance, the UN Environment Programme (UNEP) and the UN Commission on Human Settlements (UNCHS) are currently being reformed and strengthened to meet more thoroughly today's demands. It is particularly important to promote cooperation and coordination between those bodies responsible for monitoring the implementation of decisions made at the conferences where the agenda for sustainable development was created, such as the UN Commission for Sustainable Development, the Commission for Social Development and the Commission for Population and Development.

International environmental conventions are a highly effective means of promoting sustainable development. The most important international agreements concluded to date are the Framework Convention on Climate Change, the Convention on the Protection of the Ozone Layer, the Convention on Biological Diversity and the Convention to Combat Desertification. Means of reconciling free trade and environmental requirements are currently being investigated by the World Trade Organisation (WTO), the United Nations Conference on Trade and Development (UNCTAD), the United Nations Environment Programme (UNEP) and the Organisation for Economic Cooperation and Development (OECD). The OECD is additionally negotiating an important multilateral agreement on the deregulation of investments (MAI) and examining the impact of globalization on sustainable development.

The OECD Ministers of the Environment approved a set of common objectives in April 1998. Also in April 1998, the OECD Council announced that sustainable development will henceforth be one of the OECD's chief objectives. The Council urged the OECD to continue working on the Secretary General's strategy to promote sustainable development. The strategy is subdivided into sections on climate change, technological development, indicators and the environmental effects of subsidies. Sustainable development is also being promoted by the UN Economic Commission for Europe, the Council of Europe and various other organizations.

The European Union is taking action to promote sustainable development both in Europe and globally. EU membership offers Finland new opportunities, while also creating new obligations. Finland is now in a position to exercise an influential role in the promotion of sustainable development in the EU. Moreover, Finland's proposals for international cooperation have more weight with the backing of the EU. Meanwhile, the EU's united decisions obligate its Member States to take concerted action.

Finland's other channels of international influence include development cooperation, particularly the UN's operative and multilateral development funding institutions, such as the United Nations Development Programme (UNDP), the Global Environment Facility (GEF), the World Bank (WB) and the multilateral ozone fund; direct bilateral environmental cooperation, Nordic cooperation and cooperation with neighbouring areas, particularly in the Baltic and Arctic regions.

EU enlargement and the convergence of new applicant States will highlight the EU's role as a promoter of sustainable development in Finland's neighbouring areas. EU cooperation in the Baltic and Arctic regions will grow in significance in the future. Finland has lodged a related proposal on the 'Northern Dimension' of the European Union. The proposal emphasizes the importance of northern areas and their special features in relation to issues such as the sustainable use of natural resources, environmental protection, industry, trade, transport infrastructure, security and social stability. Finland has also taken an active role in European cooperation on environmental and forest affairs.

2.1.1 Global cooperation and relations with the developing countries

All countries around the world are affected by widespread environmental problems, especially climate change. These problems may have unpredictable consequences for Finland's environment and the natural

resources that underpin our economy. To combat them, then, international environmental conventions must be developed and implemented more efficiently, for example by agreeing on further measures to promote their objectives, intensifying the monitoring of their implementation, promoting technology transfer and developing new modes of cooperation between their contracting parties. With due consideration to prevailing economic trends, these measures should aim at achieving cost-effectiveness. At the same time, the developing countries should be given more opportunities to take part in the implementation of international environmental conventions. In addition to those that already exist, there is an obvious need to formulate supplementary conventions on sustainable forestry, the usage and trade of chemicals, and biosafety.

The balanced, parallel advancement of international trade and environmental protection is an ambitious goal. The main challenge for international trade policy is to find ways of enabling the developing countries, particularly those that are the least developed, to gain a foothold on world markets in a manner that promotes sustainable development. Decisions related to the use of trade measures for promoting environmental protection have already been taken at meetings of the World Trade Organisation (WTO) and between parties to international environmental conventions. In the wake of economic globalization, it is becoming increasingly vital to step up cooperation between the WTO and the secretariats of international environmental conventions. An effort will also be made to pursue the objectives stated in the Procedural Guidelines on Trade-Environment Integration ratified by the OECD Ministerial Council in 1993.

Economic growth in the developing countries is resulting in increased consumption of natural resources and rising levels of greenhouse gas emissions and environmental pollution. Moreover, problems associated with social and societal development in the developing countries, such as poverty and rapid population growth, present a challenge in their own right, not only for the developing countries, but for the entire international community. This applies particularly to those developing countries with the largest populations, namely China, India, Brazil and Indonesia, especially if they continue to experience rapid economic growth in the future. Population growth also presents a challenge with respect to employment and migration.

Development cooperation is aimed at achieving a balance between economic growth, the environment's carrying capacity and objectives related to social and human development. The goal, then, is to prevent problems before they arise and to promote general well-being on the basis of the sustainable use of natural resources. Projects receiving development aid must be environmentally, economically, socially and administratively sustainable - also after external aid is discontinued.

Sound environmental policy is being promoted in the developing countries by assisting their governments to commit themselves to international environmental conventions and their implementation. This is being done through the development of environmental administration and legislation, the advancement and implementation of environmental programmes and general capacity-building in the sphere of environmental protection.

Technology transfer and the adoption of new technology in the developing countries is being promoted by, among other measures, helping to create an operating environment that is conducive to technology transfer. Here, private investment is coming to play an increasingly important role alongside development aid, particularly in the more advanced developing countries. Through development cooperation, the developing countries are being assisted in targeting private investment in a manner that supports sustainable development.

2.1.2 Cooperation in the European Union

Finland's accession to the European Union has opened new channels of influence and new opportunities

for making our voice heard in the international arena. Finland is striving to take a prominent role in the advancement of EU policy on sustainable development and the environment. EU membership also gives Finland improved prospects for taking an influential role in global and other multilateral cooperation. By submitting well-prepared presentations, Finland is making an effective contribution to EU environmental policy and, through the EU, international cooperation. Finland's goal is to promote active EU participation in the promotion of sustainable development in Finland's neighbouring areas. Finland is emphasizing the development of the EU's Northern Dimension and the allocation of EU funding for environmental protection in the Baltic and Arctic regions.

Sustainable development is affirmed as the common goal of the European Union and the European Community in the Treaty of Amsterdam (1997), which is currently in the process of being ratified by the EU's Member States. The EU Commission has laid down its forthcoming policy in its Agenda 2000 document, which emphasizes that sustainable development and environmental aspects be taken into account in all Community policy, in accordance with constituent treaties amended by the new Treaty for Europe concluded in Amsterdam.

In December 1997, the European Council gave to the European Commission the task of formulating a strategy for the inclusion of environmental aspects in Community policy and EU activities, with the expressed goal of promoting sustainable development. The European Council reviewed the strategy in June 1998.

Stable economic and social development in Europe is an important security-promoting factor. The main challenges on the path to socially sustainable development are the reduction of unemployment and the prevention of social exclusion, which entails the continuation of stable economic development in Europe. Likewise, enhancing the transparency of EU decision-making and safeguarding public access to information are important steps in the direction of social and cultural sustainability. Special attention will also be addressed to the prevention of environmental health hazards and the promotion of equality.

Environmental protection and sustainable development are high on the agenda of talks pertaining to EU enlargement. New applicant States will be amending their legislation in spheres such as environmental protection in compliance with EU accession criteria. In accordance with its partnership agreements, the EU is supporting projects initiated by applicant States as part of their respective convergence strategies. The focus of these convergence strategies is on the amendment of environmental legislation, the development of environmental administration and the arrangement of related funding.

Sustainable development goals will be taken into account in the reform of EU Structural Funds and agricultural policy. Likewise, environmental considerations will play a greater role in the reform of criteria under which funding is allocated for Structural Funds and agricultural programmes. Rural policy will be geared towards promoting the viability of rural areas.

The EU's Fifth Framework Programme for Research and Technological Development will comprise four thematic programmes and three horizontal programmes. The titles of the thematic programmes are 'Quality of life and management of living resources', 'User-friendly Information Society', 'Competitive and sustainable growth' and 'Preserving the Ecosystem'. Those of the horizontal programmes are 'Confirming the international role of Community research', 'Innovation and participation of small and medium-sized enterprises' and 'Improving the human research potential and the socio-economic knowledge base'. Research on energy and the environment will be integrated under the same programme, but each will have its own budget and implementing committee. The combined budget allocated for the Fifth Framework Programme is in the order of FIM 84 billion. According to current plans, implementation will start at the beginning of 1999.

From Finland's perspective, the most urgent priorities in the drafting of EU environmental legislation and environmental protection programmes are, particularly, issues pertaining to climate change,

prevention of acidification, protection of biological diversity, sustainable use and protection of water resources, waste reduction and improvement of land-use planning. Emphasis will also be placed on economic instruments, particularly environmental taxes, and requirements related to the use of the best available technology (BAT). It is vital that broadly based environment-economy integration continues to be pursued in line with the principles of the Fifth Community Environment Programme and its subsequent revisions.

2.1.3 Cooperation with Nordic countries and neighbouring areas

Finland's neighbouring areas have a considerable influence on the state of our environment and our general well-being. Cooperation with these neighbouring areas is, then, an effective means of improving security, stability and the status of the environment in regions within Finland's immediate vicinity. EU cooperation, the development of the EU's Northern Dimension and EU enlargement will highlight the importance of Finland's neighbouring countries, all of which, with the exception of Russia, are currently applying for EU membership. EU accession nevertheless entails substantial investment and improvement of environmental protection, legislation and administration in these new applicant States. In any case, all developments which take place in Russia are of key significance for Finland. Finland is taking an active role in cooperation related to environmental protection, nature conservation and regional planning in the regions of the Baltic Sea, the Barents Sea and the Arctic, and also in the drafting and implementation of sustainable development programmes for these regions.

The goal of Finland's cooperation with its neighbouring areas, especially Russia and the Baltic countries, is to enable them to launch their own investments and development projects and to build their administrative capacity. More international funding will be channelled into these projects to enable their efficient implementation. Finland is additionally taking part in cooperation related to sustainable development with other transition economies.

Measures are being taken to promote stability and balanced social development and to raise the level of environmental protection and nature conservation as well as to improve methods used in the utilization of forests and other natural resources and in community planning in Finland's neighbouring areas. Through measures such as technology transfer, emissions from neighbouring areas will be reduced, especially air pollution and environmental loads in the Baltic Sea and other international waters. Technology transfer and other forms of cooperation offer new potential for Finnish exports and the development of trade. Environmental health and safety are also being improved in neighbouring areas and the knowledge base required for environmental protection and nature conservation is being strengthened. A special effort is being made to improve nuclear safety in Russia.

Nordic cooperation is emphatically practical and concrete in its orientation. Aspects of Nordic cooperation which have special significance for Finland include the integration of sustainable development and environmental affairs with other sectoral activities, cooperation with neighbouring areas, and preparatory work aimed at exerting an influence in international cooperation. The Nordic Environment Strategy for 1996-2000 approved by the Nordic Council of Ministers and the Nordic Council is being implemented on a collaborative basis by authorities and various other institutions and organizations, both in Finland and as a joint effort with the other Nordic countries.

2.2 PRODUCTS, PRODUCTION AND CONSUMPTION

Global population growth of a substantial order is expected to continue over the coming decades: the UN's estimated figures for 2050 average at 9.4 billion. At the same time, incomes are expected to rise considerably, especially in the developing countries, which will result in heavier consumption of energy and natural resources and a higher volume of emissions and waste. The adverse ecological impacts of this

increased economic activity must be mitigated in line with nature's generative and regenerative capacity.

The challenge of sustainable consumption must be faced by all countries around the world, but especially by the industrialized community. Although the developing countries account for most of the world's population, the industrialized countries still consume the highest proportion of natural resources. The main responsibility for initiating the required measures is borne, then, by the industrialized community. By altering the structure of production and consumption, the industrialized countries are in a position to set a credible example of change for the developing countries.

Global environmental objectives can be attained by reducing environmental loads at each stage of products' life-cycles, and also by reducing the volume and altering the nature of consumption. Various production and consumption trends are already being steered in a direction that supports sustainable development. Many issues have yet to be resolved, however, if ecological requirements are to be reconciled with socio-economic considerations in product policy, consumer policy and policy on trade and industry.

In the future, the concept of 'eco-efficiency' will come to play an increasingly important role with respect to the competitiveness of enterprises and national economies. The concept of eco-efficiency lays down target levels which are formulated on the basis of nature's carrying capacity and precepts of social equity, and they are designed to urge economic actors to reduce substantially the consumption of natural resources to one-quarter or even one-tenth of the present usage per production unit. Because the concept of eco-efficiency and its objectives are somewhat crudely defined for the time being, more detailed information is needed, both in Finland and globally, on the precise targets for improving eco-efficiency, the envisaged time span this would require, and indicators for measuring eco-efficiency. Broadly based international research collaboration is essential for this purpose.

The breakthrough of new technologies, particularly information management and telecommunications, offer an avenue for steering economic growth towards greater eco-efficiency. In the future, Finland's economic prosperity will increasingly derive from skills, knowledge and data-related enterprise.

2.2.1 Consumption

In a market economy, the production of goods and services, production volumes and investment activity are steered by consumer demand. Consumers are favourably disposed to ecologically sound consumption, but there remains a yawning gap between public attitudes and consumer practices. Consumers and households lack the information they need to assess the direct and indirect environmental effects of their consumer choices. Economic instruments could be utilized more extensively for promoting environmentally sound consumer behaviour.

Environmental labelling offers the consumer a tool for selecting ecologically sound products. Environmental labels are designed to provide consumers with the facts they need to select the best available products and also to give consumers and businesses a better opportunity to support environmentally sound product development. Existing product labels should continually be improved to provide adequate and reliable information on the product's environmental effects at each stage of its life cycle.

The commercial sector is well placed to relay information between the manufacturer and the consumer. It is also in a good position to support the design and development of eco-friendly products, logistical solutions and packaging, and to distribute related information to consumers.

The impact of public-sector activities on sustainable consumer choices has, up to now, received little attention in Finland. In view of their role as bulk consumers of goods and services, the government and

local authorities are in a prime position to influence the supply and demand of environmentally sound products. Public construction projects, given their large scale, have a particularly important influence on sustainable development. Environmental assessment of public procurement and environmental management systems need to be developed in the public sector.

2.2.2 Industrial production and construction

A healthy reduction has been achieved in the level of industrial sulphur dioxide emissions since the 1970s. Nitrogen oxide emissions, too, have been reduced, as have environmental loads resulting from the discharge of industrial effluents. Meanwhile, carbon dioxide emissions from energy production have grown in volume. The greatest challenge we face is to combat climate change by reducing greenhouse gases, but at the same time, action also needs to be taken to mitigate other adverse environmental effects arising from industrial production. Industrial waste is being minimized on a pre-emptive basis, recycling is being augmented and materials are being used more efficiently, thereby keeping the volume of waste deposited at landfills at a sustainable and cost-effective level.

Sustainable development calls for the efficient and economical utilization of natural resources. The structure of Finnish industry is raw material-intensive and energy-intensive and, moreover, relatively dependent on the import of raw materials and energy. By the same token, Finland boasts a high standard of expertise in environmental technology. The global environmental protection market is among those with the greatest growth capacity, offering promising opportunities for business enterprises in the environmental cluster.¹

Environmental protection in Finnish industry has mostly been regulated through legislation. Up to now, its implementation has chiefly been steered by mandatory regulations and discretionary permits. Finland's environmental permit procedures are currently being reformed to comply with the 'integrated permit' stipulated under the EU Integrated Pollution Prevention and Control Directive. Businesses are also being encouraged to employ environmental management systems and various other voluntary forms of environmental stewardship. Production and the structure of industry can also be influenced using economic instruments, which should preferably be employed on the basis of broad-ranging international cooperation.

The reduction of environmental loads is one of the greatest challenges facing the construction trade and the construction materials industry in the near future. Although Finnish buildings represent a high standard of energy efficiency thanks to strict thermal insulation regulations, more than one-third of Finland's primary energy consumption goes towards heating and supplying electricity to real estate, which accounts for nearly half of Finland's annual volume of carbon dioxide emissions. Stricter energy efficiency requirements and regulations on the use of renewable energy in new constructions will only gradually reduce the total energy consumption of Finland's building stock.

Measures aimed at broadening professional knowledge and raising awareness in the construction sector, specifically research and development programmes, tend to be more effective than prescriptive measures. Voluntary codes and practices based on R&D programmes rapidly become established throughout the profession. The proliferation of life-cycle analysis in the construction industry, the administrative sector and, most of all, among users and occupants of buildings, will hold the key to waste reduction, more efficient use of energy and raw materials, and improved durability, reparability and adaptability of

¹A 'cluster' is an economically significant centre of excellence made up of closely affiliated enterprises and sectors of industry. A cluster is characterized by close cooperation. The 'environmental cluster' refers to more than just a league of inter-related product groups; it is a core competitive asset for the national economy.

buildings and construction components.

2.2.3 Products

The scope of environmental impact assessment has come to embrace not only industrial emissions, but the combined environmental effects of products and production methods at each stage of product's life cycle. Up to now, consumers have primarily assessed products on the basis of their price and quality, but eco-friendliness is rapidly becoming an equally decisive criterion. In accordance with the principles of life cycle analysis, an environmentally friendly product is defined as one that uses fewer natural resources and causes less environmental pollution than other commodities serving the same function. Reducing environmental effects throughout the whole life-cycle of the product means lengthening the product's life span, replacing hazardous substances with less harmful ones, reducing the consumption of raw materials and energy, favouring renewable raw materials, and making provisions for recycling in the product's planning stages.

Voluntary agreements that either supplement or promote the implementation of official rules and regulations provide an effective means of meeting the growing challenges of environmental protection. Voluntary agreements such as this have been concluded in Finland on the reduction and recovery of packaging waste, the phase-out of CFCs, the recovery of used tyres and the conservation of energy.

There are many opportunities yet to be tapped in the development of eco-friendly products and services. Production based on energy-saving technology, waste prevention, reuse and recycling could be used as a means of promoting employment, while also supporting the attainment of environmental objectives. The use of natural resources could be reduced and new job opportunities could be created by, for example, renting consumer commodities instead of selling them outright, and by promoting the consumption of locally produced goods and services. At the same time, this would promote the regional creation of new jobs in small enterprises.

2.3 ENERGY ECONOMY

The Council of State's Report on Energy Policy submitted to Parliament on June 3, 1997, outlines Finland's strategy on sustainable energy economy. As stated in the report, the aim of Finland's energy policy is to create conditions in which the national energy supply can be secured at competitive rates, while keeping environmental emissions below the limits set forth in international obligations. This, as the report states, is to be achieved using economic instruments and market mechanisms in a manner that supports national economic policy and employment policy. A further goal is to expedite the development and commercialisation of energy-saving technology and technology based on the use of renewable energy sources. For reaching this objective, the Council of State takes national measures and works within the Council of the European Union and in international energy organizations in order to prepare an integrated selection of means to serve the objective. The Council of State's energy strategy is focused on specific fields of action.

In the future, national energy policy must increasingly be harmonised with international development. Because of the significant role of energy policy, one of the Finnish Government's key international tasks is active contribution to the formulation of international rules that would also support the Finnish goals.

Finland, as a new member of the European Union, is currently engaged in the process of negotiating new terms of international trade. Along with trade deregulation, this has fundamentally reconfigured the international context of Finnish energy policy.

In its White Paper on energy policy, the EU Commission stresses the crucial impact of energy economy on

the Union's key objectives: completion of the Single Market, continuance of sustainable economic growth, and assurance of employment and citizens' welfare. The attainment of these objectives is affected by the general competitiveness of energy supply, the measures to secure its availability and environmental protection.

The greatest challenge for Finland's national energy policy is how to succeed in fitting together the various goals that conflict with each other. These goals include, in particular, the guaranteeing of the availability of energy at internationally competitive rates and the restriction of greenhouse gas emissions. If successful solutions are to be found, far-reaching contractual agreements must be reached through international cooperation.

2.3.1 Principles of energy policy

Energy is an indispensable industrial input and a vital commodity in modern society. A varied and sufficient supply of energy is crucial for industry, services and private households alike. Unforeseen interruptions in supply or sudden price jumps are liable to disrupt seriously the normal functioning of society. The production and consumption of energy furthermore presents an acute environmental problem.

As economic activity and affluence grows, so does energy consumption and the attendant supply-related and environmental problems - unless systematic, long-range action is taken to divert this path of development.

By the same token, disruptive or poorly timed regulation of energy policy can shake the foundations of an economic policy which is aimed at stable and sustainable economic growth which, in turn, is a vital precondition for reducing unemployment.

Energy policy is an intrinsic part of national policy on trade and industry. Where trade and industry are concerned, the government authorities are responsible for ensuring that enterprises based in Finland have every opportunity to maintain and improve their international competitiveness.

Various considerations need to be reconciled in the implementation of energy policy: the economic growth that in an open market economy, a climate policy that supports the aims of sustainable development, a range of other environmental issues as well as the need to secure a sufficient and varied energy supply. All this calls for a long-range approach and a clear strategy.

An energy strategy that supports sustainable development is one that requires buyers and suppliers of energy to comply with long-term objectives formulated on the basis of overriding public interests. The main function of energy policy is, then, to present suppliers and consumers of energy with a set of clear and adequately stringent parameters within which to steer the production and consumption of energy on a long-term basis. Decisions related to energy policy should accordingly be based on comprehensive consideration of a wide range of issues, including international perspectives.

The structure of the energy sector is slow to change, and the broad lines of energy policy have long-term effects. It stands to reason, then, that energy policy should be formulated for a long-range time frame. For this reason, the Government Report on Energy Policy examines the operating environment, objectives, measures and effects of Finnish energy policy over a time span of 20-30 years. Major changes to energy production systems can only be put into effect gradually, and they must be prepared well in advance.

All available steering measures are being applied in the implementation of Finnish energy policy, with the main emphasis on economic instruments, technological advancement, official regulations and high-profile participation in international cooperation.

2.3.2 Sustainable development, climate change and environment

The goals of energy economy (efficient use of energy, energy conservation and increased utilization of renewable energy sources) conform to those of sustainable development and contribute, on their part, to slowing down climate change and preventing and reducing adverse environmental impacts.

The most difficult aspect of climate change to combat is the rapid accumulation of greenhouse gases in the earth's atmosphere and the resultant acceleration of the greenhouse effect. Most of these greenhouse gases originate from energy production and transport in the industrialized countries. Securing an adequate energy supply for the growing global population and the increased greenhouse gases to which this will give rise present a threat to the earth's climatic conditions.

The measures that are usually employed to combat environmental hazards have limited application in efforts to slow down climate change. The only genuinely effective means of slowing down climate change is to find ways of reducing energy consumption and to wholly switch over to energy sources that generate zero carbon dioxide emissions. Ultimately, all energy-consuming human activity needs to be reduced.

Because the greenhouse effect is a global phenomenon, slowing it down will require a concerted effort and solidarity from the entire international community. Needless to say, it is difficult to reach international agreement on "burden sharing" when it concerns measures that stand to fundamentally affect national economic growth prospects. This partly explains the great difficulties encountered in attempts to implement the United Nations Framework Convention on Climate Change concluded in Rio de Janeiro in 1992.

The principal goal of the Rio Climate Convention is to stabilize the content of greenhouse gases in the atmosphere to a level that will prevent human action from having an adverse impact on the climate system. The first step is for the industrialized countries to curb emissions and to create sinks and reservoirs for removing greenhouse gases from the atmosphere. In later stages, a substantially greater cut will need to be made on the present level of emissions. Finland is accordingly working towards a long-term international strategy for emission control.

Carbon dioxide emissions are rising rapidly in the developing countries; in time, they will exceed those generated by the industrialized countries. It is therefore crucial to expedite the transfer of emission-reducing technology from the industrialized countries to the developing world.

A significant step was taken towards the reduction of greenhouse gas emissions at the third meeting of the UN Framework Convention on Climate Change held in Kyoto in December 1997. Following a two-year round of preparatory negotiations, a protocol was finalized in Kyoto charting a course for the reduction of greenhouse gas emissions in the developed countries.

The Kyoto Protocol binds the developed countries to an overall reduction in greenhouse gas emissions averaging more than 5%. The target for the EU and its Member States is an 8% reduction on 1990 levels during the Protocol's binding period, 2008-2012. The corresponding country targets for the United States and Japan are 7% and 6%, respectively. The Protocol comes into force when it has been ratified by 55 signatories to the Framework Convention on Climate Change and when those 55 countries account for at least 55% of the 1990 level of developed-country carbon dioxide emissions.

It is significant from Finland's viewpoint that the EU is entitled to share its 8% target between its Member States in line with internal EU agreements. In drawing up these agreements, special attention must be paid to each Member State's current circumstances, endemic features and capacity for sustainable growth. EU-wide policies and a coordinated approach will be critically important towards achieving the EU's 8%

target.

However the EU burden ends up being shared, Finland will in any case be required to fulfil stringent obligations, requiring at the very least Europe-wide and national measures in all key sectors of the economy to reduce greenhouse gas emissions before 2008-2012. It is vital for Finnish trade, industry and society as a whole that our national measures and the EU's united actions distribute the burden equitably between the EU's Member States.

If sustainable development is to be attained, local and regional environmental problems must not be allowed to escalate out of control. Combustion-based energy production and transport are a notorious source of emissions. As far as acidic emissions are concerned - a much-publicized problem of recent decades - a clear improvement has been achieved in the industrialized western countries. Finland alone has achieved a reduction of 80% on the 1980 level of sulphur emissions. Nitrogen oxide emissions have also been cut, but a further reduction is still imperative. For a large part of Finland, acidic deposits still exceed the critical load, a problem which is largely attributable to transboundary pollution. Action is being taken to curb transboundary pollution through international cooperation.

Threats to biological diversity and environmental degradation caused by harmful emissions, waste and noise are easier to detect and prevent than climate change. However, public concern about these problems, particularly at local level, has made it increasingly difficult to find satisfactory locations for nationally important energy supply plants and other related constructions.

2.4 REGIONAL STRUCTURE, URBAN STRUCTURE AND TRANSPORT²

Heavy out-migration from some communities may result in the underuse or disuse of existing, fully operative infrastructures. At the same time, new housing, services and engineering need to be constructed in areas of net in-migration.

Regional development policy aims to stabilize this imbalance. The pressure to migrate is being relieved by supporting regional development, promoting enterprise and creating jobs in those regions suffering most acutely from net out-migration and unemployment. Urban and rural policy is designed to address the specific problems of each region, and interaction between urban and rural areas is being promoted. Migration to urban areas for reasons other than already secured employment is a fairly new trend in Finnish society, which may result in personal income losses or, worse, social exclusion.

Basic services are in reasonably good supply all over Finland. Roads, power networks and telecommunications have nationwide coverage. The quality of the urban environment is good by international standards. The urban structure offers excellent opportunities for recreation in nearby parks and surrounding woodlands. By virtue of 'everyman's right', all members of the public have unrestricted right of passage in the countryside and forests. The healthy urban structure, the close proximity of nature and the good availability of services in Finland's urban communities will continue to be important in the future, too.

Urban communities, being the daily environment in which people live, have a considerable influence on the physical, psychological and social well-being of the population. Social equity is promoted by an

²'Regional structure' refers to the nationwide distribution of human settlements and the transport infrastructure and other basic networks connecting them. 'Urban structure', in turn, refers to land-use distribution, transport infrastructure and other basic networks within a particular community in which daily commuting takes place.

efficient urban environment which caters for the needs of different population groups. High construction standards and careful upkeep of existing building stock contributes to the quality and amenity of residential environments. A pleasant, demographically varied urban environment which fosters social well-being helps to promote security and the prevention of social exclusion.

A distinctive feature of built-up areas in Finland is urban sprawl, which shows in the sparse structure of human settlement and the wide separation of residential communities and workplaces. Because of urban sprawl, development and engineering infrastructure is dispersed across wide expanses of land, resulting in unnecessary cost and, given Finland's small population, in underused or inadequate services. Urban sprawl may cause fragmentation of ecologically important habitats and undermines the economic viability of public transport services.

Changes in urban structure are usually associated with factors which influence people to relocate to a new community, such as the degree to which the location offers a pleasant environment in which to live, high housing costs in major urban centres, municipal land policy and changes in the structure of retail trade. The form of transport chosen by commuters is influenced by a variety of factors, such as convenience, cost and the quality and availability of public transport services.

The existing urban fabric can be filled out and integrated with new areas in such a way as to ensure that convenient access is arranged between housing, services and workplaces by means of public transport, bicycle routes and pedestrian walkways. When new areas are developed, a sufficient quantity of land must be reserved for recreational usage and special care must be taken to preserve any sites of outstanding ecological importance.

Because of the human health risks of pollution, the structure of built-up settlements makes it extremely important to regulate emissions. Many important measures have been taken in the past few decades to improve environmental protection in urban communities. Major urban centres have district heating networks, and nearly two-thirds of the energy required for heating is generated as an offshoot of electricity production, which is a considerable proportion by international standards. Nearly all communities have municipal water and sewage networks and waste management services. Commendable progress has been made in environmental protection in industry and energy production. Be that as it may, it is possible, indeed imperative, to make further cuts to the nutrient load discharged into waters.

The environmental features of vehicles and fuels have improved. Low-emission fuels are currently dominating the market, largely thanks to environmentally differentiated fuel taxes. According to certain investigations, the charges and taxes paid by motorists in Finland provide comparatively good coverage of the estimated external costs they impose. Pricing can be used as a means of regulating the volume of traffic and choice of transport; indeed, the structure and regulatory potential of taxes and charges should be looked into in further detail. Public transport accounts for roughly 20% of all passenger traffic, which is a high proportion by international standards. Traffic jams are uncommon and, compared with many other countries, the air in Finland is clean, even in built-up areas.

All this provides a good opportunity to continue maintaining and developing a flexible transport infrastructure, which is crucial if we hope to connect job-providers and job-seekers more successfully than has hitherto been the case on Finland's current job market with its rising share of short-term employment. In any case, it is feasible and sensible to intensify measures to improve air quality and reduce noise pollution in urban areas.

The integration of regional, urban and transport planning is vital, particularly in long-term efforts to preserve biological diversity and reduce the use of nonrenewable resources, energy consumption and emission levels. The nationwide regional structure largely determines the developmental prospects of individual regions and the volume of long-distance passenger journeys and goods transports. The structure of urban regions and municipalities, in turn, influences the volume of daily commuting, whether

for the purpose of work or other errands, as well as the range of transport services available to commuters.

2.5 RURAL AREAS³ AND USE OF RENEWABLE NATURAL RESOURCES

Over the past 30-40 years, the number of people living in urban areas has risen to account for over 80% of the Finnish population, resulting in population depletion from remote rural areas in particular. There is substantial variation in the demographic structure of Finnish rural areas: near urban centres, the age and gender structure is in balance, but in remote rural areas, elderly people and, particularly, men, account for a large percentage of the population. As cities progressively extend their sphere of influence into the rural fringe, the line between 'urban' and 'rural' is becoming blurred: nearly 200,000 Finns live in a rural area but commute to work in cities. In 1993, rurally-based city commuters accounted for about 40% of the employed rural workforce. Rural areas have also gained importance as a recreational environment for city-dwellers.

The structure of rural trade and business has changed rapidly. Where primary production accounted for nearly 80% of rural jobs back in 1970, the figure now stands at only 20%.

Rural problems are chiefly associated with the changing structure of trade and business and the resultant changes in rural communities and their demographic structure. Because fewer jobs are available and rural communities are shrinking, services are dying out, resulting in increased out-migration from a large proportion of rural areas. The dwindling supply of services not only affects the rural community, but also those city-dwellers who spend their leisure time in the countryside. Housing and production facilities left empty because of out-migration are a non-productive resource which, if abandoned for good, can result in the disfigurement of Finland's cultural landscapes. Traditional rural landscapes are a valuable national asset with notable intellectual, cultural, historical, ecological and scenic value.

Finland's environment, clean, healthy, and of a high standard by international comparison, together with the present network of services in rural areas and the heritage value of our rural landscapes offer good prospects for rural development. Agriculture is critically important in terms of rural viability. Nevertheless, the diversification of other forms of rural trade and business is important for rural development, for instance through the promotion of rural micro-industries and various forms of small and medium-sized enterprises and by generally developing rural services. Cooperation and networking between enterprises is crucial in this respect. In the future, rural development can no longer rely exclusively on natural resources and forms of production exploiting them.

New job opportunities in rural areas can be subdivided into two groups:

- Forms of enterprise secondary to farming, such as rural tourism, mechanical wood processing (e.g. sawmilling and joinery), energy production utilizing domestic raw materials, processing of food products, horticulture, landscape gardening and fur farming.

³A rural area can be defined in a number of ways. In EU programme policy, it is broadly defined as a region characterized by certain rural features. In preparatory work done for Finnish rural programmes, however, rural areas and towns, except for "metropolitan centres" (35 in all), are subdivided into three categories: suburban rural areas (84 municipalities), rural areas proper (234 municipalities) and remote rural areas (107 municipalities). Communities classed as "suburban rural areas" are those in which a significant proportion of residents commute to work in urban centres outside their municipality of residence. "Rural areas proper" are those with their own thriving trade and business, including viable agricultural production, and "remote rural areas" are characterized by their sparse settlement and isolation from urban centres.

- Job opportunities independent of farming, such as care provider services, retail services, certain tourist services, subcontractor and partial delivery services, mechanical wood processing, other small and medium-sized enterprise, arts and crafts and teleworking opportunities offered by new information technology.

The total number of farms in Finland will continue to decline but the remaining farms will be larger, with the result that fewer labour inputs will be required in agricultural production. The age structure of farmers is a decisive factor influencing this trend. Nearly 30% of privately run farms actively engaged in agricultural production are owned by farmers aged over 55. In remote rural areas, the majority of farming families collect additional income, business revenues or pensions to supplement income from farming and forestry. The direct employment effect of forestry has likewise declined with the increased mechanization of felling methods.

By international standards, Finnish agricultural products are clean and healthy, and could be developed into a competitive product with considerable export potential, assuming that an efficient product chain is established and marketing is handled efficiently. Both conventional and organic farming methods require further development, the quality of products processed from Finnish farm goods should be improved, and consumers need to be provided with more information about Finnish food products and farming methods. The food industry is beginning to pay more attention to the origin of raw materials, and quality assurance systems are being instituted to certify the quality and ethical status of products and production methods.

The proportion of Finnish farms that have switched over to organic farming methods has increased rapidly, and their combined field area now stands at about 100,000 hectares, representing 5% of Finland's total cultivated land area. Further development is needed in organic farming, the processing of organic farm goods and their marketing.

The key challenge for environmental protection in agriculture is to reduce environmental loads which contribute to the eutrophication of waters. Further cuts should also be made in emissions from fish farms. Rural habitats and agriculture play an important role in the preservation of biological diversity. Including environmental protection among the stated objectives of programmes partly funded by the EU is an effective means of furthering environmental protection in Finland's rural areas.

Forestry and the wood processing industry remain the founding pillars of the Finnish economy. The wood processing industry accounts for about one-third of Finland's net export revenues. Finland's forests have considerable significance for the whole of Europe: the combined area of Finland's and Sweden's forests makes up half the entire forest cover of the EU region.

Over the past decades, Finland's forests have grown at a more rapid pace than they have been felled, which offers good potential for enhancing the utilization of timber resources. Various forms of enterprise capitalizing on timber resources could be developed in rural areas. This naturally entails that the long-term timber yield of forests is safeguarded through responsible forest management and various other measures. Forest management, in turn, offers much-needed job opportunities and a ready supply of timber that can be used as a source of energy. The utilization of timber yield from forest thinning should be augmented in applications such as the chemical wood processing industry. Mechanical wood processing and timber construction are sectors dominated by small enterprises which procure their raw materials locally. The development of these sectors therefore has considerable local and regional significance. In recent years, an intensified effort has been made to secure an adequate supply of domestically produced specialty timber grades for the joinery industry. The efficiency of the specialty timber market should be developed, for instance by setting up a timber exchange. Finland is currently in the process of instituting a forest certification system. The potential offered by the new certification system should be exploited to the fullest in the marketing of Finnish timber and timber products.

Finnish forest legislation and forest management directives provide an excellent basis for the proliferation

of sustainable forestry practices. Forest owners need to be provided with ongoing training and advisory services if the present standard of forest management is to be maintained and improved and if sustainable forestry methods are to become a standard practice in privately-owned forests. The diversity of forest habitats and species can be safeguarded especially through forest management planning that takes into account the diverse utilization of forests and which enables participation by various interest groups.

Rural areas can be revitalized by diversifying the utilization of renewable resources. Forms of business capitalizing on Finnish nature and its scenic potential, such as rural tourism and eco-enterprise, as well as rural holiday housing, will acquire heightened importance in future rural development. Finland's ample forests and waters offer promising potential in international competition for tourism. Finland, moreover, has a larger number of islands than any other country in Europe, which again offers opportunities for enterprise and distinctive forms of tourism. Using and preserving these advantages will entail the diligent upkeep of nature, landscapes and built environments in parallel with the development of new tourist services. The range of available services can be diversified by, for example, capitalizing on the commercial potential of various forms of nature-related recreation, which can, as a result, gain economic significance. The business prospects of tourism and eco-enterprise should be improved by developing the necessary support services, such as water supply and waste management.

2.6 RESEARCH AND EDUCATION

The knowledge base required for sustainable development needs to be diversified and strengthened. For now, there is not enough information available on the precise meaning of ecological, economic, social and cultural sustainability and the ways in which these dimensions interact. Multidisciplinary research can be utilized for comparing future social models, creating strategies of change, and for promoting the practical implementation of sustainable development. The necessary research will call for extensive national and international cooperation.

Social institutions and decision-makers must respond to changes in our operating environment and they must provide incentives for change in economics, technology and human behaviour. The key question is: what kind of mechanisms and operating models are needed to achieve the required changes?

Today we know more about the limits on human activity imposed by the depletion of natural resources and nature's carrying capacity, but more information is still needed on the ecological limits of sustainability. Scientific research can yield information on wide-ranging environmental problems, such as climate change, and their effect on the state of Finland's environment. More facts are needed, however, on their effects on the future prospects of forestry and agriculture. The economic and social effects of environmental change must be evaluated on the basis of multidisciplinary research collaboration.

Sustainable development means utilizing economic, human and natural capital sustainably and efficiently, while at the same time making provisions for their future accrual. The concept of 'national assets', and particularly the definition of 'capital', is being broadened in international discourse on terminology related to sustainable development (such as in World Bank publications). Concepts such as human, social and natural capital have emerged alongside that of man-made capital. Further theoretical and empirical research is needed on the precise meaning of these different types of capital reserves, their scarcity, and ways in which they can be maintained and enhanced. A further issue that needs to be investigated is the extent to which certain types of capital can be supplemented or replaced by the use of an alternative form of capital.

Concepts such as 'natural resource productivity', 'resource throughput' and 'eco-efficiency' are currently being developed and employed in relation to environmental economics. These concepts are designed to help society monitor the precise flow of resource throughput in the national economy and to provide tools for developing economic policy and technology. More detailed information is needed, however, both in

Finland and globally, on targets for resource productivity, society's realistic potential for improving eco-efficiency and the envisaged time-span this would require. Finland should formulate a more detailed system of material flow accounting and this should be incorporated as part of the national accounting system.

Innovations and technological progress offer promising potential for the advancement of sustainable development. Environmentally sound technology must be promoted at every opportunity. At the same time, market-driven means of stimulating demand for new technology and innovation must be found. Legal provisions and other regulatory instruments and incentives can be employed to steer market mechanisms.

Relatively comprehensive and broadly based research on sustainable development is already under way in Finland, particularly in natural sciences, engineering, agriculture, forestry and health. Research funded by the Research Council for the Environment and Natural Resources of the Academy of Finland is almost exclusively devoted to sustainable development. Many other research programmes funded by the Academy of Finland likewise incorporate research on the parameters, prerequisites and instruments of sustainable development. Research on the requirements, advancement and monitoring of sustainable development is also being conducted in several university departments and government research institutions. Sustainable development is also well to the fore in research funded by the Technology Development Centre of Finland (TEKES) as well as other technology-related research projects.

A research programme was launched in spring 1998 with the aim of advancing environmentally sound technology and strengthening the Finnish environmental cluster. Most of the funding allocated for the programme will come out of a supplementary research appropriation decided on by the Finnish Government in 1996. Other key research projects related to sustainable development and coordinated by the Academy of Finland include Finnish Biodiversity Research Programme (FIBRE 1997-2000), Finnish Research Programme on Environmental Health 1998-2001 and Research Programme for Urban Studies 1998-2000.

The Finnish Government has augmented its research budget for 1997-1999 by one-quarter. The research budget for 1999 alone is FIM 7.5 billion. Combined with supplementary funding from private investors and allocations made under earlier Government decisions, the total sum of research funding will rise to 2.9% of GDP. This extra funding will provide an invaluable boost to research activities and it will enable Finland to make a pioneering contribution to environmental technology and sustainable development.

The rising volume of information that is being produced on sustainable development presents a challenge of its own for training and education. Future education requirements will be determined by the standard of environmental expertise needed by society.

Sustainable development objectives are included in the Finnish education system's national core curriculum. Objectives formulated for different schools and educational activities will be designed not only to support learning, but also to prove useful in everyday life. Fostering knowledge of the environment, promoting local interaction, and enhancement of expertise are vital aspects of the work done by schools and other education institutions. Succeeding in this work will call for broad cooperation between education institutions and experts of various disciplines, particularly those of environmental research.

An important function is served by basic and follow-up occupational training and by the transfer of new information from research into work and education. It is foreseeable that today's professional qualifications will need to be reassessed in the future, and extensive supplementary training will probably be required. It is also necessary to begin research on the teaching and learning processes of sustainable development. Methods of assessing the efficacy of environmental education and training are being developed.

3. PRINCIPLES OF PROGRAMME IMPLEMENTATION, MONITORING, AND ASSESSING THE PROGRESS OF SUSTAINABLE DEVELOPMENT

3.1 Implementation of the programme

The Finnish Government Programme for Sustainable Development will be put into effect by the ministries and other units of public administration. It is hoped that the lines of action described in the programme will also be followed by local authorities and the private-sector.

Attaining the objectives detailed in this programme will call for broad-ranging measures embracing many different sectors of society and cooperation between various implementing bodies. Action taken by private citizens and non-governmental organizations will also have an important contributing impact. The programme is also expected to provide a basis for political and social debate on sustainable development.

It is hoped that different social actors will assess the framework policy, strategic objectives and lines of action described in this programme and consider ways of putting them into effect using existing means at their disposal. Further research and coordinated planning will be essential to support the programme's implementation.

It should also be ensured that actions taken and the combined impact of different measures do not result in any undesirable side effects or conflict between the various dimensions of sustainable development. It is therefore important to openly assess various alternative measures and courses of action.

Many institutions and organizations have formulated their own programmes of sustainable development. It is essential that dialogue be promoted between the ministries and other social actors so as to establish links between different programmes, to encourage commitment to measures promoting sustainable development, and to intensify cooperation. The ministries will initiate any necessary pilot projects and other initiatives in cooperation with various collaborating bodies.

The implementation of the Finnish Government Programme for Sustainable Development is supported by the National Action Plan for Biodiversity in Finland (1997-2005) formulated by the National Commission for Biological Diversity.

3.2 Monitoring the programme

Progress towards the implementation of sustainable development in different administrative sectors should be monitored both in Finland and internationally, and the impact of this programme in the work of different administrative sectors should be evaluated.

One of the main targets which the Finnish National Commission on Sustainable Development has set for itself is to monitor the progress of sustainable development projects in various administrative sectors up to the year 2002 and to compile related progress reports.

Each administrative sector will submit a report to the National Commission on Sustainable Development by summer 2001, outlining their progress and the impact of the programme within their field of jurisdiction. The reports will also assess the need for follow-up measures and any revisions that may need to be made to the programme.

A general evaluation will be made of the implementation and efficacy of the different sustainable development programmes and strategies that are being put into effect by various organizations and institutions. The Commission on Sustainable Development will monitor the progress of sustainable

development and the implementation of these various programmes, and extra-governmental actors are asked to assess the implementation status of their own programmes and sustainable development in general by summer 2001

Improvements need to be made to the methodology, terminology and content of methods for assessing the various dimensions of sustainable development and the connections between them.

The Special Session of the UN General Assembly (UNGASS) on sustainable development in 1997 set the target that all countries should formulate a programme of sustainable development by the year 2002. The next follow-up to the United Nations Conference on Environment and Development will be in 2002. On the basis of the reports submitted by various administrative sectors and other institutions, as well as other preparatory work, an overall assessment will be compiled on the efficacy of the programmes and the status of sustainable development in Finland for the UNCED follow-up.

3.3 Assessing the progress of sustainable development

Methods of assessing the progress of sustainable development are being devised using new national indicators which are currently under development; existing methods used in the national accounting system will also be applied. Internationally recognized assessment methods (UN, EU and OECD indicators, etc.) can also be used where relevant.

'Natural Resources and the Environment', a review published in conjunction with the State Budget, will disseminate information and serve as an instrument of government policy on sustainable development.

4. EFFECTS OF THE GOVERNMENT DECISION-IN-PRINCIPLE

The Finnish Government Programme for Sustainable Development is designed to promote ecological sustainability and the economic, social and cultural preconditions for achieving this end.

In terms of ecological sustainability, the primary goals of the programme are to reduce the use of nonrenewable resources, to preserve nature's generative capacity and ecological values, and to generally improve the condition of the environment. The programme also proposes lines of action for solving far-reaching environmental problems through international cooperation. Improving the condition of the natural environment and the environments in which people live also has beneficial consequences for human health.

In striving to achieve social and cultural sustainability, the programme is designed to equip society with the skills and knowledge required for meeting the challenges of sustainable development, thereby also generally improving social well-being.

With respect to the target of economic sustainability, the programme is designed to improve Finland's economic competitiveness and employment and to reduce the environmental burden of production and consumption.

This programme was formulated on the premise that no separate state appropriations or additional funding from the State Budget will be required for the programme's implementation.

Because the framework policy, strategic objectives and lines of action described in this programme are relatively abstract, it would be premature at this stage to make any assessment of its precise economic effects.

The basic aim of this programme is for all key sectors of administration and trade and industry to pursue the goal of sustainable development in all their activities. The more specific social and economic outcomes of the programme will be assessed at a later stage after it is put into effect in each administrative sector. Through systematic, long-range planning, both human and economic resources can be utilized and targeted more efficiently.