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**TOWARDS SUSTAINABLE CHOICES
A NATIONALLY AND GLOBALLY SUSTAINABLE FINLAND**

Submitted by Statistics Finland



PRIME MINISTER'S OFFICE
FINLAND



Towards sustainable choices

A nationally and globally sustainable Finland

The national strategy for sustainable development
Prime Minister's Office Publications | 7/2006



SUOMEN KESTÄVÄN
KEHITYKSEN TOIMIKUNTA
FINLANDS KOMMISSION
FÖR HÅLLBAR UTVECKLING
FINNISH NATIONAL COMMISSION
ON SUSTAINABLE DEVELOPMENT

Towards sustainable choices

A nationally and globally sustainable Finland

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Abstract

The vision of the National strategy for Sustainable Development is to assure well-being within the limits of the carrying capacity of nature nationally and globally. The objective is to create sustainable well-being in a safe and pluralistic society that promotes participation, and in which all people take responsibility for the environment. The vision guides both short and long-term activities, which serve to help various actors select solutions that observe the principles of sustainable development. The starting point is that the key guidelines of the Strategy form foundation for drafting Government and policy programmes. The timeline for the targets is beyond current generations, extending until about 2030.

From the Finnish perspective, the most significant development trends and challenges of sustainable development are associated with climate change, adaptation to rapid global economic changes, and demographic changes. Globally speaking, the most important challenges are, in addition to climate change, related to global poverty and inequality as well as population growth. These global challenges also reflect upon Finland. Sustainable resolution of the national and global challenges requires simultaneous and mutually supportive short and long-term policy actions on the Finnish, EU and global level.

According to the Strategy, society will be actively developed so that Finland can flexibly adapt to the changing global operational environment and cultural diversity. Success in a changing world requires Finland to develop further as a knowledge and innovation society which promotes the utilisation and development of national strengths: education and know-how, technology, good governance, equality, a high level of environmental protection, and the sustainable use of its natural resources.

Strategy and policy aimed as sustainable development particularly strengthens the innovation and change management capacity of citizens and the society. Renewable natural resources are used for economic activity and increasing human well-being so that they are not depleted but are renewed from one generation to another. Non-renewable natural resources will be utilised as eco-efficiently as possible. When operating in such a manner, the present generation will not endanger the possibilities of future generations to live a good life in a sustainable society.

Keywords

Sustainable development, environment, natural resources, sustainable communities, wellbeing, economy, international cooperation

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FOREWORD

The characteristic feature of the Finnish national sustainable development policy is a wide-reaching participation of various societal actors and parties both in the definition of the contents and implementation of the measures. At the same time, sustainable development has gradually become part of mainstream politics. International evaluations seem to indicate that our policy is on the right track. Our approach is already referred to as the "Finnish model", in which broad-based, multi-stakeholder participation is combined with high-level political leadership. In the Finnish model, the Government, civil society and business life are engaged in an open dialogue on the sustainable development policy.

Since the late 1980's, Finland has strived to enhance the role of sustainable development in mainstream politics. The Finnish National Commission on Sustainable Development has been working continuously since 1993. Led by the Prime Ministers, it has brought into the limelight of national debate several important themes of sustainable development, acted as an interpreter between national and international sustainable development trends and supported the work carried out by various actors. A discussion forum open for the different groups of actors has also been seen as a valuable factor building up national integrity. What has been considered a particular value is the fact the very core of the Government takes part in the Commission's meetings to put forward their views and to respond to questions presented by the civil society.

As a clear development trend in the sustainable development policy can be regarded the fact that the social, cultural and economical aspects of sustainable development have increasingly gained foothold beside environmental considerations. In the planning of policy measures, we expect their mutual and mutually supportive interaction. We could say that the time is ripe for preparing a strategy that takes the different dimensions of sustainable development in consideration in equal measures.

We in Finland have found it important to include the perspective of sustainable development in each and every policy. This principle also was a central part of the commitments approved in the World Summit on Sustainable Development in Johannesburg in 2002. At the practical level, in Finland this has meant an attempt to include internationally agreed guidelines on sustainable development

in the strategies and action programmes of the various sectors of administration. In this we have been extremely successful. Integration has helped the various administrations to commit to promoting sustainable development and increased the commitment of the sectors to sustainable development. In more concrete terms, the principle of sustainable development is reflected in a number of instruments, such as legislation, taxation or environmental impact assessments.

In my opinion, the starting point for the national strategy work was quite ambitious: to prepare a genuinely national policy document that would take the opinions of various actors and parties in consideration and which would pay attention to all dimensions of sustainable development as fairly as possible. Through this work on a sustainable development strategy, an opportunity was created for the various parties to take part and have an influence on outlining future policy alternatives in interaction with one another. In my opinion, the national sustainable development strategy is an excellent proof of the preparedness of the Finnish society to face new international and national challenges. It has also ensured the commitment of the various actors to work in which the process certainly is as fruitful and significant as the final document you are now holding. It is important that also in the future, we will play a pioneering role in the sustainable development policy.



Matti Vanhanen
Prime Minister
Chairman of the Finnish National Commission
on Sustainable Development 2003–

PREPARATION OF THE STRATEGY

In its meeting of December 2004, the Finnish National Commission on Sustainable Development decided to launch a process aiming at a new national strategy for sustainable development. To prepare this strategy, a broad-based multi-stakeholder Sustainable Development Strategy Group was established. The mandate of the Group was adopted in the Commission's meeting in March 2005. The task of the Strategy Group was to prepare for the National Commission on Sustainable Development a proposal for a national strategy for sustainable development by 31 May 2006.

The Strategy Group met 10 times between August 2005 and May 2006. In addition, a meeting with sustainable development researchers was organised. In September 2005, the National Commission on Sustainable Development together with the Parliament's Environment Committee organised an international strategy seminar.

Inside the Strategy Group, three smaller working groups were formed to draft basic documents associated with the protection and use of natural resources, well-being and sustainable economy. At the same time, experts from different branches were also heard. The Finnish national Indicator Network of sustainable development took part in the strategy work by identifying development challenges in the early phase of the work and by producing follow-up indicators based on instructions received from the Strategy Group during the process.

The draft strategy was submitted for an interim review to the March 2006 meeting of the Finnish National Commission on Sustainable Development, and to a wide consultation round in March-April 2006.

The Sustainable Development Strategy Group unanimously approved the proposal for a national strategy for sustainable development and its follow-up indicators at its meeting of 12 May 2006.

The Finnish National Commission on Sustainable Development adopted the Strategy Group's proposal for a national strategy for sustainable development and its follow-up indicators at its meeting of 13 June 2006. The decision was unanimous.

Composition of Sustainable Development Strategy Group

Presidium

Chairperson Martti Hetemäki, Under-Secretary of State, Ministry of Finance

Vice Chairperson, Antero Honkasalo, Environment Counsellor,
Ministry of the Environment

Vice Chairperson, Liisa Ollila, Ministerial Advisor,
Ministry of Social Affairs and Health

Members

Ministry of Trade and Industry

Risto Ranki, Deputy Director General

Deputy: Sirkka Vilkamo, Deputy Director General

Ministry of Transport and Communications

Raisa Valli, Senior Adviser

Ministry of Agriculture and Forestry

Environment Director Veikko Marttila

Deputy: Tarja Haaranen, Senior Adviser

Ministry of Education

Marita Savola, Director

Deputy: Pirkko-Liisi Kuhmonen, Senior Adviser

Ministry of Labour

Pekka Tiainen, Ministerial Adviser

Ministry for Foreign Affairs

Jukka Siukosaari, Head of Unit

Deputy: Jyrki Nissilä, Counsellor

Ministry of Finance

Heikki Sourama, Consultative Counsellor

Deputy: Päivi Valkama, Senior Budget Secretary

The Confederation of Finnish Industries EK
Riitta Larnimaa, Chief Policy Adviser
Deputy: Simo Pinomaa, Chief Economist

The Federation of Finnish Enterprises
Riikka Tähtivuori, Legal Adviser

The Federation of Finnish Commerce
Matti Räisänen, Adviser
Deputy: Ulla Rehell, Development Director

The Association of Finnish Local and Regional Authorities
Maija Hakanen, Manager for Environmental Affairs

The Central Union of Agricultural Producers and Forest Owners MTK
Markku Tornberg, Director
Deputy: Kurt Hemnell, Environmental Lawyer

Environmental Organisations¹
Leo Stranius, Friends of the Earth Finland
Deputy: Aleksi Neuvonen, Chairperson, Dodo – Living Nature for the Future

Finnish Youth Co-operation – Allianssi.
Ossi Heinänen, Youth Work Manager, the Mannerheim League for
Child Welfare
Deputy: Liisa Sahi, Development Manager, Finnish Youth Co-operation
– Allianssi

The Service Centre for Development Co-operation (KEPA)
Heidi Hautala, Member of Parliament, KEPA Board Chairperson
Deputy: Timo Lappalainen, Executive Director

¹ The Finnish Association for Nature Conservation, the World Wildlife Fund WWF, the Friends of the Earth Finland, the Finnish Nature League, the Finnish Society for Nature and Environment, and Dodo – Living Nature for the Future.

Trade Unions²

Matti Viialainen, Deputy Director, the Central Organization of Finnish Trade Unions SAK

Deputy: Outi Ervasti, Senior Adviser, the Confederation of Unions for Academic Professionals in Finland AKAVA

Regional representative

Maiju Hyry, Director of Programming, the Regional Council of Lapland

The Secretariat

Sauli Rouhinen, Environment Counsellor, Ministry of the Environment

Annika Lindblom, Senior Adviser, Ministry of the Environment

Asta Niskanen, Ministerial Adviser, Ministry of Finance

As regards the Chapter of Well-being throughout the life span in particular, the text was provided and the Presidium and Secretariat were supported by Kirsi-Marja Lehtelä, Planning Officer from the National Research and Development Centre for Welfare and Health STAKES.

The Presidium and the Secretariat held 13 preparatory meetings, in which the members of the Strategy Group Risto Ranki and Heikki Sourama as well as Kirsi-Marja Lehtelä from STAKES took part.

In the work on the indicators, Chairperson of the Indicator Network Jarmo Muurman, Senior Adviser from the Ministry of the Environment, Secretary of the Network Aili Pyhälä, researcher, and Tuomo Alhojärvi, non-military serviceman from the Finnish Environment Institute played a central role. Altti Moisala, a trainee from the Ministry of the Environment, assisted the Strategy Group and the Indicator Network in the final phase of the work.

² The Central Organization of Finnish Trade Unions SAK, the Finnish Confederation of Salaried Employees STTK and the Confederation of Unions for Academic Professionals in Finland AKAVA

SUMMARY AND KEY CONCLUSIONS

Vision and target framework

Vision

Assuring well-being within the limits of the carrying capacity of nature nationally and globally.

The objective is to create sustainable well-being in a safe and pluralistic society that promotes participation, and in which all people take responsibility for the environment.

The vision guides both short and long-term activities, which serves to help various actors select solutions that observe the principles of sustainable development. The starting point is that the key guidelines of the Strategy help form foundation for drafting Government and policy programmes.

Within the framework of the Finnish National Commission on Sustainable Development a process shall be initiated in which various bodies, in co-operation and separately, promote the proposals of the Strategy.

From the Finnish perspective, the most significant development trends and challenges of sustainable development are associated with climate change, adaptation to rapid global economic changes, and demographic changes. Globally speaking, the most important challenges are, in addition to climate change, related to global poverty and inequality as well as population growth. These global challenges also reflect upon Finland. Sustainable resolution of the national and global challenges requires simultaneous and mutually supportive short and long-term policy actions on the Finnish, EU and global level.

The timeline for the targets is beyond the current generation, extending until about 2030.

The following **principles, which apply to all dimensions of sustainable development**, direct the Strategy for Sustainable Development.

- The mutual dependence of the economic, ecological, social and cultural dimension of sustainable development.
- Extending beyond the current generation and the long-term nature of policies.
- Global, national and local consistency between various policy sectors.
- A strong scientific foundation and an approach based on the assessment of risks and probabilities.
- Strengthening of human resources by offering better prerequisites for sustainable choices and equal opportunities for individuals to attain self-fulfilment and influence society.

Sustainable development requires citizens and enterprises to make choices to support it.

Balance between the use and protection of natural resources

Climate change is one of the greatest threats to the sustainability of mankind and natural systems. The European Union has set a target of keeping the average global temperature at not more than 2°C above pre-industrial levels in the long-term. According to estimates by the Intergovernmental Panel on Climate Change (IPCC), this will require a downturn in global greenhouse gas emissions within 20 years, after which significant decreases will be necessary. Realisation alternatives will also be assessed in Finland, and a strategy will be drawn up for decreasing emissions in the medium and long-term as part of global efforts.

Finland is preparing for the changes to nature that will result from climate change by means of long-term national adaptation strategies. Finland is also preparing for the impacts of climate change that occur outside Finnish borders and is monitoring and preparing for the possible social and health impacts of climate change.

Finland works actively within the European Union and internationally to promote global co-operation so that human-induced climate change can be limited and preparations for the unavoidable changes in natural systems can be made. In international climate change negotiations concerning the time following the commitment period of the Kyoto Protocol, Finland, as part of the EU, supports application of the contractual arrangement that covers all countries that are essential in terms of mitigating climate change, in order to ensure the impact

of international climate policy. The objective is to link climate policy to all sustainable development policy and global reduction of poverty.

Mankind over-exploits the **planet's natural resource reserves**. At the global level, consumption of natural resources should be placed on a sustainable foundation. In this matter, Finland and other industrialised countries have a particular responsibility, and they must significantly reduce their economies' consumption of natural resources and environmental hazards.

The reduction of Finland's **biodiversity** loss will be halted by 2010, and favourable development of Finland's natural state will be established in the period of 2010–2016. Thus Finland will have the readiness to achieve a state of balance between the utilisation of nature and biodiversity in the long term. Finland's impact on retaining biodiversity at the global level will be strengthened through international co-operation.

The Finnish economy will grow while environmental hazards decrease. In order for this to be possible, in addition to limiting emissions, increasing attention will be focused on the environmental hazards resulting from material flows through society and on developing **material-use efficiency** in production and consumption. The public sector will function as an example by promoting ecological and socially sustainable choices in practice and in public procurement activities. Recommendations of Finland's National Programme to Promote Sustainable Consumption and Production will be implemented.

Use of **renewable natural resources** will be subject to pressure, particularly due to climate change and the increased demand for bio-energy. Renewable natural resources will be favoured in relation to non-renewable resources, but they may only be utilised within the limits of the capacities of natural systems. Efforts will be made to significantly increase the proportion of renewable sources of energy and biofuels over the next 10–15 years. International sustainable development criteria will be drafted for the production of bioenergy.

Non-renewable natural resources will be utilised as eco-efficiently as possible. An increase in the domestic use of raw materials is justified if the refinement process decreases global environmental load in relation to demand with consideration to the entire life cycle of the products. Corporate Social Responsibility will be emphasised, because the raw materials used by Finnish

industry and the consumer goods utilised in Finland increasingly come from other countries, and our products are consumed in other countries.

Since the material flows from fossil fuels place the greatest burden on the environment, Finland is consistently and purposefully reducing its coal intensity and examining how to end the use of environmentally burdening fossil fuels in the long term. The sufficiency and economically sustainable exploitability of oil are major challenges, even to the current generation. Systematic preparation for the future situation will make it possible to achieve other benefits in addition to climate change management as well.

The existing programmes and strategies for the protection of the **Baltic Sea** will be specified and implemented in order to turn ecologically, socially and economically harmful development in a positive direction. Finland will act initiatively with other countries in the Baltic Sea region and the EU to reduce nutrient emissions and the risks of sea transports.

An approach will be created by which the guidelines of the **Sami** Programme for Sustainable Development will be taken into consideration in the natural resource policy and land use planning in the Sami home region.

Sustainable communities in a sustainable regional structure

The starting point for the development of **regional structure** is the balanced development of resources in Finland's regional and community environments. Finland's objective is polycentrism, in other words strengthening a strong, cohesive urban network with functional work distribution so that various centres and regions support each other. A polycentric and networked regional structure will be used to help create economic benefits and secure the availability of urban-like services and functions in different parts of the country and, above all, utilising the potential of already existing structures and regions. In order to increase the appeal of Finland, centres of innovation activity and expertise will be created that are strong enough to attract growth enterprises and experts from abroad and capable of functioning as hubs of a polycentric regional structure. This will require state and municipal co-operation concerning infrastructure.

Regional development will be balanced by means of national and EU **regional and structural policy**. Development investments will be directed at development occurring on the basis of the strengths and background of the

regions. In particular, investment will focus on improving global competitiveness, strengthening the foundation of expertise, and improving the operational preconditions for enterprises. The EU Structural Fund Programmes will be utilised efficiently. Regions weaker in terms of development will be supported by strengthening their competence base and, in particular, by improving the operational preconditions for small and medium-sized enterprises by means of scaled regional policy subsidies.

The target is to attain **functionally diverse and structurally sound communities and a good living environment**. Land-use co-operation between the state and municipalities and regionally, between the municipalities will be improved. Co-operation will be used to attempt to utilise the existing building stock, infrastructure and services in the best possible way, ease the housing shortage in growth centres, slow the rise in housing prices, and support the opportunities to achieve a pleasant residential and operating environment.

Supporting entrepreneurship, promoting a diverse business structure and utilising the particular strengths of each region as well as promoting their sense of community and local culture will help increase the **vitality of rural areas**. A key starting point for rural vitality is ensuring the operational preconditions for agriculture and forestry. In particular, the areas of bioenergy production, the protection and management of nature and cultural landscape, and diverse promotion of domestic tourism can be of even greater importance to rural development in the future. Finland works actively in the EU towards the development of a common agricultural policy to better respond to the needs set by sustainable development.

The public sector has an important responsibility in terms of the realisation of regional and equal well-being. In order to ensure the **availability of public services**, a national municipal policy will be created to handle the balanced development of the municipal economy and to level out the differences between municipalities, with the target of ensuring good and equal availability of public services throughout the country. Co-operation between the public, private and third sectors in service production will be a necessity in the future as well.

A functional transport system is a basic requirement for society and interaction. Co-operation between the municipalities and the state will be deepened, and regional and social equality will be taken into consideration

when arranging transport and information society services. The competitive position of public transport, cycling and walking in relation to passenger cars will be improved. The competitiveness of the entire logistics system is important in terms of Finland's national competitiveness. Another target is to make goods transport safe, as efficient as possible, and harmless in terms of the environment.

The starting point for the planning of the transport system will be to minimise the need for traffic and reduce the adverse effects of transport. The objective is to increase the eco-efficiency of the present transport system and develop rail and public transport as well as information networks. Controlling the growth of transport will require a comprehensive approach, in which the demand for transport is actively influenced by traditional transport policy means as well as by economic instruments and informative measures, land-use planning, and assessing other socio-political decisions, especially the impact of economic, tax, regional, industrial, and housing policies on the demand for transport.

Well-being throughout the lifecycle

Society provides **active citizens** with equal opportunities for independent action, life management, and responsible action in society and the local community. Society is responsible for arranging basic services and basic social security. The **social security and service systems** must cover the entire lifecycle of a citizen, be socially just and economically sustainable in the future as well. The social security systems must encourage work and enable adaptation to changing conditions, as well as support individual solutions and spontaneous preparation for future needs.

A high employment rate is a key requirement for sustainable development. **Work** is an essential factor in the well-being of an individual, and a lack of work is one of the most significant risk factors for social exclusion. The structure of the labour market will be further developed so that it is worthwhile for an employer to offer work and worthwhile for an employee to accept that work. Development of working life will allow for employee well-being at work and the reconciliation of work and family life. By strengthening the positive aspects of work, developing the individual at work, supporting career development and innovativeness, and good leadership will make it possible to better ensure the success of enterprises and employee health and well-being in the rapidly changing working life of today.

Gender equality has not yet been realised in terms of salaries, job permanence, the costs of parenthood, and life expectancy, so determined and broad advancement of these matters is still needed. The gender perspective will be taken into account in all decision-making.

A national target in the future must also be a service and income transfer system that provides a strong framework for ensuring **intergenerational solidarity** based on the needs of different age groups. The aim is to ensure the well-being of children and young people and their growth and development into balanced adulthood, as well as the opportunity for educational and other corresponding choices on the basis of equality. Social assistance and service systems will be developed so that children and families are not subjected to inequality. An active ageing population is a resource in different areas of society, such as working life, volunteer and organisational work, caring for relatives, education, and the transfer of experience.

Prevention of social exclusion will be established as a normal part of activities in social, health, educational and employment policies. Special attention will be paid to long-term unemployment by means of the reform of active labour policy. Ultimately, pension solutions for seriously disabled long-term unemployed persons will be studied. Social assistance security and services will be developed in a more active direction, so that the system will not develop exclusion traps.

As young age groups decrease in size and the population ages, **service production** will be adapted to this change. This will also require open discussion of the limits to the social, educational and health services system, the roles of different actors in producing services, and the development of preventive systems as well as focusing of resources on the most effective services. In terms of the sustainability of the service system, it is essential to improve the capacity of the ageing population in the future, delay the need of the ageing for care, and focus services according to the care need.

Public health care services will focus on **preventive health policy**. Society provides opportunities for the spontaneous maintenance of health, and the target is for people to take increasing responsibility and interest in maintaining their health. In the future, there should be an extensive examination of how different social policy means could be used to implement reforms to promote

health. The opportunities for people to influence their own health and the factors that affect it will be improved.

Health threats caused by communicable diseases do not observe state borders. Health risks resulting from climate change are linked to climatic extremes, such as storms, floods and heat waves. Preparation for these health threats requires the co-operation of researchers and many authorities.

The characteristics of Finland's culture must be protected. At the community level, national inheritance and knowledge of other cultures increase stability and tolerance. Retention of cultural diversity within Finnish regions must be promoted, and the cultural perspective taken into account in all decision-making.

In the future Finland will be an even **more multicultural country**. Faster integration of immigrants and language acquisition is essential in terms of the well-being of immigrants, the balanced development of society and the economy. The target for immigrants of working age is their entry into working life and placing the competence and education of the arrivals at the disposal of Finnish society. In particular, the preconditions must be created for integrating young people of immigrant background into society.

The starting point in the development of a welfare society is broad democratic rights for society, individual freedom, freedom of speech, freedom of religion, political rights, and the further development of such rights. Sustainable development requires that citizens have equal opportunities to participate, bear responsibility and benefit from the increased choices resulting from development. Maintaining a conscious and active **values discussion** in society makes it possible for citizens to participate in determining the priorities of common issues.

The economy as a safeguard for sustainable development

Finland's objective in the future is also to retain its position as a **Nordic welfare society**, for which the good competitiveness of its national economy and a stable public economy provide the preconditions. Good employment, educational, health and social policy as well as a healthy environment lay the foundation for a stable society and thus strengthen the competitiveness of Finland.

The target is a **dynamic information society that takes advantage of opportunities** and has efficient production in terms of the environment. Finland's economic growth and well-being are based on successful enterprises, an open economy, strong human competence, and a high level of environmental protection. Finland's target is to offer enterprises and people an operating environment that attracts activity in Finland and from Finland in the future as well. This requires functional labour markets, an effective innovation system, sound basic structures and viable basic services as well as a good regulation environment.

Success in global competition requires specialisation, readiness for change and the **ability to take advantage of the national strengths**. Finland will utilise its own strengths, which are education, stable labour market relations, technology, a high level of environmental protection and good governance, access to welfare services and equality, and will invest in these in the future as well. Simultaneously, Finland has to provide developing countries with the chance to utilise their strengths.

In the future, Finland's economic success and well-being will continue to be based on **a high level of competence** and ensuring equal educational opportunities for the entire population. The challenge in terms of education is moving from the teaching of information to learning skills and creating new knowledge and innovations as well as searching for solutions. Attention will be particularly focused on ensuring that the structure of education meets demand in future decades. Simultaneously, lifelong learning for those already working must be developed.

Industrial policy will be used to develop the quality of the operating environment for enterprises, create an atmosphere that favours entrepreneurship, ensure access to markets for enterprises, and promote the growth of enterprises, particularly those in the start-up phase.

Ensuring a high level of income requires the continuous improvement of **productivity**. Good productivity development, in both goods and service production, requires that employee well-being at work and the incentives for the growth of human resources and innovation activities are sufficient. Taxation will be developed so that it supports doing work and commissioning work in Finland, promotes sustainable use of natural resources and attracts foreign investment and experts to Finland.

Ultimately, **public sector financing** depends on the employment of a sufficient number of the working age population. A 75 per cent employment rate is the precondition for a sustainable foundation for a welfare society. The financing base for the public economy will be improved by furthering well-being at work for people of working age, preventing loss of working capacity, quick access to education and graduation as well as lifelong learning. Controlled work-based immigration will also be needed to supplement the offering of labour in areas where there is a shortage of domestic labour.

Finland as a global actor and bearer of responsibility

Social, economic and environmental problems can, if they worsen, cross state borders, combine with each other, take new forms, and spread quickly to develop into regional or global security risks. The dependency of Finland's own internal and external security on the international situation has increased in pace with globalisation. **Finland will act constructively, actively and initiatively** on behalf of the broad realisation of sustainable development, democracy, freedom of speech, good governance, human rights, equality, the principle of constitutional state, and a functional market economy in the world. Finland will also strive to exert as much influence as possible on the decisions made in international relations and processes, which reflect on Finland and the security and well-being of Finns.

Strong international organisations and contractual arrangements will be needed to influence globalisation. A multilateral system must be based on responsible and accountable institutions and on co-operation between public institutions, markets and civil society actors. There is a need to increase the opportunities for developing countries to exert influence, especially in international financial institutions. Increasing the possibilities for democratic influence in terms of non-governmental organisations will also provide added value for the functionality and approval of the international system.

Finland will support **strengthening the United Nations** as an important multilateral co-operation organisation, for which the impact of decisions must be improved and the consistency of activities must be furthered. As part of UN reform, Finland supports the establishment of a United Nations Environmental Organisation. Finland also promotes the broad commitment of the world's countries to international agreements.

From Finland's perspective, it is particularly important to have stable development in our **neighbouring regions**. Joint efforts will continue and be condensed, especially in terms of blocking threats to the vulnerable environment of the Baltic Sea and Arctic regions and increasing environmental responsibility. Regional co-operation must also focus particular attention on developing infrastructure and logistics, energy co-operation, preventing communicable disease, and removing barriers to trade and investment.

For Finland, the **European Union** represents a significant channel for furthering the targets of sustainable development in the UN and other international organisations. In order for the EU to influence international decision-making in accordance with its importance, it must be strengthened internally. Furthermore, it has to find its place in the accelerating globalisation and international distribution of work. Finland will promote the continued improvement of the European Union's possibilities and ability to act as an initiator and an active actor in international development, human rights and environmental policies. Finland will also work towards ensuring that sustainable development and EU's competitiveness become clearer focuses of EU activities. Sustainable development must be more strongly integrated into all EU policy areas.

The mutual dependency of industrialised and developing countries has increased as a result of globalisation. Finland will strive to influence on behalf of **more just development of globalisation**, and the removal of poverty and inequality. Finland is committed to the UN's Millennium Development Goals, which include promoting peace and security as well as reducing poverty in various ways. Finland is committed to consistently furthering development policy goals in all areas of international co-operation and national policy that influence the position of developing countries. Finland is also committed to increasing its development co-operation contribution to 0.7 per cent of gross national income, as agreed in the UN.

Finland promotes the availability of **new technologies and information technology** in developing countries and joins forces with the private sector to find information and communications technology solutions that are suitable for developing countries and serve to further achievement of the goals of the Millennium Declaration.

Economic growth produced by private business activities functioning on a sustainable foundation is important to increasing well-being and jobs as well

as reducing poverty in all countries. Economic growth must serve the targets of **human well-being** without endangering the environment or biodiversity.

Supporting sustainable choices

Sustainable development requires citizens and companies to make choices to support it. This is affected by people's values and the opportunities for making choices. Strict regulation does not necessarily lead to the desired result, because it does not provide sufficient room for new, creative solutions. Although legislative control is still effective and necessary in many cases, new tools, such as economic instrument, to **encourage more sustainable choices** and spontaneous activity are needed to an increasing degree. However, internationally agreed rules must be observed. The policy instruments must also be acceptable to citizens.

In the future, education will include information and teaching concerning the formation of values and attitudes as well as sustainable choices. The importance of sustainable development will be strengthened in **educational policy** and in the basic and in-service education for teachers. Sustainable development must be made a priority in the strategies concerning the basic and early education, and a support for education is needed in the strategies of other administrative sectors and actors. Targets for development presented in the Strategy (2006) of the Finnish National Commission on Sustainable Development's Sub-committee for Education will be implemented in accordance with the adopted plan of action.

In terms of creating **innovations**, it is important to develop a know-how society, in other words, operating environments and strong centres of expertise that support the creation and application of new information. Skills related to the bottlenecks of the innovation system, such as risk financing, business competence, commercialisation and internationalisation, will be developed. Finnish enterprises need to learn new skills, especially in the areas of functionality, design and commercialisation of services. Changing inventions that support sustainable development into successful products on the market will be promoted and strong investment in research and product development will continue. Promotion of innovations in accordance with sustainable development requires consistent policy in different sectors, and the development of regulation so that it rewards innovation activity that supports sustainable development.

In terms of cost, Finland will use **the most efficient and effective policy instrument** for each specific situation. The steering of choices must observe strong scientific evidence and the precautionary principle, which is based on probabilities. The policy instruments must be developed systematically and patiently on both a national and EU basis. Co-operation and joint solutions within the European Union will make it possible to increase the impact of the economic instrument system and reduce the costs of adaptation resulting from new steering. The long-term target is to obtain agreement on the use of effective measures in international co-operation when responding to global environmental challenges.

Measures will be developed that reduce the use of non-renewable natural resources and environmental hazards as well as promoting recycling and the energy efficiency of products, their consumption and energy use. The possibilities to decrease subsidies that are harmful to the environment and sustainable development will be examined. **Economic instruments** provide the opportunity to promote sustainable production methods, consumer habits and lifestyles, make environmental steering more efficient and increase the cost-efficiency of environmental policy.

Implementation and monitoring of the Strategy

The Finnish National Commission on Sustainable Development approves the Strategy. The Strategy is valid until further notice.

The objective is to guarantee the **continuity of sustainable development policy**. The main responsibility for the guidelines and implementation of sustainable development lies with the Finnish Government, which will direct the work by means of government and policy programmes as well as the decisions-in-principle of the Finnish Government.

It is appropriate that the National Strategy for Sustainable Development be handled in all Parliamentary Committees in which the strategic guidelines apply to the sector.

The objective is for the sustainable development guidelines presented in the Strategy to be taken into account **in the programmes and strategies of various administrative sectors and in those of other actors** involved in the Strategy. Within the framework of the Finnish National Commission

on Sustainable Development, a process shall be initiated in which various actors, in co-operation and separately, promote the proposals of the Strategy. The comprehensive and Prime Minister-led activities of the Finnish National Commission on Sustainable Development will be ensured in the future as well.

Ensuring the **consistency of policy** between global, regional, national and local programme work is another target of Finland's sustainable development policy. Co-operation between different levels of administration will be improved and dialogue between them increased. The effects on the preconditions for regions and municipalities to make decisions that support sustainable development will be taken into consideration when making national solutions.

Citizens, municipalities, regions, various organisations and enterprises are actors whose choices have a decisive impact on the implementation of sustainable development. Sustainable development has progressed in many ways at the local and national level. The challenge at the **local level** is to make sustainable development work a part of municipal strategy work and the planning system as well as to link the **regional level** more closely to the sustainable development process.

It is important to ensure the **innovativeness of sustainable development policy** by means of networking co-operation and programmes of the administration, scientific and civil organisations, and economic life. The success of sustainable development policy will be monitored by methods that include national indicator work. The **sustainable development indicators** are developed and updated in the national indicator network between the different administrative sectors.

The National Strategy for Sustainable Development will be **assessed every two years**, and this examination will be linked to the assessment process for the EU Strategy for Sustainable Development. The Finnish National Commission on Sustainable Development will report to the Government on the results of the assessment.



Photograph by Sauli Rouhinen

1 BACKGROUND FOR THE STRATEGY WORK

1.1 National sustainable development guidelines

Finland was one of the first countries to compile its own programme for sustainable development in 1998. The Programme was written according to the Agenda 21 action programme approved in 1992 at the UN Conference on Environment and Development (UNCED) in Rio de Janeiro. The Government's Programme for Sustainable Development was aimed at ecological sustainability and creating the economic, social and cultural preconditions for achieving this end. It also presented strategic goals and lines of action for the most important areas of sustainable development. The ministries and other public administration organisations implemented the Programme.

The Finnish National Commission on Sustainable Development (FNCSO) asked various societal actors to draft their own programmes for sustainable development in close dialogue with the Government's programme work on sustainable development. The Confederation of Finnish Industry and Employers, Federation of Finnish Commerce, the Association of Finnish Local and Regional Authorities, the Sami Parliament, various non-governmental organisations, and the Central Union of Agricultural Producers and Forest Owners drafted programmes that were mainly approved in 1997.

The Finnish Government Programme for Sustainable Development was evaluated as a broad interactive process under the leadership of the FNCSO in 2000–2002. In addition to the administration, the stakeholder organisations that drafted their own programmes, among others, participated in the evaluation process.

Sustainable development in Finland has been promoted in the public and private sectors. Strategies and programmes for sustainable development have been drafted and actions evaluated in numerous administrative sectors, municipalities, organisations and enterprises. Furthermore, since autumn 2003 the Finnish National Commission on Sustainable Development has addressed key challenges concerning sustainable development policy in its theme meetings, which provide a good foundation for more comprehensive strategic guidelines³. Finland's

³ The themes of the meetings of the Finnish National Commission on Sustainable Development in 2003–2006 were: Trade, poverty and sustainable development; Finland and the long-term goal of climate change policies; Sustainable transport and mobility; Corporate Social Responsibility; Ecological tax reform; Reducing eutrophication in the Baltic Sea; Sustainable welfare from diverse forests; Biodiversity; Sustainable regional development; and Education for sustainable development.

National Programme to Promote Sustainable Consumption and Production (the so-called KULTU programme) was one of the first in the world to be completed in June 2005. In the programme recommendation, a long-term vision of an eco-efficient society is created and proposals for measures to improve well-being while reducing the burden on the environment are presented by the broad-based multi-stakeholder KULTU Committee. The FNCSD's Sub-committee for Education prepared a Finnish National Strategy of Education for Sustainable Development and its plan of action for 2006–2014. It was approved at the FNCSD meeting in March 2006.

1.2 International sustainable development guidelines

For the first time ever, the idea of sustainable development was recognised at a high political level at the UN Conference on Environment and Development held in Rio de Janeiro in 1992, and the governments of the world committed to promote sustainable development in their national activities and international co-operation. As a result of the Rio Conference, the world began to understand that uncontrolled economic growth, poverty and population growth have significant adverse effects on the global environment. Another major end result of the Conference was the common understanding that matters relating to environmental protection, economic growth and social, human welfare are essentially linked to each other.

In 2000, Finland committed to the UN's Millennium Declaration and achieving its common development goals by 2015 at the latest. Finland and 188 other countries approved the Declaration, which pledged to implement eight millennium goals: to eradicate extreme poverty and hunger, to achieve universal primary education, to promote gender equality and empower women, to reduce child mortality, to improve maternal health, to combat HIV/AIDS, malaria and other diseases, to ensure environmental sustainability, and to develop a global partnership for development.

The UN's World Summit on Sustainable Development (WSSD) was held in autumn 2002 in Johannesburg, where a political declaration and a plan of implementation covering commitments from the most important sustainable development sectors was approved. The main focuses of the programme were practical measures to support the UN goals aimed at eradicating poverty, measures for better management and use of natural resources and commitments concerning changes in production and consumer patterns. Furthermore, the

plan of implementation includes commitments linked to health, management of globalisation, trade and financing, and education.

The European Council approved the EU Strategy for Sustainable Development in Gothenburg in 2001. This complements and supports the EU's so-called Lisbon Strategy on competitiveness. The revised Strategy for Sustainable Development was approved by the European Council in June 2006. The key challenges in the revised Strategy are climate change and clean energy, sustainable transport, sustainable production and consumption patterns, management of natural resources, public health, social exclusion, demography and migration, and global poverty and development challenges.

The first Nordic Strategy for Sustainable Development, approved by the Nordic Prime Ministers and the Nordic Council, entered into force in 2001, and the revised strategy (Sustainable Development – New Bearings for the Nordic Countries) was approved in 2004. The Strategy defines the long-term guidelines for sustainable development until 2020 and describes the initiatives to which the Nordic countries are committed in 2005–2008. New themes in the revised Strategy are sustainable consumption and production and issues related to socially sustainable development.

1.3 Interpretation of sustainable development is changing

Sustainable development is a process for which the definition and interpretations change in the dialogue between various actors. Sustainable development as a concept and principle first came to international attention about 20 years ago with the publication of the Brundtland Committee's famous definition in 1987: *'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'*

In December 1994, the Finnish National Commission on Sustainable Development defined sustainable development as follows: *'Sustainable development is continuous, guided process of societal change at the global, regional and local levels, aimed at providing every opportunity to present and future generations to live a good life.'* Broadly defined, sustainable development comprises three operational dimensions: an eco-economic, a societal and a cultural dimension.

The definition of sustainable development has been developed in various locations. For example, the World Bank has been examining it since the end of the 1990s by means of capital concepts. In such cases, sustainable development considered to be the creation of opportunities in which *'we leave future generations as many, if not more, opportunities than we have.'* The opportunities can be interpreted as an asset, wealth, capital, which can be concretised and measured using four types of capital. These are human capital (for example, competence, science, research and development, patents), physical capital (including production equipment, infrastructure, the constructed environment), social capital (including legislation, administration, social networks, trust and legitimacy, citizen-oriented activity), and natural capital (renewable and non-renewable natural resources, biodiversity). Sustainable development and, in particular, its social dimension have also been interpreted through the capital concepts in the Finnish National Commission on Sustainable Development.

In recent years, socio-political research and discussion concerning sustainable development has given rise to an approach in which the transition to a sustainable development society requires new innovative solutions at the same time as changes in procedures and behaviour is needed. For example, when mutually reinforcing, parallel changes occur in technology, the economy, institutions, ecology, culture, education, lifestyle and religions, they give rise to a positive ring of activity. The transition to a sustainable development society always requires reliable information about changes happening in society and access to the sources of such information.

1.4 A new strategy – the Finnish model

In its meeting held in December 2004, the Finnish National Commission on Sustainable Development decided to initiate a process aimed at a new national strategy for sustainable development. The preparatory work in the Commission's secretariat began in early 2005. A broad-based multi-stakeholder Strategy Group was established to compile the Strategy, and its mandate was approved in the Commission meeting in March 2005. The Strategy Group's task was to prepare a proposal for the Finnish National Commission on Sustainable Development concerning a National Strategy for Sustainable Development by 31 May 2006.

The principles for preparing the Strategy and its aims are stated as follows in the mandate approved by the Commission:

- The Strategy shall observe the overall view of the European Union and the Lisbon Strategy concerning sustainable development;
- The Strategy shall take worldwide and European Union strategy processes concerning sustainable development into consideration and lay out Finland's participation in these processes;
- The Strategy shall take the sector-specific and horizontal strategies and action plans compiled in different connections into account and create common policy guidelines to provide the basis for creating and updating them, as well as take into account the National Programme to Promote Sustainable Consumption and Production;
- The Strategy shall also support sustainable development work at the local level;
- The design of the Strategy content shall take into account the proposals and conclusions presented in the Commission's theme meetings;
- The Strategy shall form the foundation for sustainable development implementation plans when laying out future Government programmes.

The starting point for sustainable development strategy is to combine the sustainable use, management and protection of natural capital with citizens' well-being and ensuring the integrity of society so that the result is a competent Finland that utilises its strengths in a sustainable manner.

The preconditions for implementing the Strategy are:

1. Taking the economic, social and environmental impacts of sustainable development into account during the transition;
2. Including various societal actors in the preparation and implementation of the Strategy;
3. Ensuring implementation by means of institutional arrangements; and
4. Linking integrated evaluation of the impacts of sustainable development to the policy programmes and plans resulting from the Strategy.



Photograph by Antero Aaltonen

2 GLOBAL CHALLENGES AFFECTING SUSTAINABLE DEVELOPMENT

According to the UN's population forecast, the world population will continue to grow from the current figure of 6.5 billion to 9.1 billion by 2050. However, the increase in population growth has slowed since 1990, and this trend is expected to continue as living conditions in developing countries improve. At the same time, the decreased birth rate and longer lifespan in all industrialised countries is causing changes in the age structure of the population. The European population is decreasing and ageing. The change is also significant in Japan and China. There are strong pressures on the population of developing countries to move to countries of higher income.

Technological development and the liberalisation of trade and capital are leading to strong changes in the structure of the global economy. An ever-growing portion of industrial production takes place elsewhere than in developed industrialised countries. In recent decades, global trade has grown faster than gross national product, and many states have been able to raise their standard of living due to international trade. Globalisation development has made many new and large countries, such as China, India and Brazil into significant players in the global economy. The development of Russia is of particular importance to Finland. The rise of new countries to become major players in the global economy is speeding up competition for natural resources and causing serious environmental problems in rapidly developing countries. Energy consumption in developing countries is growing faster than that in developed countries. On the other hand, economic growth provides new opportunities to decrease environmental hazards.

The strong growth of the global economy has helped many countries reduce poverty. Although the growth is rapid, it will take many generations for developing countries to achieve the gross national product per capita of countries that currently have a high standard of living. Simultaneously, the sufficiency of natural resources will set its own limits on growth. Economic growth increases the demand for and the harmful effects resulting from the use of natural resources. The growth in demand has been particularly fast in China. In addition to quick economic growth, population growth in developing countries has added to the demand for natural resources. The energy need in developing countries will increase dramatically over the next 30 years, as consumption is expected

to increase by 250 per cent. At worst, the competition for natural resources can lead to international crises.

Despite the growth, many countries are being excluded from the growth and global trade. The majority of the world's population lives in extreme poverty. In rural areas of developing countries, 60 per cent of people live in ecologically sensitive regions, such as dry and mountainous areas. The income of many people living in developing countries is based on industries that are dependent on natural resources, such as agriculture and forestry, fishing, hunting, gathering and tourism. Protection of natural resources and sustainable use are the preconditions for these people's income.

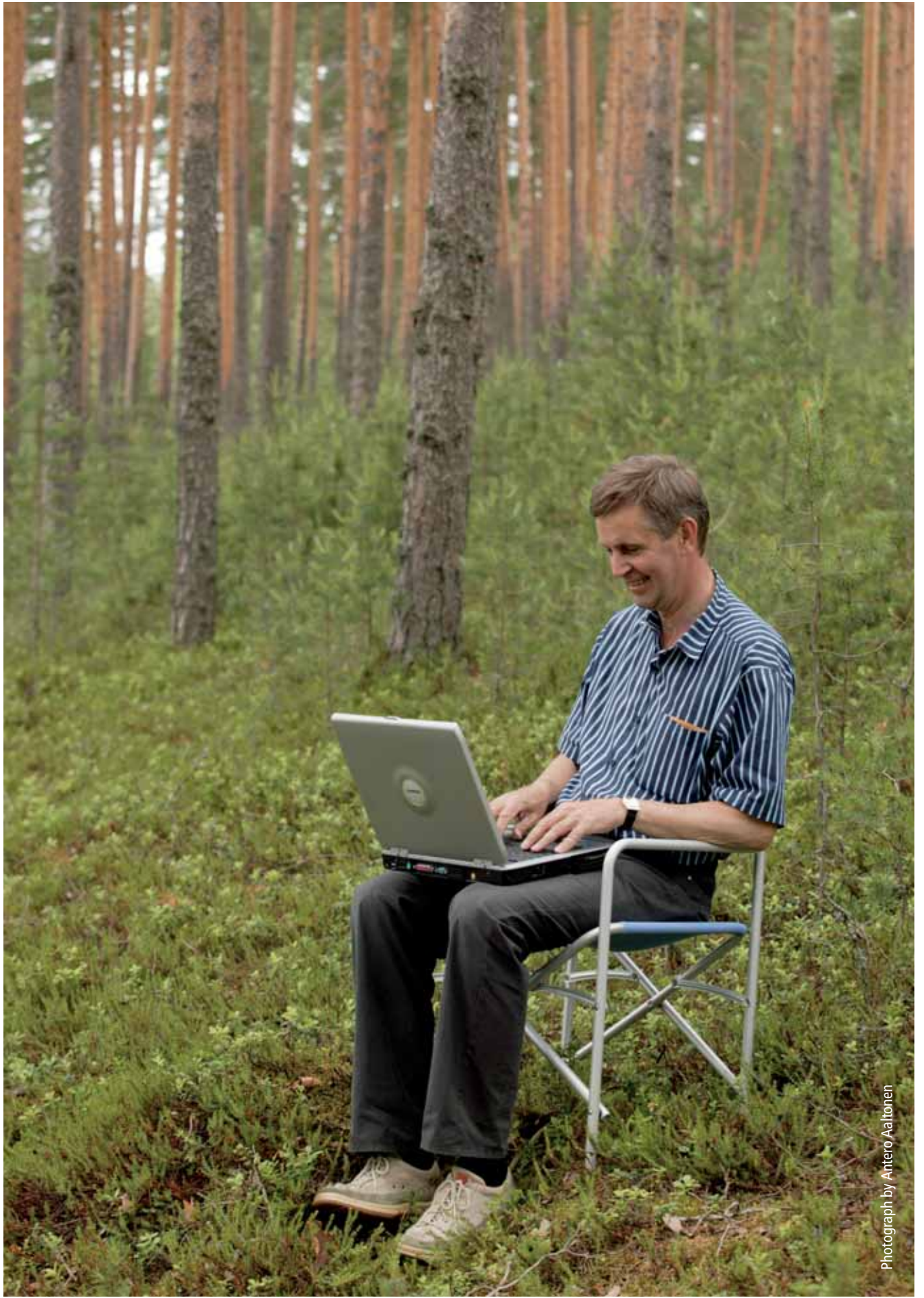
The actions of mankind have changed the earth's ecosystems more rapidly and extensively in the past 50 years than ever before. The amount of land under cultivation has increased more since the Second World War than during the 1700s and 1800s combined. Increased agriculture and the use of fertilizers and other human activities have reduced biodiversity. At this time, up to one-third of all mammals, bird and amphibian species are in danger of becoming extinct. According to the Millennium Ecosystem Assessment supported by the UN, two-thirds of the benefits that the global ecosystem provides mankind with are being degraded or used in an unsustainable manner. Possible advances towards the eradication of hunger, poverty and diseases will also remain short-term if degradation of the ecosystems that are essential to the well-being of mankind continues.

Climate change and the sufficiency of fresh water may be the most important threats to the well-being of mankind and the environment. The use of fossil energy sources and decrease in the Earth's forests are the most important factors causing climate change. Climate change is expected to increase and strengthen extreme weather events, such as storms, drought and floods. The progress of climate change is very likely lead to significant costs. Furthermore, fossil fuels, especially oil, are an exhaustible natural resource and their use is not in harmony with the principles of sustainable development in the long term.

Poverty and social inequality as well as various societal disputes over natural resources, especially fresh water and energy, as well as poor governance are the greatest barriers to sustainable development, because they provide a breeding ground for conflicts and terrorism. Many environmental problems result from

the fact that there are no sustainable alternatives for work and earning a living, which in turn leads to activities that are harmful in terms of environmental and social development. Global employment, social cohesion and access to education are all preconditions for sustainable development.

An increasing proportion of the population of developing countries lives in large cities, where they are exposed to the effects of air pollution and, particularly in the case of the poorest, the problems caused by garbage and wastewater. The HIV /AIDS epidemic continues to expand around the world. The life expectancy in 38 countries has declined as a result of AIDS mortality. The threat of spreading communicable diseases also applies to Finland.



Photograph by Antero Aaltonen

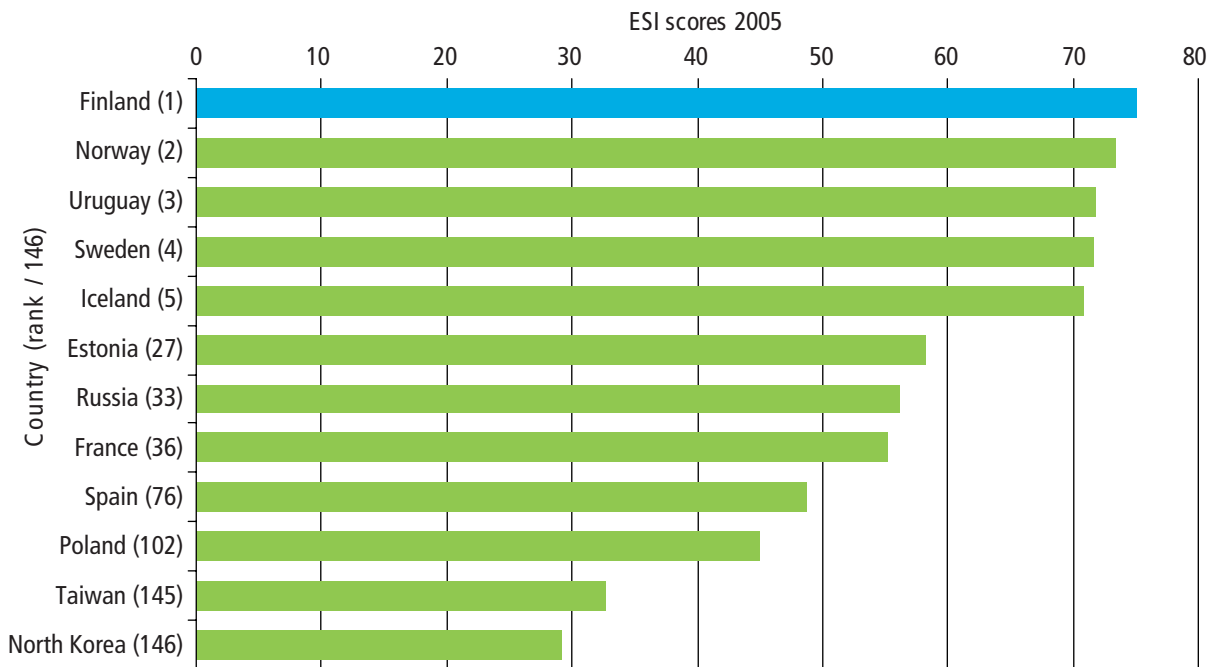
3 THE STRENGTHS AND CHALLENGES OF SUSTAINABLE DEVELOPMENT IN FINLAND

Finland has been successful in numerous international comparisons measuring sustainable development. Finland has placed first three consecutive times in the Environmental Sustainability Index (ESI) conducted by the World Economic Forum (WEF), most recently in 2005. The international index produced by Yale and Columbia universities for the World Economic Forum in 2001, 2003 and 2005 uses a special index to compare the environmental sustainability of countries. This index divides sustainability into five components: environmental systems, reducing environmental stresses, reducing human vulnerability, societal and institutional capacity, and global stewardship. Finland has done well in many areas of the comparison, but placed first in the measurement of societal capacity to reduce human vulnerability to environmental threats and the capacity of social and human capital to respond effectively to environmental challenges. In light of this, Finnish citizens live in a rather safe environment, and the Finnish administration, legislation, level of competence, and responsibility of industrial life for environmental protection is at a high level. Finland is also one of the least corrupted countries in the world. According to ESI, Finland needs to improve in the areas of global stewardship and reducing economy's environmental stress. According to the index, the problems of industrial countries are often related to unsustainable consumption and production, waste and emissions.

Finland has also been a leader in the World Economic Forum's comprehensive Global Competitiveness Report (2004–2005) and study of gender equality (2005) as well as the OECD's Pisa survey measuring educational level (2004). In 2006 Finland placed third in the Pilot 2006 Environmental Performance Index. In addition to these, Finland has been amongst the leaders in indexes measuring issues that include societal stability, quality of life, social development, gender equality, social responsibility of enterprises, and public sector capacity.

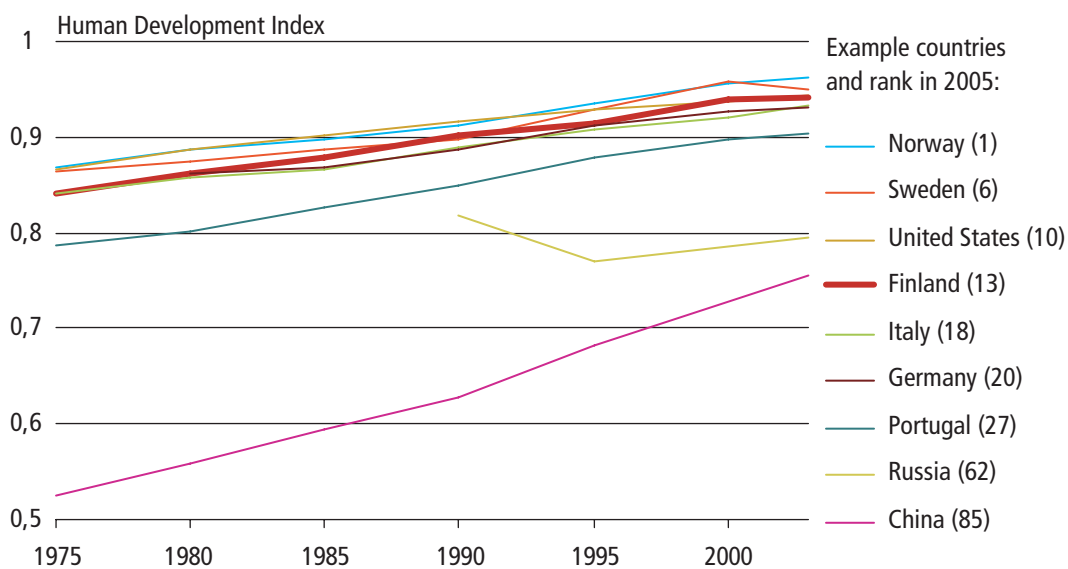
Finland has numerous strengths upon which to build a strategy for sustainable development. These include significant investments in research and development activities, a well-functioning educational system and the high education level of citizens, functional service systems, responsible enterprises, good governance, a working civil society, and a tradition of co-operation. A clean, vital and diverse environment is one of the basic factors in Finnish well-being. Finland is also an advanced information society. Strong areas of competence that are also

Figure 1 Environmental Sustainability Index



Source: Yale and Columbia Universities

Figure 2 Human Development Index



Source: Human Development Report 2005

essential in terms of export include efficient industrial processes, for example, the electronics, forest and metal industries, and monitoring and steering systems, including process steering. Finland has also invested in climate and energy technology, especially in the production of combined heat and power (CHP), bioenergy and wind power technology, and infrastructure competence in the broad sense.

The promotion of health and prevention of diseases have had a decisive effect on improving the health of the population in Finland and elsewhere. For example, the prevention of disease by means of vaccinations and hygiene as well as the reduction of heart and vascular disease through lifestyle changes have greatly improved the health of Finns in recent decades. Current challenges include the huge health losses resulting from tobacco and intoxicants, the increase in mental health problems and obesity and the rise in the number of diseases and problems related to ageing. Maintaining and furthering physical capacity and retaining the independent performance of elderly people have become even more important.

The societal structures that have been considered the foundation of a welfare state have been undergoing strong change in the past decade. The recession in the early 1990s represented a drastic change in many branches of policy. The recession has cast a long shadow. The public economy, which has traditionally shown a surplus, began to operate at a deficit at the beginning of the 1990s. Economic balance was only achieved at the end of the 1990s, and maintaining that balance in the long term remains a critical societal challenge. Unemployment has not fallen to the level before the recession in the 1990s. In particular, long-term unemployment has remained a rather serious problem, although it is falling. Employment has become less regular. The change in working life has created new labour markets and employment relationships. Growth has become regionally centralised. The average size of households has decreased and an increasing number of children are raised in single-parent homes. The elderly live farther away from their relatives. In addition to these factors, the exceptionally favourable age structure of the population is changing due to the ageing of the population and the relatively low birth rate.

As a result of the ageing of the population, health and pension expenditures in relation to gross national product are growing in Finland, as in other OECD countries. According to OECD, EU Commission and national calculations, the demands on public services and the social security system will grow if the

current development continues. Although Finland has prepared quite well for ageing through, for example, employment pension funding and increasing the efficiency of the service system, the public economy in Finland does not appear to be on a sustainable foundation in the future. Globalisation is increasing tax competition and financing for the public economy is becoming more difficult.

A growing share of industrial production occurs elsewhere than in developed industrialised countries, which are unable to compete with the low pay levels in industrialising countries. This will become a problem unless new business activity and new jobs can be created to replace the old, and Finland is able to fully utilise investments in innovation activities and education that observe the principles of sustainable development.

The significance that global problems, development crises and regional conflicts have in relation to security has also increased. The dependency of Finland's internal and external security on the international situation has increased in pace with globalisation.



Photograph by Sauli Rouhinen



Photograph by Antero Aaltonen

4 VISION AND TARGET FRAMEWORK

Vision

Assuring well-being within the limits of the carrying capacity of nature nationally and globally.

The objective is to create sustainable well-being in a safe and pluralistic society that promotes participation, and in which all people take responsibility for the environment.

From the Finnish perspective, the most significant development trends and challenges of sustainable development are associated with climate change, adaptation to rapid global economic changes, and demographic changes. Globally speaking, the most important challenges are, in addition to climate change, related to global poverty and inequality as well as population growth. These global challenges also reflect upon Finland. Sustainable resolution of the national and global challenges requires simultaneous and mutually supportive short and long-term policy actions on the Finnish, EU and global level.

Society will be actively developed so that Finland can flexibly adapt to the changing global operational environment and cultural diversity. Success in a changing world requires Finland to develop further as a knowledge and innovation society which promotes the utilisation and development of national strengths: education and know-how, technology, good governance, a high level of environmental protection, and the sustainable use of its natural resources.

In a sustainable society, society is responsible for arranging basic services and social security just as active citizens take responsibility for the well-being of their own and future generations economically and in an environmentally sustainable manner. Society has to provide opportunities for the individual to be independent, manage his/her own life and be active in local communities. Citizens are committed to a sustainable lifestyle and participate actively in developing society. They are able to weigh the ecological, economic, social and cultural impacts of their everyday choices, both locally and globally.

Strategy and policy aimed at sustainable development particularly strengthens the innovation and change management capacity of citizens and the society. Renewable natural resources are used for economic activity and increasing human well-being so that they are not depleted but are renewed from one generation to another. Non-renewable natural resources will be utilised as eco-efficiently as possible. When operating in such a manner, the present generation will not endanger the possibilities of future generations to live a good life in a sustainable society.

In terms of Finland's well-being and security, it is also important to attempt to influence the implementation of fairer global development.

The vision guides both short and long-term activities, which serve to help various actors select solutions that observe the principles of sustainable development. The starting point is that the key guidelines of the Strategy form foundation for drafting Government and policy programmes. Within the framework of the Finnish National Commission on Sustainable Development, a process shall be initiated in which various bodies, in co-operation and separately, promote the proposals of the Strategy.

The timeline for the targets is beyond current generations, extending until about 2030.

The **following principles, which apply to all dimensions of sustainable development**, direct the Strategy for Sustainable Development:

- The mutual dependence of the economic, ecological, social and cultural dimension of sustainable development.
- Extending beyond the current generation and the long-term nature of policies.
- Global, national and local consistency between various policy sectors.
- A strong scientific foundation and an approach based on the assessment of risks and probabilities.
- Strengthening of human resources by offering better prerequisites for sustainable choices and equal opportunities for individuals to attain self-fulfilment and influence society.

Sustainable development requires citizens and companies to make choices to support it.



Photograph by Antero Aaltonen



Photograph by Tero Pajukallio

5 A GOOD LIFE IN A SUSTAINABLE SOCIETY

5.1 Balance between the use and protection of natural resources

Key challenges

- How should we proportion the environmentally burdening consumption of industrialised and industrialising countries to the ensuring the basic conditions of life for the entire world and for future generations?
- How can Finland use its renewable natural resources reserves in a manner that maintains and increases the nation's well-being and utilise natural resources sustainably at the national and global level?
- How can Finland use its non-renewable natural resources sustainably at the national and global level? How can Finland prepare for a reduction in fossil fuels?
- How can Finland act to mitigate climate change and prepare for it?

Mankind over-exploits the planet's natural resource reserves. The main results of the Millennium Ecosystem Assessment (2005) showed that the world's ecosystem services, in other words the benefits and commodities the ecosystems offer mankind, are seriously depleted. The report examined 24 ecosystem services, 15 of which have been degraded or are seriously threatened as a result of environmental change. The world's reserves of drinking water and fish stocks are in particularly poor condition, but fuel wood and genetic resources are also in serious decline. In addition to various material commodities, the report examined cultural services offered by the ecosystems. For example, beautiful scenery and certain animals and plants considered holy in different religions have declined.

The Millennium Ecosystem Assessment concludes that without strong measures, the carrying capacity of natural systems is being degraded due to population growth and, in particular, to increased per capita material consumption. The consumption of natural resource reserves required to maintain material well-being in Finland and other industrialised and industrialising countries is many times greater than the consumption of the great majority of the Earth's

population. The Millennium Ecosystem Assessment was launched at the initiative of UN Secretary-General Kofi Annan and was compiled by more than 1,300 experts from different fields in 95 countries.

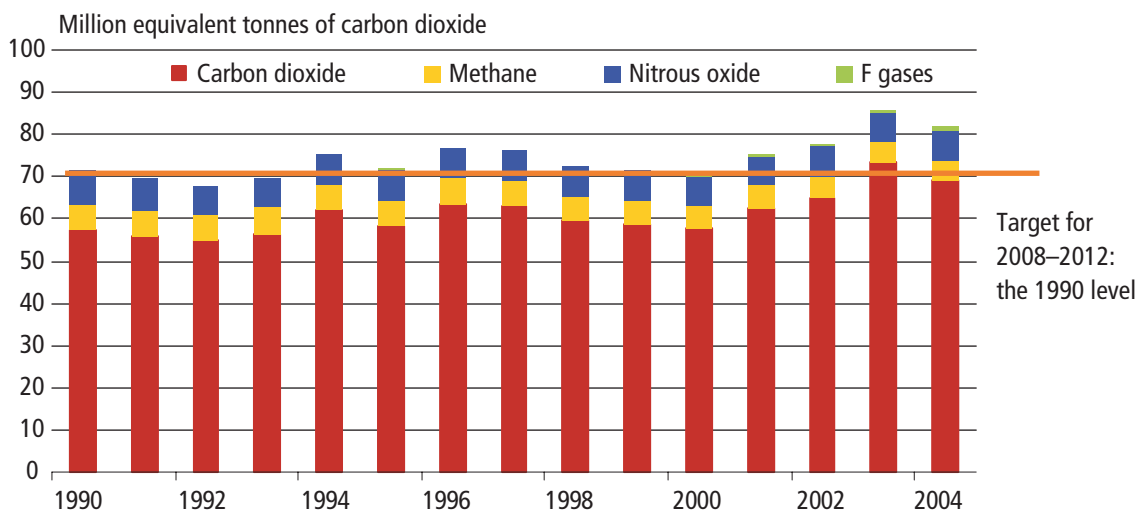
One of the key objectives in the European Union's Strategy for Sustainable Development, reviewed in 2006, is "to safeguard the Earth's capacity to support life in all its diversity, to respect the limits of the planet's natural resources and to promote sustainable production and consumption with the aim of breaking the link between economic growth and the degradation of the environment".

5.1.1 Limiting greenhouse gas emissions

Mitigating climate change will remain one of Finland's most important environmental policy focuses for a long time. According to responsibilities set by the Kyoto Protocol (1997), which enlarges on the United Nations Framework Convention on Climate Change (UNFCCC, 1992), the common target of industrialised countries is to reduce greenhouse gas emissions by an average of 5.2 per cent in comparison to the 1990 level in the 2008–2012 period. Under the EU's internal burden-sharing, Finland commits to maintain its emissions at the 1990 level.

Figure 3

Greenhouse gas emissions



Source: Finland's Natural Resources and the Environment, Statistics Finland

The Kyoto Protocol is an important step. However, further measures are still needed. Discussions of climate policy after Kyoto were also initiated at the 11th Conference of Parties to the UN Climate Convention and the first meeting of the Parties to the Kyoto Protocol held in Montreal in 2005. The Parties to the Kyoto Protocol, 162 countries at this time, will begin to examine the post-2012 commitments of developed countries that are part of the Kyoto Protocol. Overall evaluation of the entire Protocol will begin in autumn 2006. The Parties to the UN Climate Convention (189 countries in total) will start a dialogue on long-term co-operation to respond to climate change. The agendas at the Conferences of Parties also include other issues that are important in terms of future action, such as an initiative concerning deforestation by developing countries and a five-year work programme concerning adaptation to climate change.

The European Union has set a target of keeping the average global temperature at not more than 2°C above pre-industrial levels in the long-term. According to estimates by the Intergovernmental Panel on Climate Change (IPCC), this will require a downturn in global greenhouse gas emissions within two decades, after which significant reductions, a minimum of 15 per cent and possibly as much as 50 per cent from the 1990 levels will be needed by 2050. The European Council has emphasised the EU's readiness to co-operate with other parties to examine the required emission reductions and strategies to achieve the necessary reductions. The EU Environment Council has proposed the consideration of greenhouse gas emission reduction pathways of 15–30 per cent by 2020 and of 60–80 per cent by 2050 for industrialised countries.

Finland's Energy and Climate Strategy was completed in November 2005, and it outlines the plans to implement the international obligations for limiting greenhouse gas emissions during the Kyoto Protocol commitment period of 2008–2012. The approved Strategy, presented in the form of a government report, focuses on the utilisation of renewable energy sources, energy savings and the reduction of greenhouse gas emissions. In addition to this, the state is acquiring the emissions units allowed by the Kyoto Protocol by means of so-called flexible mechanisms. Using the measures outlined in the Strategy and flexible mechanisms, including the EU's emissions trading, Finland will fulfil the approved obligations set for it. Otherwise, Finland's greenhouse gas emissions would exceed the obligation of the Kyoto Protocol by about 15 per cent.

- Realisation alternatives will also be assessed in Finland, and a strategy will be drawn up for decreasing emissions in the medium and long-term as part of global efforts.
- New technology is being developed at the same time as the use of existing technology is being made more efficient. Furthermore, market-based instruments that are based on environmental impact and cost-effectiveness, such as markets for emissions trading that function along genuinely global, uniform principles.
- Citizens' awareness of greenhouse gas emissions and readiness for preventing them will be increased, as will alternatives that allow for environmentally friendly choices.
- Finland works actively within the European Union and internationally to promote global co-operation so that human-induced climate change can be mitigated and preparations for the unavoidable changes in natural systems can be made. In international climate change negotiations, Finland, as part of the EU, will endeavour to make progress towards the goal of achieving global agreement on how to take the UN climate regime forwards when the Kyoto commitment period comes to an end in 2012 so that all countries that are essential in terms of mitigating climate change are included, in order to ensure the impact of international climate policy.
- Finland will strive to ensure that emissions reduction projects implemented with Finnish financing in developing countries reduce poverty and promote sustainable development. The objective is to link climate policy to all sustainable development policy and global reduction of poverty. In term of developing countries, attention should be balanced between mitigating climate change, adapting to it, and availability of energy. Finland commits to help developing countries prepare for climate change in accordance with earlier agreed principles and decisions.

5.1.2 Increasing energy efficiency and the use of renewable energy

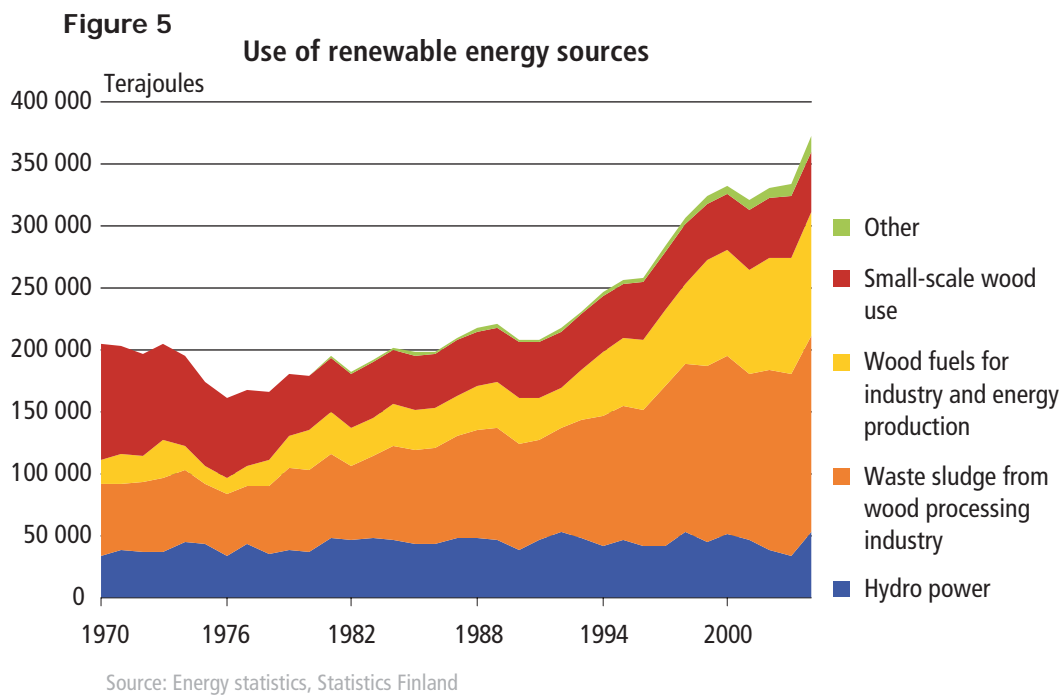
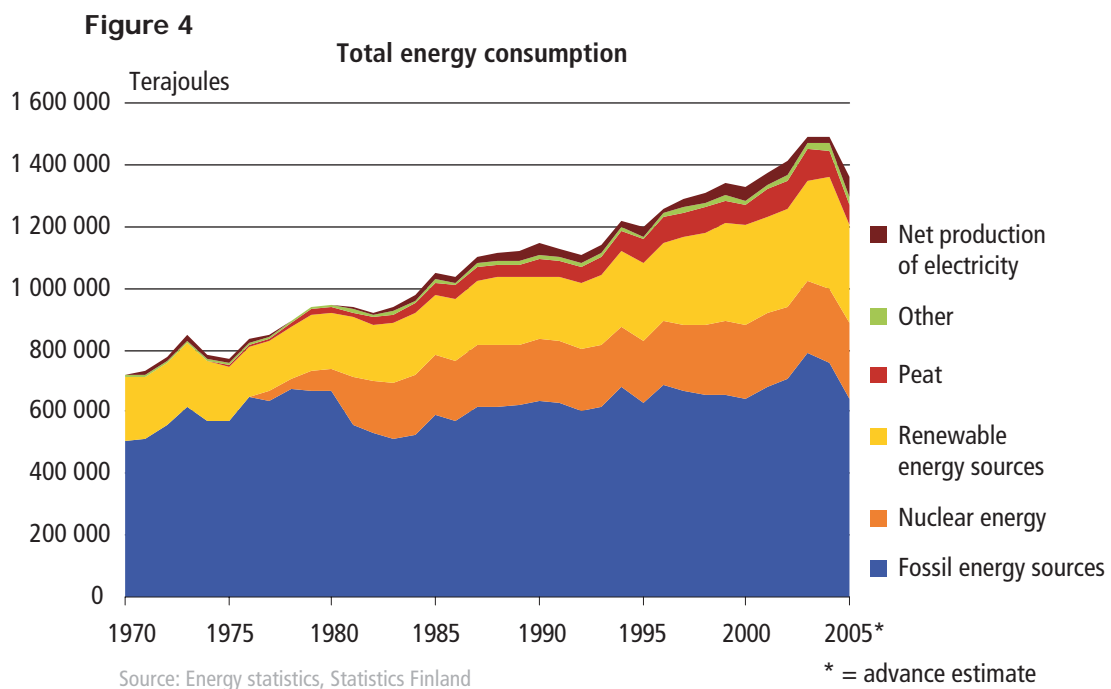
More efficient utilisation of energy in production processes means less of it is consumed and lower emissions to the environment. Energy efficiency increases economy efficiency and improves self-sufficiency while having a positive impact on the reduction of greenhouse and other gases. Efficiency of energy production and use are also key competitive factors in the European Union's Lisbon Strategy.

Implementation of the EU Emissions Trading Scheme makes energy use more efficient. The increased cost of fuels that cause emissions and electricity market price resulting from emissions trading significantly improves the economy of energy savings thus furthering the achievement of the energy saving target in the emissions trading sector (including pulp and paper production, iron and steel productions, large energy production plants) and in the non-emissions trading sector (mainly transport, agricultural emissions, household-specific emissions).

According to the objective of Finland's Energy and Climate Strategy (2005), total consumption of renewable energy will increase by at least 25 per cent by 2015 and at least 40 per cent by 2025. In this case, the share of renewable energy could rise to nearly one-third of primary energy in comparison to 25 per cent in 2005. The share of electricity produced using renewable energy, in an average precipitation year, has been about 27 per cent of total electricity consumption.

Domestic energy sources hold an important position in the delivery reliability of energy management. In 2005, renewable sources of energy and biofuels accounted for about 24 per cent of total primary energy consumption, 20 per cent of which came from wood energy and 4 per cent from hydro-energy. Peat accounted for 6 per cent. The proportion of wind energy is small, but there is a lot of potential for its utilisation in the coastal and fell regions and especially in sea regions. In terms of the implementation of biofuels in transport, the EU has set a reference value of a 5.75 per cent share by 2010.

In particular, bioenergy production may be even more significant in terms of primary production, the rural region, and the entire national economy in the future. In the long term, renewable and non-emissions generating energy sources



and improving energy efficiency will become increasingly important issues in global energy management. The implementation of bioenergy has to take note of how and in what form it can be most beneficial. However, the impacts of its production also have to be taken into consideration in bioenergy use. In Finnish conditions, the use of biofuels in solid form for heat production or in combined heat and power production has been developed efficiently throughout the whole production chain so that the production chain only consumes a small amount of the energy contained in the biomass. In contrast, the production chain for liquid biofuels from cultivated plants requires significantly more energy. There is still room for significant development work in this area.

- One of the starting points for Finland's energy policy is to reduce oil dependency and raise energy self-sufficiency.
- An additional savings of 5 per cent in energy consumption by means of improving the efficiency of the current energy saving measures and with new energy saving measures is the target by 2015 in comparison with the situation without any measures. The long-term target is to stop the growth in overall primary energy consumption and reverse the trend.
- Efforts will be made to significantly increase the proportion of renewable sources of energy and biofuels over the next 10–15 years. The bioenergy sector requires major investments in research and development activities, especially to promote the production and utilisation possibilities for cultivated biomass and biofuel and biogas. Focusing now on research, products and export in this sector will create opportunities for market leadership in the future. International sustainable development criteria will be written for the production of bioenergy.
- Finland will keep to the target set in conjunction with the Directive on Electricity Production from Renewable Energy Sources, according to which the share of electricity produced from renewable sources of energy in Finland should be nearly one-third of overall electricity consumption by 2010.
- The aim is to at least triple the amount of wood chips made from forestry waste, cultivated biomass, recycled fuels and biogas used in primary energy from about 2 per cent in 2004 to more than 6 per cent over a period of 15–20 years.

- Energy efficient and low energy construction will be promoted in new building productions and a high level and reliability of technology ensured.
- Citizens' awareness of energy efficiency and renewable energy sources will be increased and their opportunities for choice made easier by means of labels indicating energy efficiency and markets that offer eco-efficient alternatives.

5.1.3 Adapting to the adverse effects of climate change

The growth in greenhouse gas concentrations in the atmosphere is warming the globe and leading to changes in the global climate. These changes will be large in the coming decades and can result in significant consequences for nature and societies. The climate is warming fastest in northern and arctic regions. According to estimates by the Finnish Meteorological Institute, the average temperature in Finland will rise by as much as 4–6°C by 2080, with an average increase in rainfall of 15–25 per cent. Simultaneously, extreme weather events, such as storms, drought and heavy rain are expected to become more common.

Finland's National Strategy for Adaptation to Climate Change (2003–2004) presents estimates of Finland's current capacity to adapt to climate change and outlines measures to improve adaptation. This is an effort to reduce the adverse impacts and take advantage of the benefits provided by the favourable effects of climate change. However, according to the National Strategy for Adaptation to Climate Change, the current information on how the climate is changing, what impacts climate change will have and what measures can be used to reduce the adverse effects of climate change are insufficient for planning adaptation measures.

Finland's northern location is one reason why the atmospheric warming resulting from climate change lengthens the rainy season and has a positive impact on agriculture. It will also move the tree line in a northerly direction and most likely benefit the forestry industry. On the other hand, there are major uncertainties linked to the movement of the tree line, as it is not clear how quickly tree species will be able to adapt to atmospheric warming and move to the north. The need for heating will also be less, but the increase in floods caused by

rainfall and stormy weather will set new demands for construction and other land use and the instruction of them. Northern ecosystems are sensitive to the irregular variations of natural phenomena and changes in living organisms. There is a risk that climate change will have an adverse effect on many of the ecological, economic and social benefits that biodiversity produces for mankind. The relationship between climate change and biodiversity sets new challenges to ensuring biodiversity and to its sustainable use.

- Emissions reductions have a slow effect but are essential to prevent the situation from becoming untenable at the end of the century. Simultaneously, it is important for the various areas of society to look for means of forecasting changes, adapting to climate change and reducing the risk of extreme weather events. There is good reason to take risk factors, such as floods, into consideration in the instruction of construction and other land use.
- A research programme on adaptation to climate change will be implemented in 2006–2010, with the target of increasing Finland's readiness to adapt to climate change by producing the information required for the planning of adaptation measures. Research will focus on the most urgent issues in terms of adaptation, such as increase in extreme weather events. Communication with citizens will be ensured.
- Another target in terms of the biodiversity of Finland is to forecast the measures required to reduce the adverse effects or adapt to them as early as possible. In order to achieve this target, methods for drawing up climate change sensitivity analyses, for example, regarding the functionality of conservation areas and the consistency of the conservation area network. So-called adaptive planning measures for the evaluation and management of land use risks, especially the risks of flood, that also take preparation for and adaptation to climate change into account will be developed. Furthermore, it is important to prepare for maintaining the species that are most threatened by climate change outside their natural environments.
- Preparation for climate change must also take note of the fact that climate change constitutes a serious challenge for agricultural and horticultural production. The positive and negative effects of climate change

require new competence that must also be adjusted to correspond to sustainable development. This applies to cultivation methods, production investments, production animals and plant protection, etc. The good state of Finnish plant and animal health must be maintained.

- Finland will track the possible social and health impacts of climate change and prepare for them.
- Finland will also prepare for such climate change impacts that occur outside Finnish borders. Examination of climate change from a global perspective emphasises that climate change must be taken more seriously into consideration in all policy areas, also in development policy and other foreign and security policy.
- The significance of the global impacts in relation Finland will be surveyed as extensively as possible when updating the National Strategy for Adaptation to Climate Change. An estimated two-degree rise in average global temperature means notable regional and global changes all over the world. Despite its geographic remoteness, the impacts of these changes will reflect on Finland, for example, in the form of migration.
- Finland will perform a comprehensive assessment of development co-operation from the climate change perspective. On the basis of the assessment, a plan will be compiled concerning how, on the one hand, the mitigation of climate change and, on the other hand, the opportunities for development co-operation to support developing countries in adapting to the changes caused by climate change are taken into consideration in development co-operation and policy.

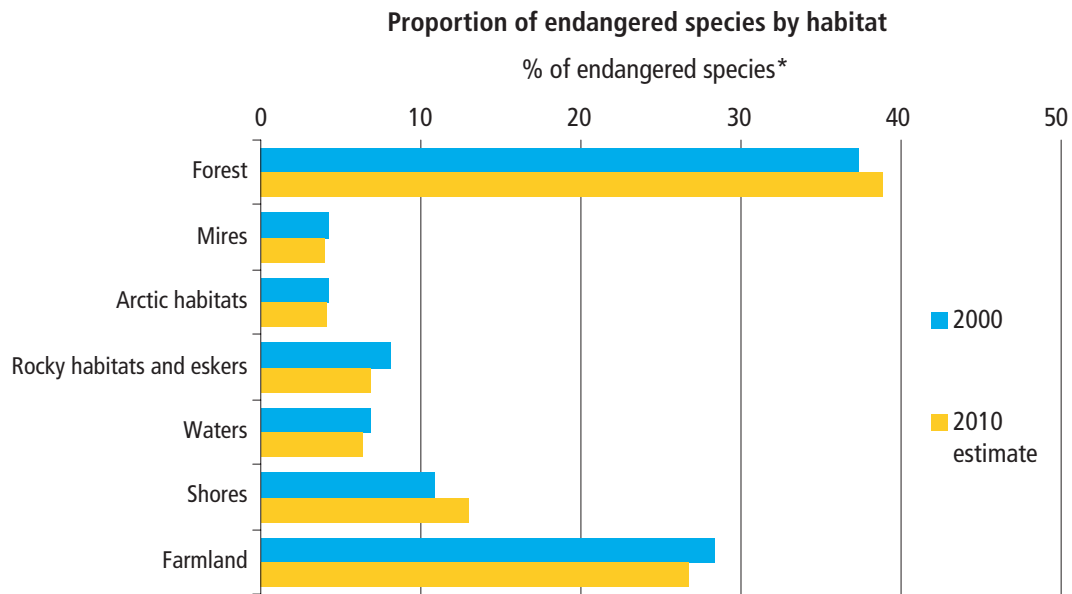
5.1.4 Ensuring biodiversity

At the World Summit on Sustainable Development held in Johannesburg (2002), Finland committed to significantly slow the degradation of biodiversity by 2010. Furthermore, the European Union and Finland as a member of it has set a target of halting the biodiversity loss by 2010. In Finland the greatest human-induced impact on biodiversity occurs in efficient forestry management and agriculture: 37 per cent of threatened species are forest species and 28 per cent are species living in traditional rural environments. Coastal construction and

transport also affect nature and its biodiversity by breaking up natural areas and changing the living conditions for species and nature types. According to the latest Assessment of Threatened Species in Finland (2000), about 10 per cent of Finland's living species are threatened.

- A National Strategy and Action Plan for the Protection and Sustainable Use of Biodiversity for 2006–2016 will be implemented.
- The decline of Finland's biodiversity will be halted by 2010, and favourable development of Finland's natural state will be established in the period of 2010–2016. Thus Finland will have the readiness to achieve a state of balance between the utilisation of nature and biodiversity in the long term. Finland will be prepared for the changes to nature that will result from climate change by means of a long-term National Adaptation Strategy.

Figure 6



*All life forms, including those previously less well-known

Source: Evaluation of the National Action Plan for Biodiversity in Finland, 2005

- In addition to protecting living species and environments, innovative and comprehensive approaches to planning will be developed and implemented. It is possible to alleviate the adverse effects of society and the economy have on nature by means of regional and land use planning while simultaneously ensuring the subsistence of people who get their living from nature.
- Economic incentives will be introduced to encourage the development of new means of livelihood, such as nature tourism and enterprises that refine products of nature as well as nature and landscape management enterprises.
- Identifying the economic and employment opportunities offered by the protection, management and sustainable use of biodiversity is a key factor in terms of societal acceptance of the protection of biodiversity. Efforts will be made to increase citizens' awareness of the importance of biodiversity and methods of protecting it. Multidisciplinary research will be promoted with the objective of developing innovations and types of business as well as employment in the area of biodiversity.
- Finland's impact on retaining biodiversity at the global level will be strengthened through international co-operation.

5.1.5 Promoting sustainable production patterns

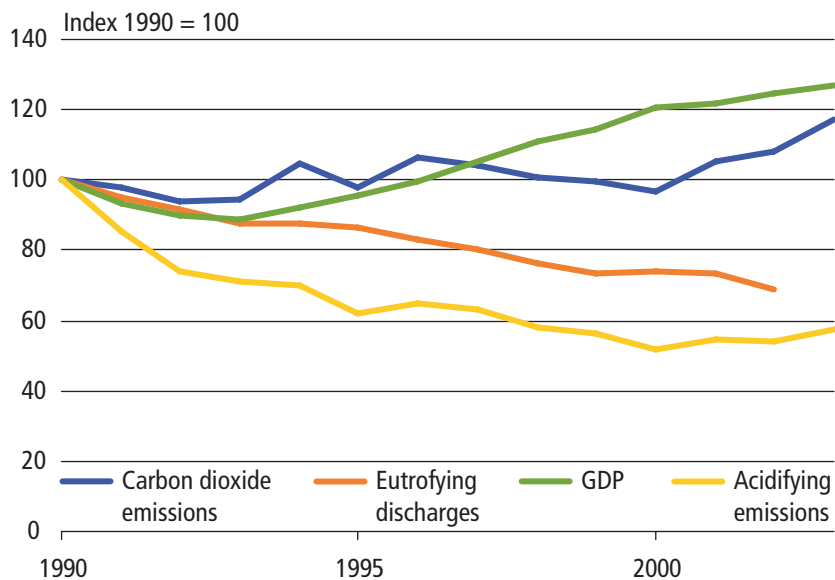
Consumption of natural resources, emissions and waste in Finland are growing at a slower rate than gross national product (relative decoupling). With the exception of carbon dioxide emissions, emissions in the whole country have not increased in the last ten years, although production and consumption have increased significantly at the same time. In 2005, carbon dioxide emissions also fell to 1990 levels. The same trend has occurred in relation to municipal waste. The amounts of Finland's industrial waste, which are large in European terms, have also declined overall. This positive development continued throughout the 1990s, but the decrease in many emissions stopped or levelled out at the beginning of the 2000s. Increased production has also meant a clear increase in the use of raw materials.

Decoupling

Relative decoupling describes a situation in which the consumption of natural resources, emissions and waste in Finland are growing at a slower rate than gross national product. Absolute decoupling describes a situation in which the environmental impacts decrease or at least do not increase at all. On the national economy level, decoupling of environmental hazards must take the environmental impacts of both production and consumption into account.

Figure 7

Environmental loading in relation to economic growth

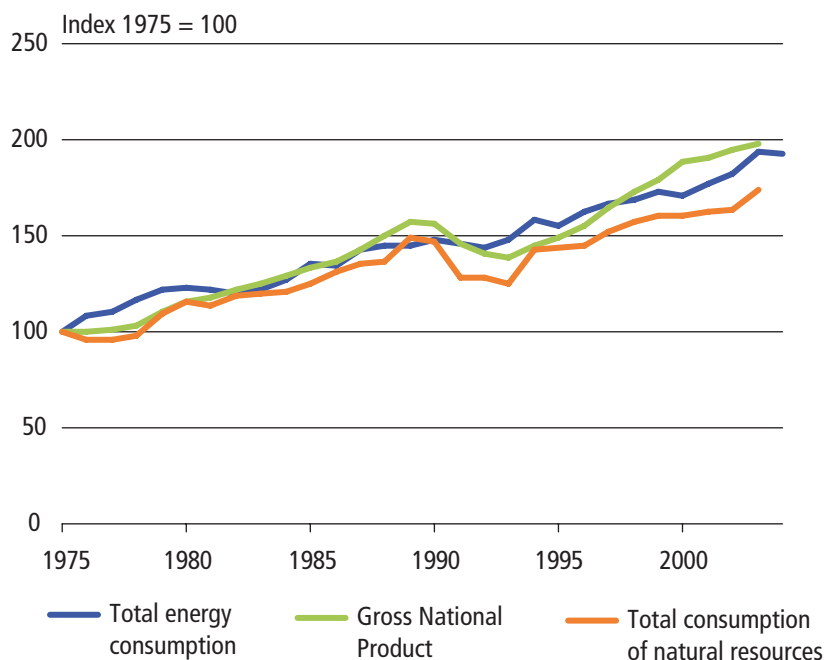


Source: Statistics Finland

The direct material consumption of the Finnish economy grew by 13 per cent and overall energy consumption by 23 per cent in 1995–2003, after which energy consumption has fallen. When comparing consumption of fossil fuels in 2005 and 1995, use of oil increased by 7 per cent and natural gas by 27 per cent. Consumption of coal during that period fell by 22 per cent and peat by 14 per cent. However, the use of coal varies depending on weather conditions and the market situation.

Figure 8

Energy and natural resource consumption in relation to economic growth



Source: Statistics Finland; Thule Institute, University of Oulu

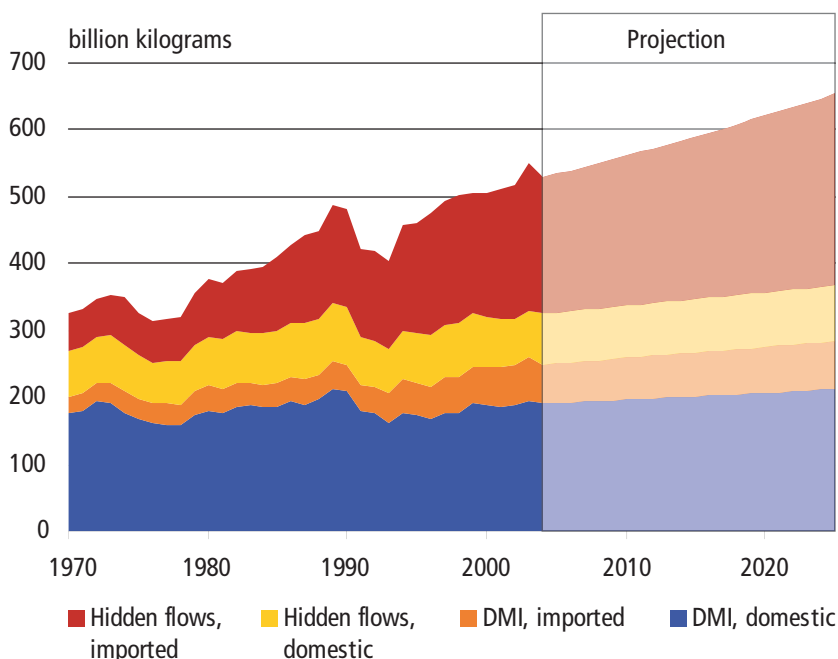
In terms of renewable raw materials, the proportion of wood use has been most significant at 25 per cent. Imported wood accounts for about 20 per cent of this figure. Mining of ore, industrial minerals and limestone in Finland has grown by nearly one-fifth, in other words three times greater than the import of metals. Domestic gravel and crushed rock constitute the majority of total material consumption.

Only part of the materials are actually utilised in conjunction with the use of various raw materials. The remainder is unutilised material that, when combined with Direct Material Input (DMI), gives Total Material Requirement (TMR). However, the environmental impacts of these hidden flows differ noticeably depending on the raw material.

Import makes up the majority of material flows in the economy. Since economies specialise in global trade, they no longer produce everything they need but import some products and raw materials. In this process, the so-called hidden

Figure 9

Development of total material requirement, 1970–2025



Source: Mäenpää, Thule Institute

flows of the imported product, in other words, the non-commercial material flows associated with implementation of the raw material, such as agricultural and forestry erosion and waste from mining activities, remain in the producer country. Furthermore, according to lifecycle approach, the hidden flows of import include the implementation, refinement and transport of the natural resource, energy consumption, and other material use independent of the products. The raw materials used by industry and the consumer goods used in Finland are also imported from other countries to an increasing extent.

In 2000, consumption accounted for one-quarter and investments for about one-fifth of total use of natural resources. Production of export products accounted for slightly more than half of the natural resources used by the economy. Export's share of the total use of natural resources has increased significantly in recent years. The volume of export has also risen noticeably in Finland following the recession of the 1990s, which further increases the use of natural resources. By field of activity, Finland's export typically consists of basic heavy industry and high technology. In particular, export in the service sector is very low in

terms of international comparisons. The export level of basic industry products is likely to remain at a high level in the future as well.

Economic growth, which focuses on moving from increased use of natural resources to know-how and quality, means the opportunity to raise eco-efficiency and simultaneously emphasises the increasing role of human resources. Promoting a service and information society provides the preconditions for decreasing use of natural resources. However, its overall societal effects are not sufficiently understood as yet. Implementation of new technology will make it possible to speed up this process. Economical use of natural resources and good management of environmental issues will provide a sustainable foundation for the eco-competitiveness and eco-innovations of enterprises.

- The Finnish economy will grow while environmental hazards decrease. In terms of limiting emissions, special attention will be paid to fine particles and hazardous substances as well as the growing noise problem. In addition to limiting emissions, increasing attention will be focused on the environmental hazards resulting from material flows through society and on developing material-use efficiency in production and consumption. Corporate Social Responsibility will be emphasised, because the raw materials used by Finnish industry and the consumer goods utilised in Finland increasingly come from other countries, and our products are consumed in other countries.
- Since the material flows from fossil fuels place the greatest burden on the environment, Finland is consistently and purposefully reducing its coal intensity and examining how to end the use of environmentally burdening fossil fuels in the long term. The sufficiency and economically sustainable exploitability of oil are major challenges, even to the current generation. Systematic preparation for the future situation will make it possible to achieve many benefits.
- Non-renewable natural resources will be utilised as eco-efficiently as possible. An increase in domestic use of raw materials is justified if the refinement process decreases global environmental load in relation to demand with consideration to the entire life cycle. In terms of export, the objective is the highest possible level of global eco-competitiveness, in which case the eco-efficiency of every industrial export production

plant will be as good as possible in comparison to the production plants for the same product in other countries.

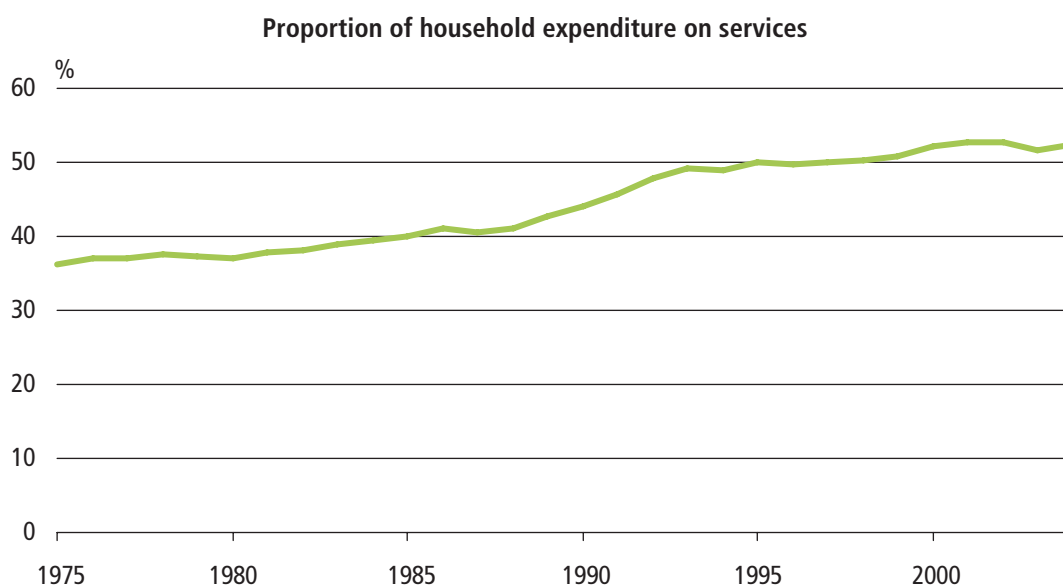
- Particular attention will be paid to the hidden flows of non-renewable natural resources. The environmental impacts of hidden flows have not been studied sufficiently yet, and they will be examined in the future. Efforts will be focused on the development of eco-efficient materials.
- In terms of renewable natural resources, an important choice in the coming years concerns how the use of natural resources to various purposes, such as nutrition, bioenergy, forest industry products and carbon sinks, will be integrated with the objectives of nature protection. The growing pressures for the use of renewable natural resources result from the increased demand for bioenergy and from climate change. Renewable natural resources will be favoured in relation to non-renewable resources, but they may only be utilised within the limits of the carrying capacities of natural systems.
- Public research and development funds will be directed at a new generation of environmental policy that combines various sciences and technologies to offer user-oriented, sustainable solutions at the EU and national level. As technology markets grow strongly, Finland will also ensure that systematic and long-term policy creates new business opportunities and export products that will help improve Finland's chances to employ and guarantee well-being. Thus environmental policy will increasingly support the targets of business and employment policy.
- Sectoral indicator systems will also be created on the basis of lifecycle approach, and will allow the international comparison of eco-efficiency. These indicators should be easy to understand and internationally comparable in order for them to be useful in future environmental discussion and consumer communications.
- Broad commitment to international agreements and mutual rules will also create demand for services and products that promote sustainable development. Finland will actively promote commitment of the world's states to international environmental and human rights agreements and their implementation.

5.1.6 Changing consumption habits

In September 2002, the UN's World Summit on Sustainable Development held in Johannesburg decided to combine regional and local programmes and projects to build a ten-year programme framework aimed at promoting sustainable production and consumption patterns. The initiative was one of the most important negotiation results for Finland and the EU. Industrial countries committed to take a leading role in this work. Finland's National Programme to Promote Sustainable Consumption and Production was completed in 2005.

An increasing number of unsustainable consumption habits lie in the background of environmental hazards: growing consumption in many areas appears to nullify the environmental improvements achieved by means of environmental technology. However, the population's environmental awareness is increasing all the time, and the requirements citizens set for a good living environment are growing, both nationally and internationally. Simultaneously, however, research has shown that a positive environmental attitude is not necessarily transferred directly to people's actions, nor do people change their consumption habits very easily.

Figure 10



Sources: National Accounts; Statistics Finland

The greatest environmental problems associated with consumption are, in terms of nutrition, eutrophication of the waters and, in terms of housing, energy consumption. The environmental hazards of transport are clearly the most serious in terms of leisure time activities. Community structure and planning plays an important role in choices. Influencing the quality and amount of consumption is difficult without economic incentives. Using economic incentives, restrictions and taxation to direct consumption in a direction that places less burden on the environment is one of the challenges of the near future.

- Recommendations of Finland's National Programme to Promote Sustainable Consumption and Production (the so-called KULTU programme, 2005) will be implemented.
- Consumers will be given sufficient information to support sustainable purchasing choices. Preconditions for making sustainable consumption choices include the actual availability of sustainable choices, the consumer's perception of the choice as important, and the desire to favour sustainable choices in practice. Patterns that make sustainable consumption possible will not come into existence without comprehensive planning and an integrated approach in which producers, consumers and other parties participate in developing the solutions.
- Putting consumption on a sustainable foundation requires economic instruments, such as taxes, subsidies and pledges for energy investments, and illustrative tools, including eco-labels, eco-benchmarks, and international measures, such as ecological footprint. The most cost-effective instrument for each specific case will be utilised.
- More researched information on the lifecycle impacts of products are also needed to support more sustainable purchasing choices. Various networks and co-operation forms are also needed, which, through combining benefits and exchanging information, will enable a broader supply of more sustainable alternatives.
- Local production, organic production and the production and marketing of fair trade products will be promoted as possible.
- Advertising and the media play an important role as a creator and director of consumption needs and habits, and as a developer of media

reading skills at schools. High-quality and reliable societal advertising and communications to promote sustainable consumption habits will be developed in co-operation with the media. Co-operation between the media and schools will be promoted.

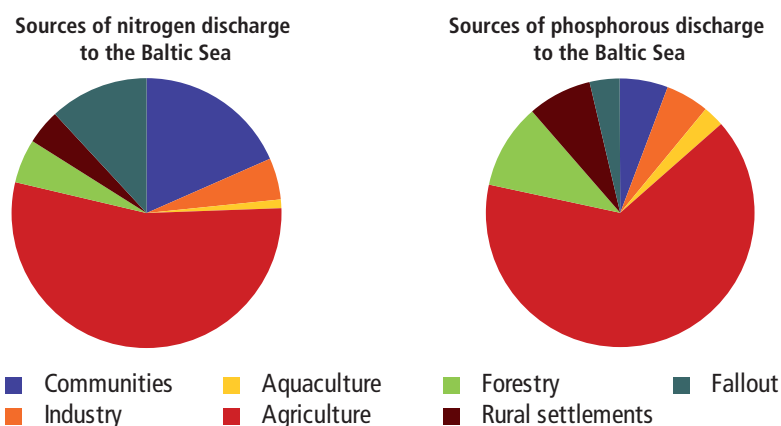
- Training the development of sustainable everyday practices and consumption habits in daycares, schools and institutes lays a good foundation for lifelong assessment of consumption habits. The sustainability of everyday functions will be purposefully promoted by means of sustainable development programmes and quality systems.
- Material-intensive consumption will move in the direction of service use, for example, repair, maintenance, rental and cultural services. New means will be explored to help enterprises and consumers jointly develop new environmentally friendly services and influence the environmental properties of products.
- Public sector procurement currently accounts for about 15 per cent of Finland's gross national product. The public sector will function as an example by promoting ecological and socially sustainable choices in practice and in public procurement activities. An action plan for greener public procurement will be developed

5.1.7 Improving the state of the Baltic Sea

The Baltic Sea is a young and ecologically very sensitive sea. Recent decades have shown that changes in the Baltic Sea have been pronounced and have caused deterioration in the state of the open seawaters and the water and shore nature on the coast. The water nature has changed as a result of measures performed in the water areas or in the catchment areas.

The catchment area of the Baltic Sea is home to about 85 million people in 14 countries. The countries surrounding the sea form a heterogeneous community in which each country has a very different relationship with the Baltic Sea. Various agreements to protect the Baltic Sea have been aimed at standardising the relationship and activities of the countries, with the objective of improving the state of the Baltic Sea. Particular burdens on the Baltic Sea include nutrient loads and the resulting eutrophication, air emissions, countless harmful substances

Figure 11 Eutrophicating discharges into Baltic Sea



Source: Finnish Environment Institute

that accumulate and enrich the sea's ecosystems, increased shipping traffic, especially oil transports, and foreign organisms entering the sea.

The Baltic Sea is extremely important in terms of the economic and cultural development of Finland and the neighbouring regions. The deteriorating state of the marine environment of the Baltic Sea has already had an adverse effect on fishing and leisure time use. Because the Baltic Sea area is subject to growing pressures concerning its use, the security and environmental risks have also increased.

In 2002, the Government made a decision-in-principle on actions to protect the Baltic Sea, known as Finland's Programme for the Protection of the Baltic Sea. The targets of the Protection Programme include decreasing eutrophication of the Baltic Sea and improving the state of nature and water areas in the Baltic Sea. The Programme identifies more than 30 measures for achieving the targets. The decision will require actions over the next 10–15 years in Finland and the neighbouring regions.

- The existing programmes and strategies for the protection of the Baltic Sea will be specified and implemented in order to turn ecologically, socially and economically harmful development in a positive direction. The Agri-environmental Subsidies Scheme for the 2007–2013 period will look for more effective measures for controlling the agricultural nutrient load.

- Finland will continue to act initiatives with other countries in the Baltic Sea region and the EU to reduce the risks of nutrient emissions and sea transports.
- Finland will be active in increasing environmental awareness in the Baltic Sea region.

5.1.8 The cultural significance of natural resources

A unique cultural characteristic of the relationship Finns have with nature is the concept of everyman's right, which forms the basis for enjoyment of nature, gathering products of nature and a strong tradition of hunting and fishing. Summer cottages, sauna culture, roaming in nature, and boating along the clean water routes, in lakes and in the Baltic Sea archipelago are characteristics of Finnish lifestyle.

The Sami people live in their home regions in Northern Finland and are divided into three language groups. The traditional occupations of reindeer management, hunting and fishing form the foundation of the Sami culture. The reindeer industry, based on free grazing and also practiced by other residents of the reindeer management area, has been adapted to coexist with other forms of land use, such as forestry and tourism. The new Sami Programme for Sustainable Development (2006) approved by the Sami Parliament presents guidelines for planning natural resource policy and land use in the home region of the Sami people.

- Citizens' opportunities for everyman's right and other recreation, outdoor activity, hunting, fishing and gathering taking place in nature will be ensured. More diverse use of natural products could also benefit the export industry and promote the maintenance of rural vitality.
- The importance of urban nature as a central factor in a good living environment will be strengthened in community planning. Citizens' opportunities to participate in and influence the planning of living environments will be ensured.
- The perspective of cultural sustainability and the guidelines of the Sami Programme for Sustainable Development will be taken into consideration when updating the Ministry of Agriculture and Forestry's Natural

Resources Strategy (Strategy for the Sustainable Use of Renewable Natural Resources, 2002).

- A method will be created by which the guidelines of the Sami Programme for Sustainable Development will be taken into consideration in the natural resource policy and land use planning in the home region of the Sami people.



Photograph by Antero Aaltonen

5.2 Sustainable communities in a sustainable regional structure

Key challenges

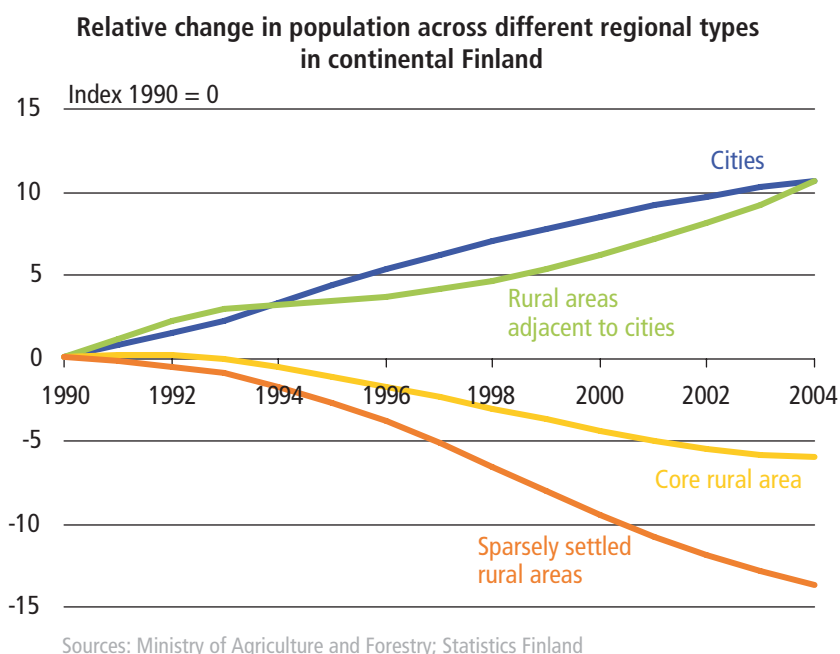
- How can a sustainable regional structure be promoted?
- How can citizen-oriented planning of communities be promoted and people's housing needs and desires be realised while simultaneously preventing the decentralisation of community structure and the subsequent ecological and economic problems?
- How can services be ensured both in regions of declining population and in growth centres while simultaneously taking the changes in age structure into consideration?
- How can transport solutions in sparsely populated areas be organised economically and eco-efficiently?
- How can citizens and local communities and organisations be encouraged to participate actively in decision-making and exerting influence in areas that concern themselves, their housing and living environments?
- How can regional and local resources be directed to support sustainable development?

5.2.1 A polycentric and networked regional structure

Regional structure and the use of regions change slowly. Finland's regional structure has mainly developed through economic activities. It still has characteristics of a fragmented agricultural society and job centres built around industry as well as the city hierarchy created by services. In the future, the economy will move from investment-driven growth to more innovation-driven development, and Finland's regional structure will become more strongly linked to neighbouring regions: the Baltic Sea area, Northwest Russia, Scandinavia, and the North Calotte region.

Although Finland has aimed for social and regional balance and to ensure equal living conditions and services, regional differences have grown in recent decades. While the population has concentrated in cities and their commuting areas, the population in rural areas has fallen. Nearly half of all Finns live in the ten largest urban areas. The proportion of young people in the population of growth areas is greater than average, while the population is ageing in regions of negative migration. The ageing population is also increasing in growth regions.

Figure 12



Production and employment are strongly concentrated. Over the next few decades, competition for enterprises and experts will become tougher globally and within Finland. Enterprises will look for economies of scale, good availability and competence intensity, which larger urban regions in particular are able to offer. On the other hand, competence-based growth means that the regions have to be able to offer living environments that support creativity for the experts employed by the enterprises. It is likely that the new logics of growth will favour the Helsinki region and certain other large urban regions, but it can also push development in a more balanced direction by favouring regions that are able to specialise in their development and utilise competence networks and regional co-operation. The effects of concentration can be seen in the municipal economy as well as in regional production differences. Too large development differences in Finland are problematic in terms of the preconditions for equal life and the national economy. The strong concentration development causes problems in relation to well-being and ecological sustainability in shrinking and growing regions. If these problems are not dealt with, they will also decrease competitiveness before long.

- The starting point for the development of regional structure is the balanced development of resources in Finland's regional and community structure. Finland's objective is polycentrism, in other words strengthening a strong, cohesive urban network with functional work distribution so that various centres and regions support each other. A polycentric and networked regional structure will be used to help create economic benefits and secure the availability of urban-like services and functions in different parts of the country and, above all, utilise the potential of already existing structures and regions. In order to increase the appeal of Finland, centres of innovation activity and expertise will be created that are strong enough to attract growth enterprises and experts from abroad and capable of functioning as hubs of a polycentric regional structure. This will require state and municipal co-operation concerning infrastructure.
- Co-operation between municipalities will be developed in order to retain and create jobs and a diverse service structure.
- Regional development will be balanced by means of national and EU regional and structural policy. Development investments will be directed at development occurring on the basis of the strengths and preconditions of the regions. In particular, investment will focus on improving global competitiveness, strengthening the foundation of expertise, and improving the operational preconditions for enterprises. The EU Structural Fund Programmes will be utilised efficiently. Strengthening their competence base will support regions that are weaker in terms of development, as will improving the operational preconditions for small and medium-sized enterprises by means of scaled regional policy subsidies.
- Networking of different parts of the country with regions that straddle country borders and are functionally important to them will be promoted. South Finland will be developed as part of the operational co-operation region of the Baltic Sea. On the basis of its good rail connections, the Helsinki region and the areas surrounding it will be developed into a strong European metropolitan area that serves the entire country. Eastern Finland will exploit the proximity of Russia and St. Petersburg in particular, which will provide opportunities for cross-border co-operation. Co-operation between the Finnish west coast, particularly

the Quark and Bay of Bothnia regions, and Sweden and Scandinavia will be deepened. The importance of natural resources will be emphasised in co-operation in the Barents region.

5.2.2 Functionally diverse and structurally sound communities and a good living environment

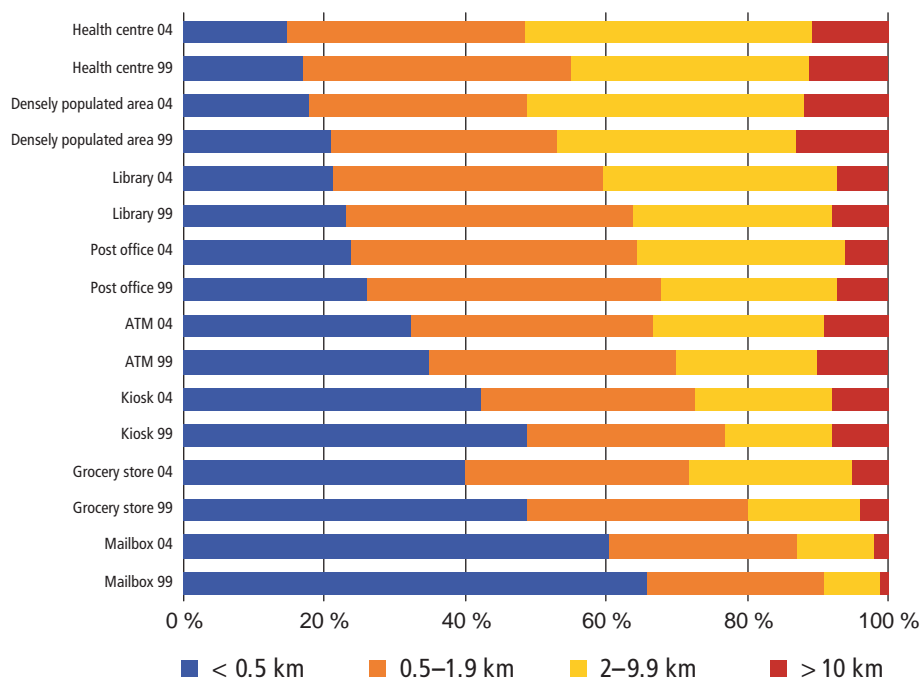
Key quality factors in the Finnish living environment are peacefulness, nature, safety, social cohesion, services and leisure time opportunities, functional transport and community. A living environment is considered important economically, culturally, socially, and in terms of health. The residents appreciate a pleasant, safe, healthy and functional living environment. Housing desires also vary according to the stage of life. Other factors affecting the choice of neighbourhood include housing prices, availability of services and the functionality of transport connections. Quality of living environment is important to people's well-being, labour availability and international competitiveness.

The disparity between supply and demand for housing, particularly in the centres of growing urban regions, has led to a strong increase in housing prices. The housing supply is affected by the existing housing stock and new construction, which in turn is dependent on the availability of plots and construction resources as well as the profitability of construction. The price development in housing and a lack of suitable dwellings in centres are one reason why people are looking for housing on the outskirts of cities. Rural-type residential areas are also popular because they are considered spacious, close to nature and safe.

Improved transport possibilities mean that living, jobs and services can be located further and further apart, which leads to the decentralisation of community structure and increased traffic. Business and housing policy or community planning has not been able to influence this development to a sufficient extent. The decentralisation of community structure, concentration of services and increased transportation needs cause problems in centres and around them. Sparsely constructed settlement adds to the need for infrastructure construction and the costs. At the same time, cohesive nature areas and landscapes may be broken up, which decreases the value of nature and the cultural environment.

Finland's regional concentration development also reflects on land use planning. There are municipalities in regions of negative migration where the construction stock and infrastructure are not being used. On the other hand, there are

Figure 13 Distance of certain services from homes of people aged 15–74:
A comparison between 1999 and 2004



Source: Interview and Survey Services, Statistics Finland

municipalities where it has been necessary to slow population growth by means of land policy measures, because services are insufficient to meet the needs of the growing population. The competition between municipalities for residents and taxpayers still affects land use planning, although regional co-operation between the municipalities has been promoted. Co-operation between the municipalities and the state also requires development in terms of land use issues, such as the planning and implementation of infrastructure and the use of state land. In the long run, construction that is inappropriate in an overall sense is expensive for the municipal and state economy as well as for private citizens.

The built environment makes up about two-thirds of Finland's national wealth. Repairing and supplementing the existing construction stock will save natural resources and support the historical stratification of the living environment. As a result of changes in the business and production structure, for example, buildings and areas are being freed up from industry and transport use for

new purposes. Utilising these areas, which are often ideally located in terms of community structure or in downtown areas, for housing can reduce the pressure for construction on the outskirts of urban areas that decentralises the community structure.

- A functional infrastructure, in other words, good basic structures, are a necessity for the functioning of the whole of society. Basic structures include energy, transport and information technology systems as well as water, waste water and waste management systems. Social, health and educational services are also part of the basic community infrastructure and a functional living environment.
- The infrastructure will be developed in anticipation of future needs and development. Long-term maintenance of the existing infrastructure will be ensured. The economic efficiency of the infrastructure will be increased by means of land use planning and, inter alia, by liberalising markets or promoting the use of information technology.
- Land use co-operation between the state and the municipalities and regionally between the municipalities will be improved so that the existing construction stock, infrastructure and services are utilised in the best possible way, efforts will be made to relieve the housing shortage in growth centres and slow the increase in housing prices. Furthermore, opportunities to attain a pleasant living and operating environment will be supported.
- The target is to attain functionally diverse and structurally sound communities and a good living environment. In particular, growth centres and the surrounding areas need housing, workplace and other construction that realises people's housing desires and the objectives of a sustainable community structure. The decentralisation of community structure and minimisation of transport needs as well as a reduction in the adverse effects of traffic are necessary in order to, inter alia, mitigate climate change. Measures to decrease the amount of transport and emissions will improve the health of the environment and also reduce costs in the long term.
- The cohesion of natural systems will also be ensured in land use planning and space will be left for wild nature and biological diversity. Town

and infrastructure planning can be used to exert greater influence on the consumption of natural resources resulting from construction and prevention of the hazards of their use. Physical activity, nature tourism, recreation in nature, and the needs of summer cottagers and leisure time requirements will be taken into consideration in land use planning.

- The existing built environment will be utilised as the starting point for land use planning and construction. The retention and repair of usable buildings will be promoted so that their cultural-historical value is also taken into consideration.
- As housing needs change and the requirement level rises, it must be possible to offer opportunities for specialised personal choices and ensure that the most attractive options observe the principles of sustainable development. There is reason to improve the efficiency of zoning of plots for small houses, but it is also just as important to increase production of larger dwellings suitable for families in the municipalities at the centre of the commuting areas. Retaining and strengthening the position of the centres is essential in terms of a healthy community structure. Good public transport connections, improved air quality and noise prevention will improve the preconditions for living and other functions in centres.

5.2.3 Ensuring a vital rural region and its services

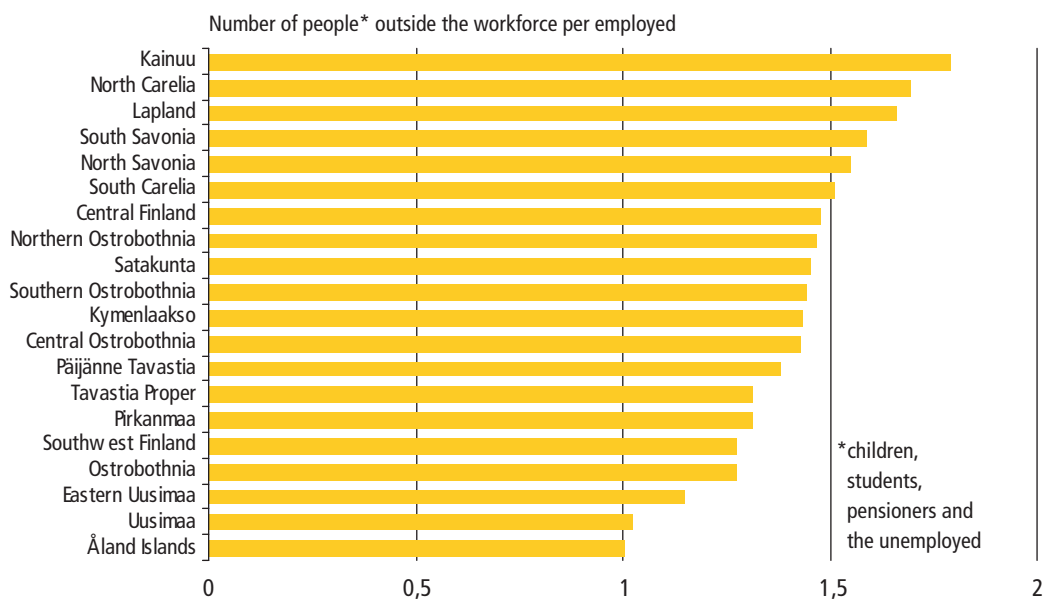
The rural production structure is changing in Finland as agricultural jobs continue to decrease and are focused on a few regions. The opportunities for rural regions are increasingly linked to specialisation and other business practiced in addition to agriculture. The most successful rural areas will be those near the regional centres, where people employed in the regional centres live and where there is demand for various services. Many regions are dependent on public sector activities.

Development of the rural area will be increasingly linked to the development of cities. In terms of rural development, it is problematic that the network formed by cities in Finland is not dense enough to cover the entire country, meaning that rather isolated regions remain between the cities regions. These areas are in the weakest position due to an unbalanced business structure, the lack of employment opportunities and the small size of local markets.

It is possible to live in accordance with sustainable development both in cities and in rural areas. Promoting living in rural areas can support the development of the villages, keep the existing construction stock in use and take empty properties into use again. Living in and working from leisure time houses contribute to the activity and vitality of many municipalities and villages and help maintain services.

Figure 14

Economic dependency ratio by province, 2003



Source: Statistics Finland

- Increasing the vitality of the rural area can relieve the adverse effects caused by the changing age structure of the population and the trend towards concentrated living. Diversification of business in rural areas is necessary in terms of the use of national finances and regional balance. Supporting entrepreneurship, promoting a diverse business structure, utilising the particular strengths of each region and promoting their sense of community and local culture as well as independent development of the villages will help increase the vitality of rural areas.
- The operating preconditions for practicing agriculture and forestry will be ensured. In particular, the areas of bioenergy production,

the protection and management of nature and cultural landscape, and diverse promotion of domestic tourism can be of even greater importance to rural development in the future.

- Existing and new regional production chains and sectoral centres in the energy sector can be used to create new opportunities for employment and earning income in rural areas. Thus, there will be new options for agricultural production, the profitability of which will also be improved by the farm subsidy system to be implemented. In terms of new lines of production for agricultural and forestry farms, bioenergy production will be a key focus of development work. Increasing the use of energy wood will simultaneously promote forest management.
- Finland works actively in the EU towards the development of a common agricultural policy to better respond to the needs set by sustainable development.
- Long-term actions are also needed to increase telecommuting. This will require functional and well-protected information technology connections and flexible working time arrangements.

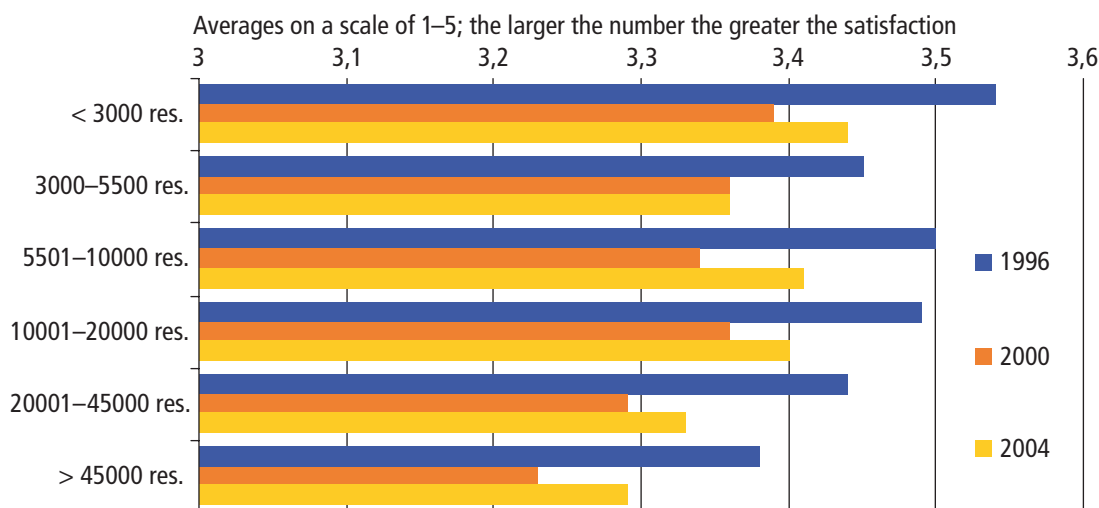
5.2.4 Ensuring the availability of services

Relatively speaking, regions of negative migration have less young people and more population who needs basic services. An ageing population increases the need for local services, health care and public transport services. The needs of young people are often commercially and culturally oriented, which serves to increase the pressure to migrate to centres. As a result of unfavourable population development, tax income in regions of negative migration are falling, and the municipalities' dependence on state subsidies is increasing. The skewed age structure of some isolated and small municipalities is beginning to produce a nearly overwhelming problem with regard to organising services. On the other hand, growth centres have problems organizing daycare and school services.

Commercial services have long been strongly focused on units that are increasingly large and less in number. However, the decrease in the number of grocery stores has slowed, and the number of small stores and sales has increased in many urban areas. This is the result of societal regulation, such as store location steering and legislation on business hours. However, the situation

Figure 15

Municipal residents' satisfaction in services: A comparison by size of municipality



Source: Association of Finnish Local and Regional Authorities, KuntaSuomi 2004 survey

in different regions has simultaneously become segregated in that services in the downtowns of large cities and certain suburbs have improved while services in small municipalities and detached house areas have deteriorated significantly. Car use on shopping trips has increased. In the future, immaterial services will increase and the importance of the concrete location of the services may decrease as online services improve.

- The public sector has an important responsibility in terms of the realisation of regional and equal well-being. In order to ensure the availability of public services, a national municipal policy will be created to handle the balanced development of the municipal economy and to level out the differences between municipalities, with the target of ensuring good and equal availability of public services throughout the country. Co-operation between the public, private and non-governmental sectors in service production will be a necessity in the future as well.
- National community policy will prevent the social segregation of urban areas. In rural areas, the importance of local conditions and approach models in the production of welfare services will be emphasised. The

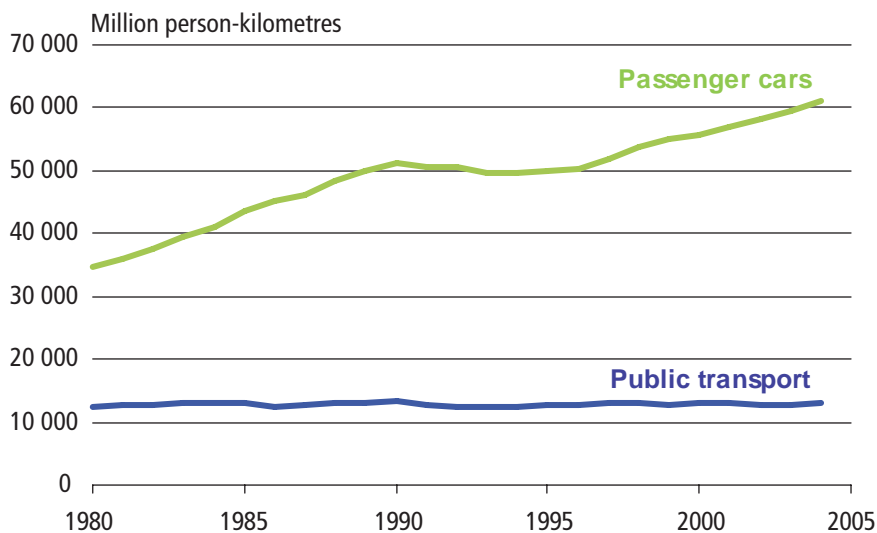
location of services close to inhabitants can, for example, further the elderly living at home, reduce the need for arranging transport services and increase the vitality of villages as well as, most importantly, their attractiveness as living areas. Local services include home, health care and family clinic services, schools, daycare, postal, cultural, youth and physical activity services as well as trade.

- The aim is to ensure the availabilities of daily consumer goods in different parts of cities and rural areas so that car dependency is also reduced. This will be made possible by, for example, online shopping and the spread of delivery services, which will require logistics development for service production and the implementation of organised deliveries and mobile service points.

5.2.5 The transport system and information society services as a basic precondition for a functional society and interaction

The concentration of regional structure and, in particular, the decentralisation of the community structure in growing urban areas also makes it more difficult to maintain and develop the transport system and basic services. Negative

Figure 16
Development of public and passenger car transport



Sources: Statistics Finland; Finnish Road Administration; VR Group Ltd; Finnish Maritime Administration; Civil Aviation Administration; Helsinki City Transport

migration regions have difficulty maintaining the basic services of operational public transport, and in building and maintaining high-quality transport and communications networks in a cost-efficient manner. If public transport services are cut back, migration could accelerate even more. The transport networks in areas of negative migration are deteriorating and they cannot offer the latest communications technology either. The roads system to be maintained in negative migration regions will not significantly decrease, because the need for mobility and transport must be satisfied, even if the amount of traffic on the road and railway network decreases.

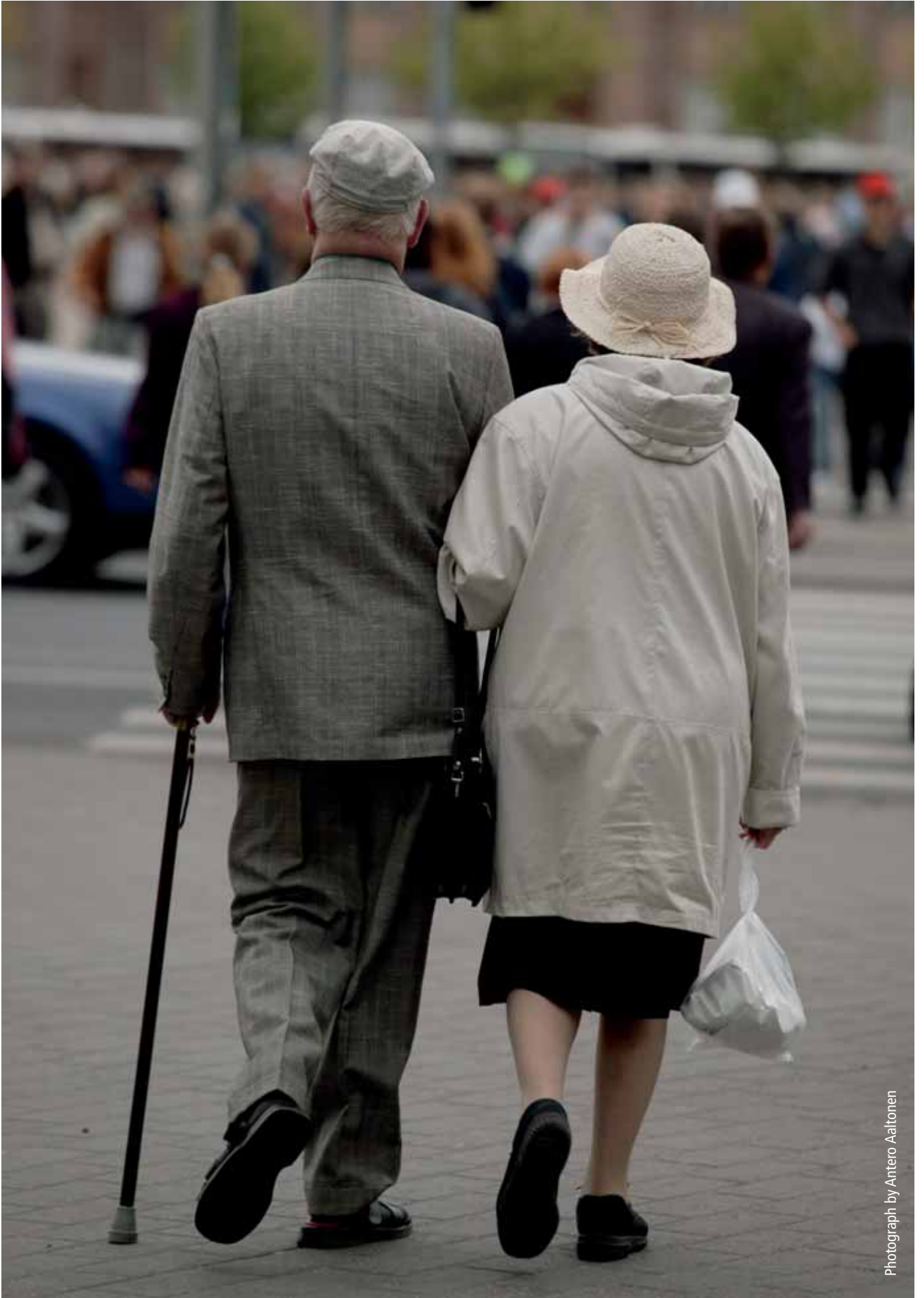
On the other hand, concentration of the population in growing city centres puts pressure on the arrangement and maintenance of transport and communications services. Traffic jams have increased noticeably in recent years, especially in the Helsinki region as a result of the decentralised structure and increased use of cars. The residents of areas bordering on the Helsinki region travel more than other Finns in terms of kilometres and time. As traffic increases, the traffic safety, health and environmental hazards caused by traffic also increase.

Bioenergy production is considered to be an important factor for the entire national economy in the future. However, a move from oil to biofuels will not reduce the amount of traffic, consumption of non-renewable natural resources used in infrastructure construction, or the other problems caused by transport, such as noise pollution. The benefits of using biofuels may also be nullified if traffic continues to increase.

- A functional transport system is a basic requirement for society and interaction. Regional and social equality and environmental impacts will be taken into consideration when arranging transport and information society services. The starting points for planning the transport system and information society services are safety and security, accessibility, the equality of citizens, availability of services, and eco-efficiency. Functional information society services also provide the opportunity to reduce physical transport through, for example, telecommuting.
- Controlling the growth of transport will require a comprehensive approach, in which the demand for transport is actively influenced by traditional transport policy means as well as by economic and informative instruments, land-use planning, and assessing other socio-political decisions, especially the impact of economic, tax, regional,

industrial, and housing policies on the demand for transport. Co-operation between the municipalities and the state will be increased when planning the transport system.

- The starting point for the planning will be to minimise the need for traffic and reduce the adverse effects of transport. Preventing car dependency and stopping the growth of passenger car use will be made a target of transport planning.
- The competitive position of public transport, cycling and walking in relation to passenger cars will be improved. The state and municipalities will use public funds to support public transport and public transport investments, especially where passenger numbers are high. The preconditions for sustainable means of transport will be improved and opportunities will be provided to combine public transport, walking and cycling into a functional travel chain. New, cost-efficient forms of public transport will be developed and implemented in rural and urban areas.
- Maintenance of old transportation routes consumes considerably less natural resources than building completely new routes. Thus new construction of routes is a decisive factor in terms of the natural resource consumption resulting from the transport system. The objective is to increase the eco-efficiency of the present transport system and develop rail and public transport as well as information networks. Another target in addition to eco-efficiency is a reduction in the use of natural resources. Thus both total consumption and emissions will be reduced.
- The functionality of the logistics system is important in terms of competitiveness throughout Finland. The target is to make goods transport safe, as efficient as possible, and harmless in terms of the environment.
- Citizens' awareness will be increased regarding how transport burdens the environment and how to select transport means that are sustainable in terms of the environment.



Photograph by Antero Aaltonen

5.3 Citizens – well-being throughout the entire life cycle

Key challenges

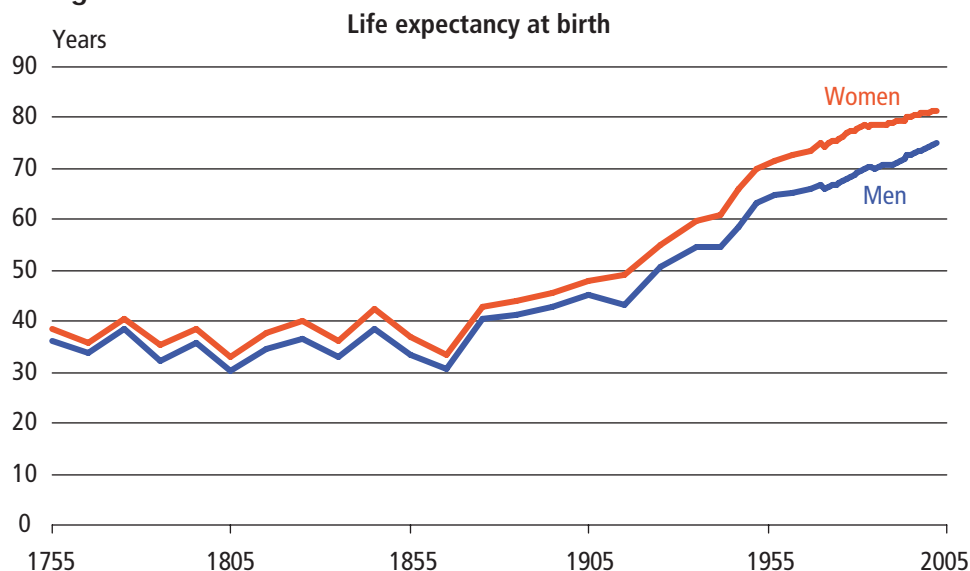
- How can the responsibility of the individual and society be balanced? How can active citizenship be promoted?
- How can working life and the needs of family and leisure time be integrated in a sustainable manner?
- How can equality and cohesion be retained between different generations?
- How can healthy lifestyles and the functional capacity of the population be promoted while preventing health risks caused by the environment?
- How can the participation of socially excluded persons and those at risk of exclusion be increased?
- How can national cultural diversity be ensured under the pressures for a uniform culture and how can cultural collision be prevented?

On average, the well-being, health and wealth of Finns is better than earlier. Well-being has increased for the majority of the adult population. The education level of the population has risen, quality of housing is better than before and economic well-being has increased in terms of average income and level of wealth. According to several measures, the health of working-age people and the functional capacity of ageing people have also improved. Working conditions have developed in a positive direction in recent years. However, at the same time, it appears that conditions for living have become tougher for families. On the other hand, unemployment and long-term unemployment is significant, stress is considered to be increasing and alcohol mortality is on the rise. The income gap has grown, although it is still one of the smallest in the OECD countries. When striving for general well-being, a sustainable society has to ensure that the relative position of weakest population groups improves. This is a precondition for the societal cohesion.

5.3.1 Balance between individual and societal responsibility

According to the Constitution, the Government must ensure equal social welfare and health care services for citizens regardless of their place of residence. Tax-funded municipal services are the mainstay of social welfare and health care services and are available to all regardless of social position or economic circumstances. The Government also has to support the opportunities for

Figure 17



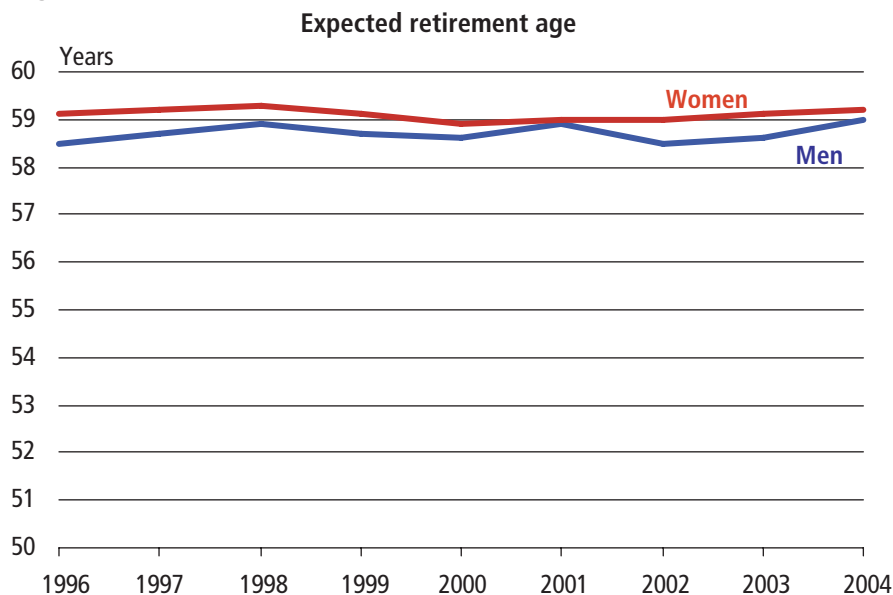
Source: Statistics Finland, Population

families and others responsible for children to ensure child well-being and individual growth. So-called age-dependent expenditures, such as pensions, health care, long-term care and education, are expected to rise by nearly 6 per cent in relation to gross national product by 2030. Finland has begun to prepare for the increased expenditures resulting from ageing.

For Finns, the most important factors affecting quality of life and happiness are a good family life and human relationships, health, enjoyable work, and income security. Enjoyment of nature is also considered to add to well-being. Engaging in art and culture has been shown to have a direct impact on human well-being. Life management and a sense of purposefulness have proven to be important factors in retaining a zest for life and preventing depressions and other mental problems. Voluntary participation in non-governmental organisations, internal trust in the civil community and cultural and social bonds all have a positive impact on health and life span.

- Safety, equity, health, science, art and other factors in human life are values in themselves, and should be embraced as such.
- Society provides active citizens with equal opportunities for independent action, life management, and responsible action in society and local

Figure 18



Source: Finnish Centre for Pensions

communities. An active citizen also takes responsibility for global well-being and the environment.

- Society is responsible for arranging basic services and basic social security. The social security and service systems must cover the entire lifecycle of a citizen, be socially equitable and economically sustainable in the future as well. The social security systems must encourage work and enable adaptation to changing conditions, as well as support individual solutions and spontaneous preparation for future needs.
- As young age groups decrease in size and the population ages, service production will be adapted to this change. This will require open discussion of the limits to the social, educational and health services system, the roles of different actors in producing services, and the development of preventive systems as well as focusing of resources on the most effective services. In terms of the sustainability of the service system, it is essential to improve the capacity of the ageing population, delay the need of the ageing for care, and focus services according to the care need.

5.3.2 Quality of working life

A clear shortage of labour is a threat as the so-called Baby Boom generation born after the second World War enter retirement. However, people still retire quite early, although the situation is improving. Working conditions have mainly developed in a positive direction in recent years. However, at the same time, the changes resulting from globalisation have led to uncertainty in employment relationships. The demands of working life have increased steadily and employees face many new competence requirements along with the development of information technology, among others. The pace of work has increased. Working a lot of overtime is another phenomenon related to increased urgency. Temporary employment relationships are a particular problem for young women.

Figure 19



Sources: Statistics Finland; The Federation of Accident Insurance Institutions; The Farmers' Social Insurance Institution

- Work is an essential factor in the well-being of an individual, and a lack of work is one of the most significant risk factors for social exclusion. The structure of the labour market will be further developed so that it is worthwhile for an employer to offer work and worthwhile for an employee to accept that work.

- As working life will be developed, different areas of life are taken into consideration in a balanced manner. The target is to improve the well-being at work of employees and make it easier to reconcile work and family life. By strengthening the positive aspects of work, developing the individual at work, supporting career development and innovativeness, and good leadership will make it possible to better ensure the success of enterprises and employee health and well-being in the rapidly changing working life of today. The learning networks of working life are important, and they will be reinforced. Development of innovative solutions will require functional interactive relationships, creativity and competence.
- Gender equality has not yet been realised in terms of salaries, job permanence, the costs of parenthood, and life expectancy, so determined and broad advancement of these matters are still needed. The gender perspective will be taken into account in all decision-making.
- Working life flexibility, such as promoting working time saving and job alternation leave, provide the opportunity to renew professional skills and take breaks to rejuvenate and regulate the burden of work as well as extend the working career. The use of information and communication technology to enable telecommuting will be promoted and guidelines for that will be developed. The notable spread of telecommuting requires its integration into employers' strategies. Organisations should adopt telecommuting as part of their operating methods wherever possible. Different solutions that are under development must be adapted to the employment objectives.
- In terms of the economy and funding of social security, it is important for people to be able to live healthily and with good functional capacity, and to remain in working life for a longer time. Thus, education policy must be built on the principles of lifelong learning and active ageing.

5.3.3 Cohesion between different generations

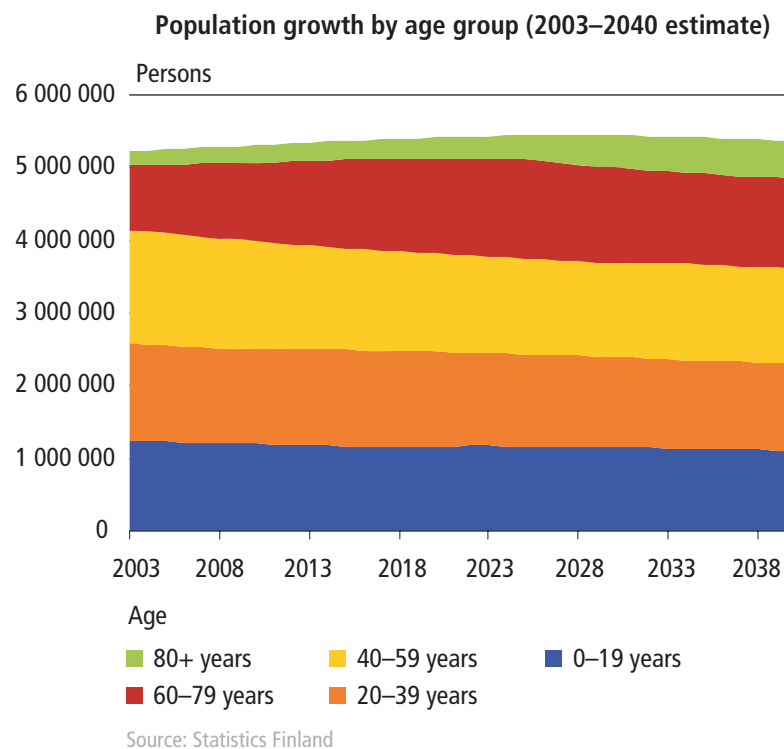
The Nordic welfare society is based on an agreement in which everyone finances and receives services and social security on time during the different phases of their life cycle. Cohesion between the generations is the result of interaction between generations, which must be furthered. Good care for children is also

a precondition for having caregivers for the elderly generations of the present and future.

The age structure of the Finnish population will change over the next 20 years so that the number of 65-year-old people who do not yet require treatment and care will grow absolutely. This population group is more educated, wealthier and healthier than its predecessors, so ageing can also be considered a resource in many ways and in different sectors of society.

The number of children born has decreased in recent years, because the age groups of childbearing age are smaller than before. Total fertility rate has however remained relatively stable. The number of children in the population will continue to decrease in the future as the childbearing age groups become smaller.

Figure 20



The economic position of families and the preconditions for earning a living have changed. The position of families in income distribution has deteriorated, but income development has varied a lot between families. Poverty in the childhood home doubles the risk of poverty as an adult. The increased disintegration of families and rise in single parenthood as well as unemployment has both immediate and long-term impacts on family income. Single earner households are more susceptible to external economic risks, such as unemployment, than are multiple earner households.

- A national target in the future must also be a service and income transfer system that provides a strong framework for ensuring intergenerational solidarity based on the needs of different age groups.
- The operating potential of an active ageing population in different areas of society, such as working life, volunteer and organisational work, caring for relatives, education, and the transfer of experience, will be supported. Accessibility of housing and the living environment will make living at home possible as physical condition deteriorates. Operational public and private services will help prevent problems and support functional capacity and independence.
- The target is the well-being, growth and development of children and young people into balanced adulthood. Social assistance and service systems will be developed so that children and families are not subjected to inequality. The opportunity for equal educational and other choices will be ensured. Possible development of social exclusion will be prevented by means of education to support children and young people and by early intervention in problems. New operating models will be developed for the versatile support of children, young people and their families in schools and in health care services for children and young people.
- Childhood and youth are valuable stages of life as such. Young people have the right and the responsibility to build their own future. Social inclusion and the opportunities to develop into an active citizen who bears responsibility will be promoted by supporting empowerment.
- One of the preconditions for the balanced growth and development of children and young people is ensuring the health of the children and their parents. Information on the health and lifestyles of children and

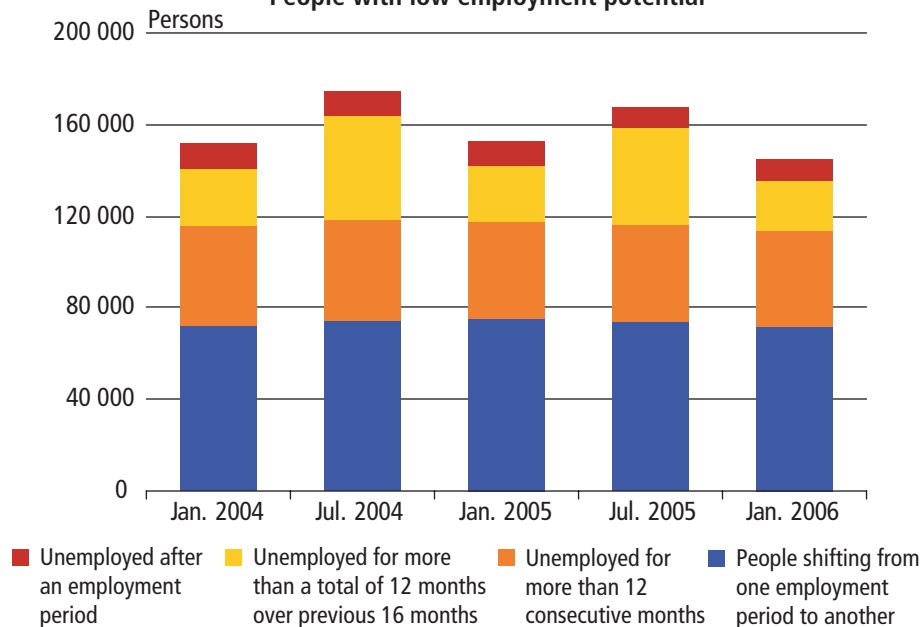
young persons and the changes occurring in them is needed to develop and support family clinic and school health care and health promotion programmes. The target is to develop a national monitoring system to follow the physical and mental development and health of children and young people.

5.3.4 Preventing social exclusion and poverty

Social exclusion refers to increasing hardship that includes income problems, long-term and often repetitive unemployment, problems related to health and life management, and exclusion from being a part of society. Many lifestyle habits that weaken health and increase the health differences between population groups, including smoking and use of alcohol or drugs, are related to social exclusion. In accordance with the EU's Joint Report on Social Protection and Social Inclusion, Finland is committed to creating its own plan of action for Finnish citizens.

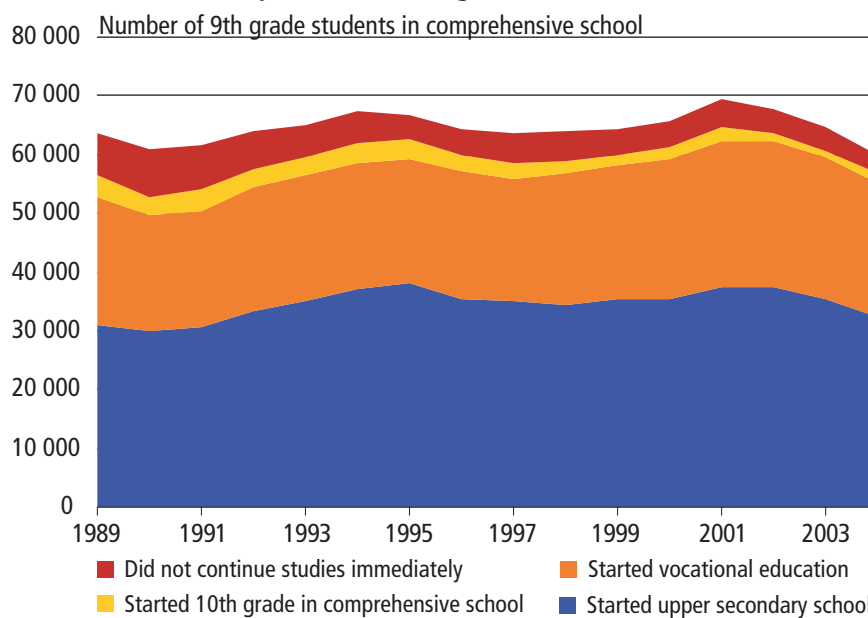
- It is important to promote the inclusion of people who are at risk of being excluded from the society. Prevention of exclusion will be established as part of normal activities. The assessment of social and health impacts in different policy sectors, particularly in education and employment policy, is particularly important. Social security and services will be developed in a more active direction, so that the system will not develop exclusion traps.
- Schools' competence at identifying the children and families that are at risk of social exclusion will be increased, and education that takes the individual's special needs into consideration will be developed. Special attention will be focused on the transition phase between education and working life. The target is for every person to receive a vocational or university education after completion of comprehensive school.
- Special attention will be paid to long-term unemployment by means of the reform of active labour policy. Ultimately, pension solutions for seriously disabled long-term unemployed persons will be studied.
- Inclusion will also be promoted by means of support networks based on peer support, so that they create opportunities for social cohesion and participation. Activity centres for the unemployed, clubhouses for

Figure 21 People with low employment potential



Source: Ministry of Labour, employment services statistics

Figure 22 Immediate placement of 9th grade students in further studies



Source: Statistics Finland, Education

mental health rehabilitation, and partner and community centres are concrete examples of arenas for everyday participation available for people outside working life.

5.3.5 Promoting healthy lifestyles and functional capacity and preventing health threats

Successful national health work has added many years to the lifespan of Finns and many more years of health and functional capacity. However, this development has not been positive in all disease and socio-economic groups, as differences have remained large. Particular attention must be focused on narrowing health differences and providing citizens with equal opportunities to live in a healthier and safer manner.

Cardiovascular diseases are still a major cause of death and, together with musculoskeletal disorders and mental health problems, they account for the majority of premature retirement and long-term unemployment. Musculoskeletal disorders and mental disturbances cause the greatest amount of health-related quality of life reduction in the population. Depression is the most common cause of functional incapacity. In addition to intoxicants and nutrition, the challenge in terms of promoting public health and preventing disease is lack of exercise, which results from the decrease in physical everyday activity. Half of Finns aged 19–65 are sufficiently active in terms of their health. Physical activity is one of the most important and reasonably priced tools for promoting the health of the ageing population. Physical activity plays a large role in the development of children, because an activity started as a child lays the foundation for an active lifestyle.

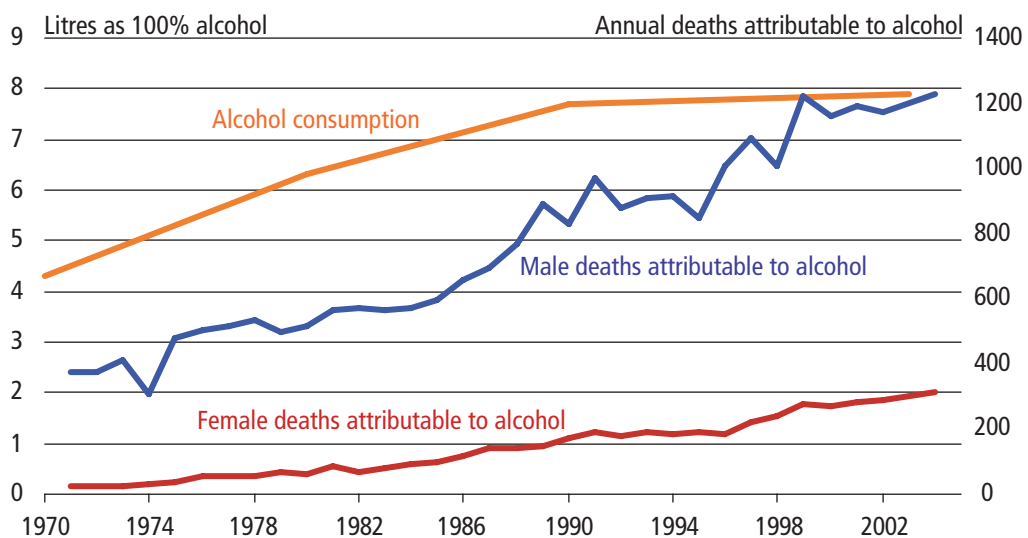
Good health is dependent on a community structure and living environment that promotes safety and health, the most important elements of which are safe workplaces and residential areas, clean outdoor and indoor air, water and other environment, operational waste and water management, and health care service systems. Health policy that focuses on health care services, security for the period of sickness and measures to prevent sickness plays a key role in the maintenance, improvement and return of health as well as in the alleviation of pain and suffering. The long-term sustainability of the health care system is linked to the functionality of community structure and health policy.

Health is a significant factor also outside the health sector. In terms of health, it is important how the decisions made in various sectors of society support the opportunities for a healthy life and how possible health-promoting or health-endangering factors are taken into account in societal decision-making at the national, local and EU level and globally. There should be particular concern about large socio-economic health differences. Physical and mental health can be noticeably furthered by means of employment and social policy, which not only prevents social exclusion, but also takes note of people's need for security, family situations and human resources.

In the long term, promotion of health can help achieve significant cost savings, for example, as reduced sick leave and in the general costs of specialised health care and health care.

The comprehensive Finnish education system has also been an important factor in health. Nutrition policy, which makes nutritious and healthy school and workplace meals possible, promotes health and the adoption of healthy lifestyles. Alcohol and tobacco policy, which protects underage persons from the effects and advertising of these substances, leads to health savings over

Figure 23 Per capita consumption of alcoholic beverages and deaths attributable to alcohol by gender



Source: Statistics Finland, Stakes

the years. City planning and transport policy to promote independent and safe movement also furthers health.

- Public health care services will focus on preventive health policy. Society provides opportunities for the spontaneous maintenance of health, and the target is for people to take increasing responsibility and interest in maintaining their health. Healthy lifestyles will be promoted by people if it is easy to choose them. In the future, there should be an extensive examination of how different social policy means could be used to implement reforms to promote health. Lifestyle changes will be broadly influenced through information, health care and multiparty co-operation. The role of health care personnel and many non-governmental organisations, the school institution, business life and the media as distributors of reliable health information will be supported.
- Environments that make health promotion, preventive services, health-promoting structures and physical activity possible as well as prevention of diseases are the primary means for increasing the health and social cohesion of the population, improving work capacity, enabling active ageing, and increasing the functional capacity of the ageing population. Anti-drug policy and health promotion programmes will be directed at influencing the choices of children and their parents in the direction of healthier lifestyle choices.
- The health care and drug service system will be developed in a more integrated direction so that the available resources can be further focused on identifying and treating people at a high risk of becoming ill or socially excluded.
- Structural changes through community and building planning and co-operation between industry and other business life will protect people's health while developing and promoting an environment that supports a healthy life.
- A challenge will be to develop and apply new telecommunications solutions to support the functional capacity, performance and participation of citizens with limited functional abilities. The development of easy-to-use applications and aids will be supported to improve the quality of independent activity for all people in different stages of life.

- Development of healthy foodstuffs, their increased supply and pricing as well as school and workplace catering has an effect on the choices of citizens. Measures to help transfer the focus from supporting production of foodstuffs that contain large amounts of saturated fats to the production of healthier choices, such as fish, vegetable oils, vegetables and fruit, will be supported, especially in daycares and schools. The target is for consumers to select healthy, safe and ecologically produced raw materials and foodstuffs.
- Citizens' access to information on the factors affecting environmental health is necessary, in order them to make the right choices. The opportunities for citizens to exert influence in the planning of living environments need to be improved in order to ensure the health, safety and pleasantness of the residential environment. Integrating the health impacts into the environmental impact assessment must be reinforced. More information is needed about the cause and effect relationships between the environment and health, the joint effects, health risks and impact mechanisms of hazardous substances, and the health-promoting factors of the built environment.
- Health threats caused by communicable diseases do not observe state borders. Health risks resulting from climate change are linked to climatic extremes, such as storms, floods and heat waves. Preparation for these health threats requires the co-operation of many actors, such as researchers and various authorities.

5.3.6 The national identity and a multicultural Finland

Each nation maintains the diversity of the cultures in the global community by means of its own culture, and this is considered one of the essential characteristics of human progress. According to many international studies, art and cultural life accumulate social capital and increase the level of perceived health. At the community level, national inheritance and other cultural knowledge increase stability and tolerance.

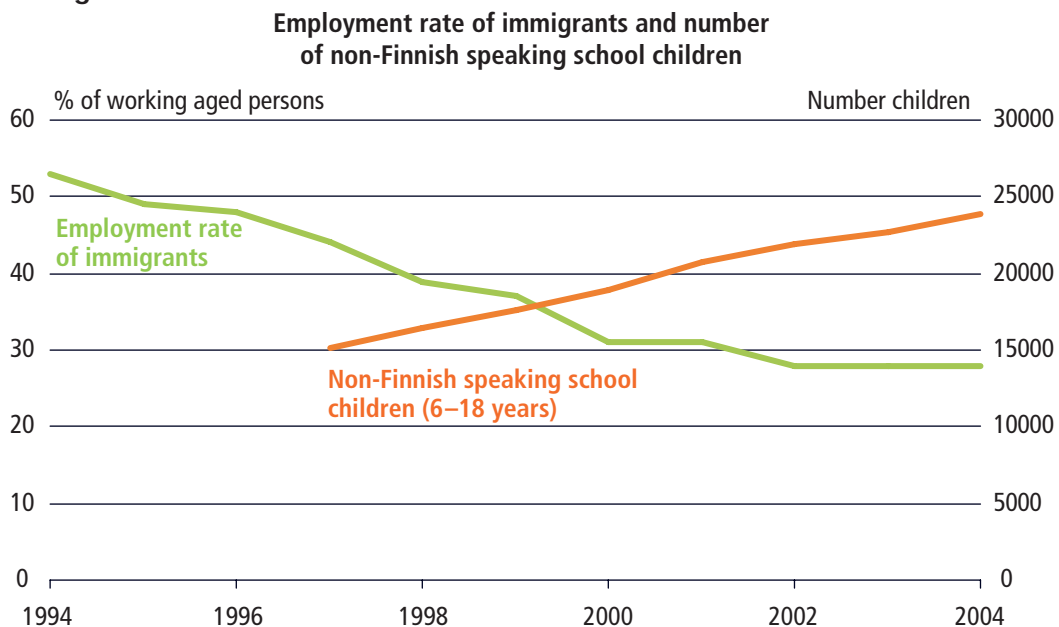
According to the Council of Europe, the cultural perspective should be taken into consideration in all decision-making. This particularly applies to municipal decision-making, which occurs close to local people. The activity of citizens, a functional democracy and real opportunities for participation are essential

in terms of cultural sustainability. In a sustainable society people have the chance to influence their own tangible and intangible cultural environment and be involved in building it. Education is a key factor enabling participation. Education is also a source for the development of an understanding of tolerance, multiculturalism and cultural heritage.

The Finland of the future will be a more multicultural country than today. Difference also has to be seen as an opportunity for new learning and cultural interaction, and subsequent growth in innovativeness. Immigrants are an important resource and their good rate of employment is important for Finnish society's social cohesion. Knowledge, understanding and respect for different religions and philosophies will reduce the chance of conflicts.

- The characteristics of Finland's culture must be protected. At the community level, national inheritance and knowledge of other cultures increase stability and tolerance. Retention of cultural diversity within Finnish regions must be promoted, and the cultural perspective taken into account in all decision-making.

Figure 24



Source: Statistics Finland, Ministry of Labour, Finnish National Board of Education

- In the future Finland will be an even more multicultural country. Faster integration of immigrants and language acquisition is essential in terms of the well-being of immigrants, the balanced development of society and the economy. The target for immigrants of working age is their entry into working life and placing their competence and education at the disposal of Finnish society. In particular, the preconditions must be created for integrating young people of immigrant background into society.

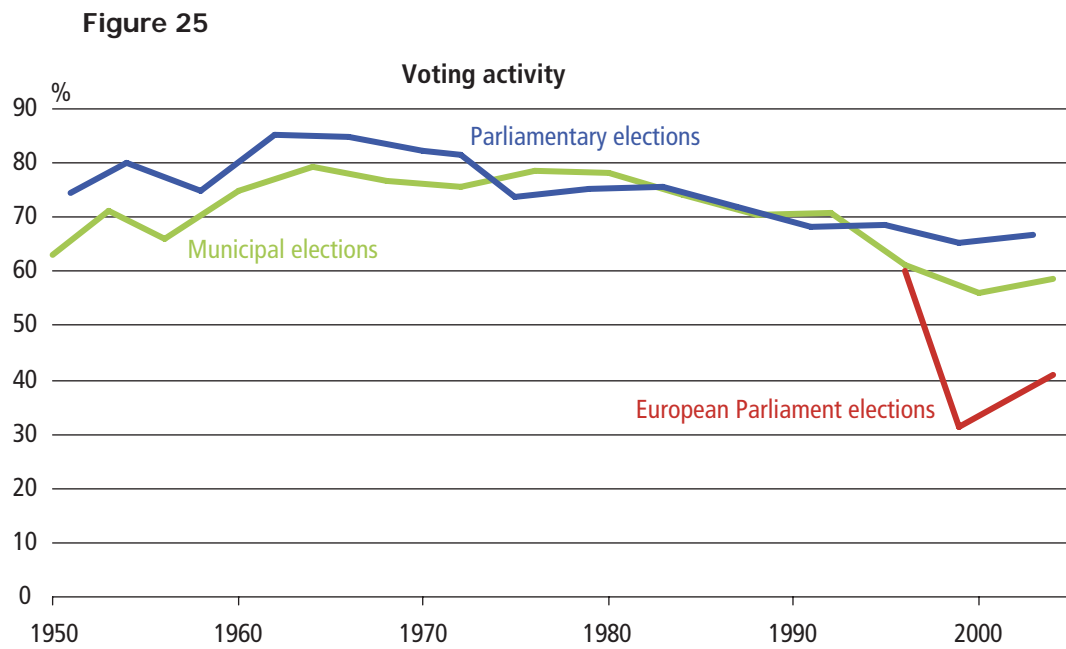
5.3.7 Promoting civil activity

A representative democracy meets new challenges, for example, new forms of civil activity. In the same way, the need to reconcile the different levels of decision-making, from local to global, has become stronger. The significance of a civil society as a place for discussion and a developer of the skills needed for democracy is increasing. At the same time, the traditional way of handling citizenship is expanding. Citizenship in a nation-state will remain important but will increasingly be accompanied by a citizenship in neighbourhood, local and regional levels as well as an EU and global citizenship.

Voluntary civil activity is also very important in terms of the economy. Knowledge and use of various means of participation and influence is essential to the development of democracy, learning about visioning and building a sustainable future.

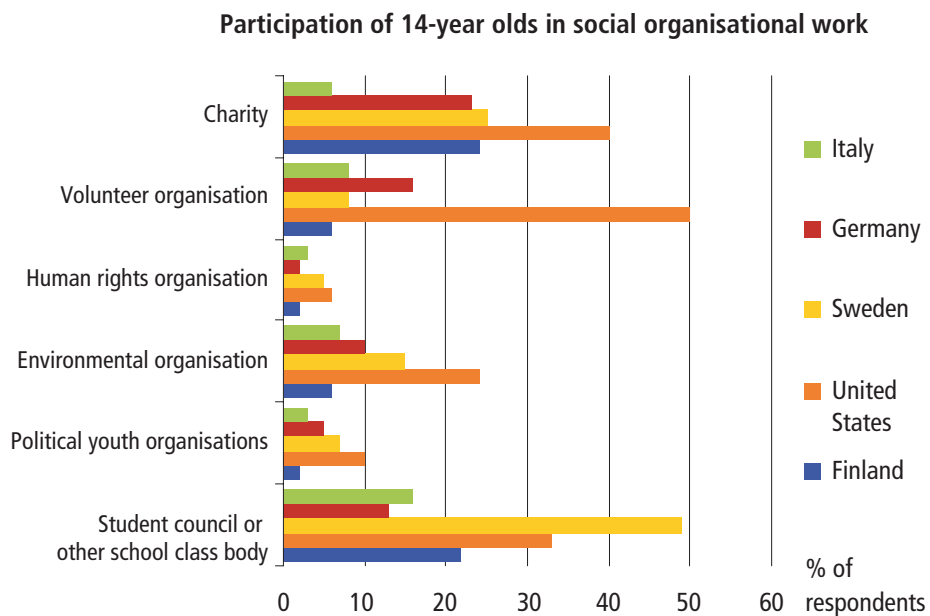
- The starting point in the development of a welfare society is broad democratic rights for society, individual freedom, freedom of speech, freedom of religion, political rights, and the further development of such rights. Maintaining a conscious and active values discussion in society makes it possible for citizens to participate in determining the priorities of common issues.
- Sustainable development requires that citizens have equal opportunities to participate, bear responsibility and benefit from the increased choices resulting from development.
- All children and young people must have experience of taking responsibility and managing common matters, both in their own organisation and in those outside the school. Partners will be needed to extend the learning

environment to society. The spread and establishment of methods of participation and influence in educational organisations that have been found successful will be promoted, and new means will also be developed.



Source: Statistics Finland, Population Statistics

Figure 26



Source: IEA-Civic Education Study 2001, Institute for Educational Research, University of Jyväskylä



Photograph by Amette Hotari

6 THE ECONOMY AS A SAFEGUARD FOR SUSTAINABLE DEVELOPMENT

Key challenges

- How can Finland's competitiveness and jobs be ensured as an increasing amount of industrial production moves from developed industrialised countries to other countries, and how can a service society be promoted?
- How can the services and income transfers that are essential to a welfare society be ensured as the population ages and the need for expenditure grows and international tax competition prevents an increase in the tax rate?

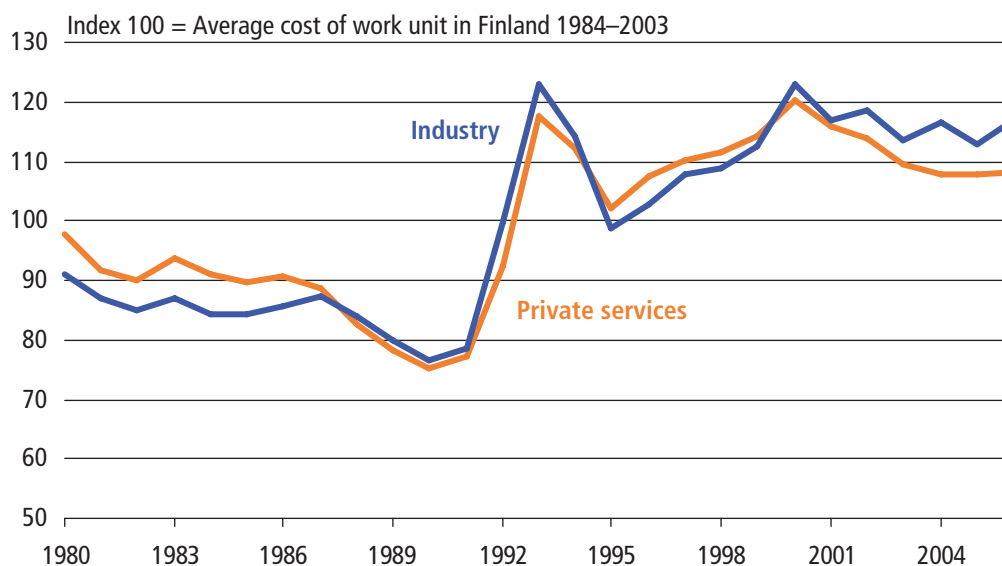
A growing share of industrial production occurs elsewhere than in developed industrialised countries, which have difficulty competing with the low wage levels in industrialising countries. Simultaneously, the pressure for price unification in terms of production factors is increasing. Unemployment in Finland is more clearly concentrated on the labour force with a lower education than it is elsewhere in Europe. On the other hand, competition from developing countries focuses most strongly on this labour group. As the level of education rises in developing countries and telecommunications connections improve, creative, high education work will also be partly transferred to developing countries. This will create a problem unless new enterprise activity and new jobs replace the old ones. However, the large new markets in developing countries also represent new opportunities for Finnish enterprises.

The success stories of tomorrow will be countries that are able to build their own economies for the most eco-efficient consumption of natural resources as possible. Countries will succeed to a greater extent if they are able to offer the world progressive energy and water conservation technology and competence, energy production solutions based on renewable and non-emitting sources of energy, optimal logistics solutions, and eco-efficient material solutions based on new innovations.

In terms of Finnish success, innovations, strong investment in research and development activities and a good education system as well as social security will play a key role. Many studies have shown that the growth of recent years

Figure 27

**Finland's competitiveness in relation to other OECD countries
assessed in terms of relative cost of work unit**



Source: The Research Institute of the Finnish Economy, Forecasting Unit

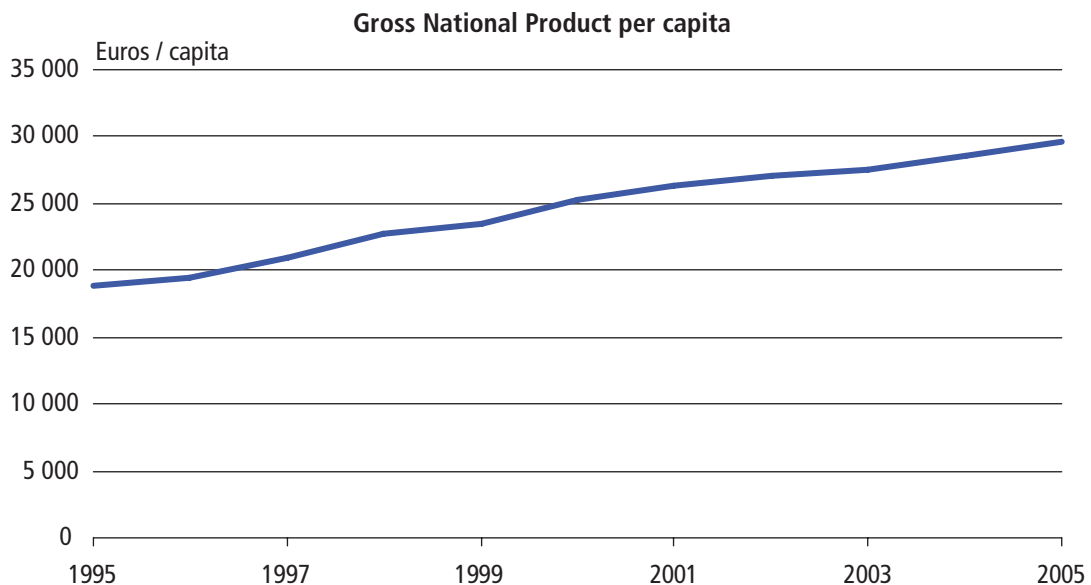
has been increasingly dependent on technology innovations combined with a networked organisational structure. Innovations are an essential source of economic growth.

Finland is a high-level information society. According to reports from the OECD and the EU Commission, information and communications technology have a major impact on growth and employment; one quarter of the growth in the EU's gross national product and more than 40 per cent of the growth in productivity are attributed to information and communications technology. Learning to utilise technology in everyday life and thus improve productivity is a decisive factor in promoting an information society. Development of competitiveness requires investment in technology adaptation and research and development of services as well as social innovations. Efficiently operating markets place pressure on enterprises to utilise existing resources as efficiently as possible and develop innovations, competence and new business. A lack of competition is one reason for weak productivity. In Finland, special attention should be focused on making competition more efficient and preventing distortion in the public and private sectors.

In a global economy, productivity is the key determinant of development for different countries and regions. Ensuring a high level of income requires the continuous improvement of productivity. Growth in work productivity is based on three factors: fixed investments, human and social capital, and technical development. It is possible to invest in human capital through education, learning on the job and health care. Strong institutions and good governance build social capital. Improving the productivity of natural resources and use of material also reduces costs and is sensible business. Economic growth, which focuses on moving from increased use of natural resources to know-how and quality, means the opportunity to raise eco-efficiency and simultaneously emphasises the increasing role of human resources. In this manner, socially sustainable development supports development that is sustainable economically and environmentally.

In the future, the majority of growth in production will come from growth in service sectors, where work productivity has risen at a significantly slower rate than in goods production. Good productivity development, in both goods and service production, requires sufficient incentives for the growth of human capital and innovation activities. Service and information sectors also differ from production-intensive industrial processes, which require new ways of organising

Figure 28



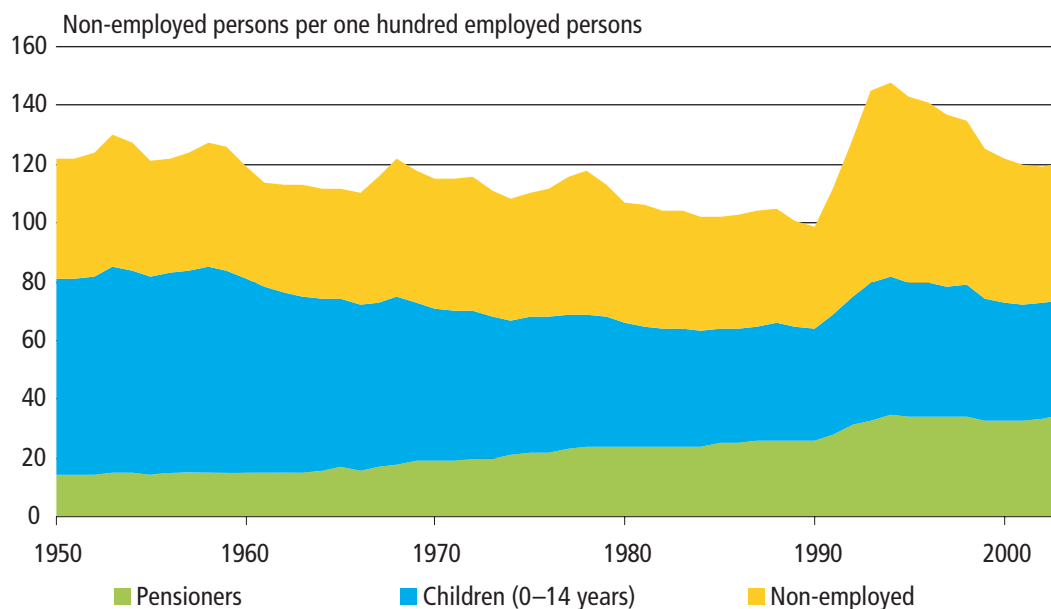
Source: Statistics Finland, National Accounts

work. It has also been demonstrated that payroll systems can provide the motivation for better work performances. This requires that personnel have sufficient opportunities to influence the conditions and success of operations.

The challenge for balanced sustainable development in the future will be ensuring the sustainability of the public economy. In light of this, it is alarming that, according to international and national assessments, Finland's public economy does not appear to be on a sustainable foundation in the long term. Even in this decade, the number of 55–64-year olds will increase more than ever before. At the same time, the birth rate is declining. So-called age-dependent expenditures (pensions, health care, long-term care and education) are expected to grow by nearly 6 per cent in relation to gross national product by 2030. Pension expenditures and the costs of health care and long-term care will both increase by about 3 per cent in relation to gross national product. Expenditures on education will decrease in relation to total production.

Ultimately, public sector financing depends on the employment of a sufficient number of the population. As of 2010, the size of the working age population

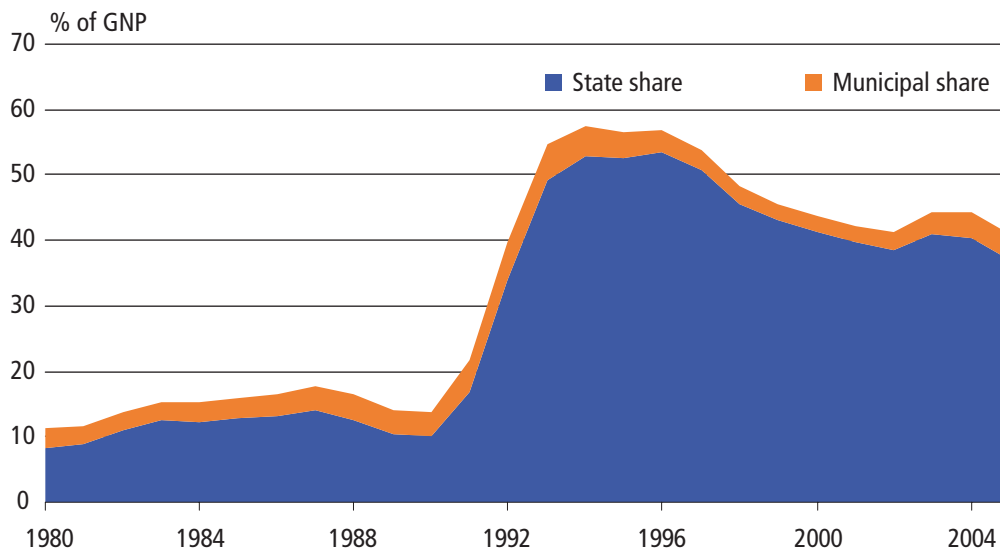
Figure 29
Economic dependency ratio



Source: Ministry of Social Affairs and Health

will begin to decline. Even if the shortening of working time were to end, current development will result in decreased work effort over the decades. On the other hand, growth in productivity will compensate for some of the decrease in work effort.

Figure 30
Public debt (state and municipal) in relation to GNP



Source: National Accounts, Statistics Finland

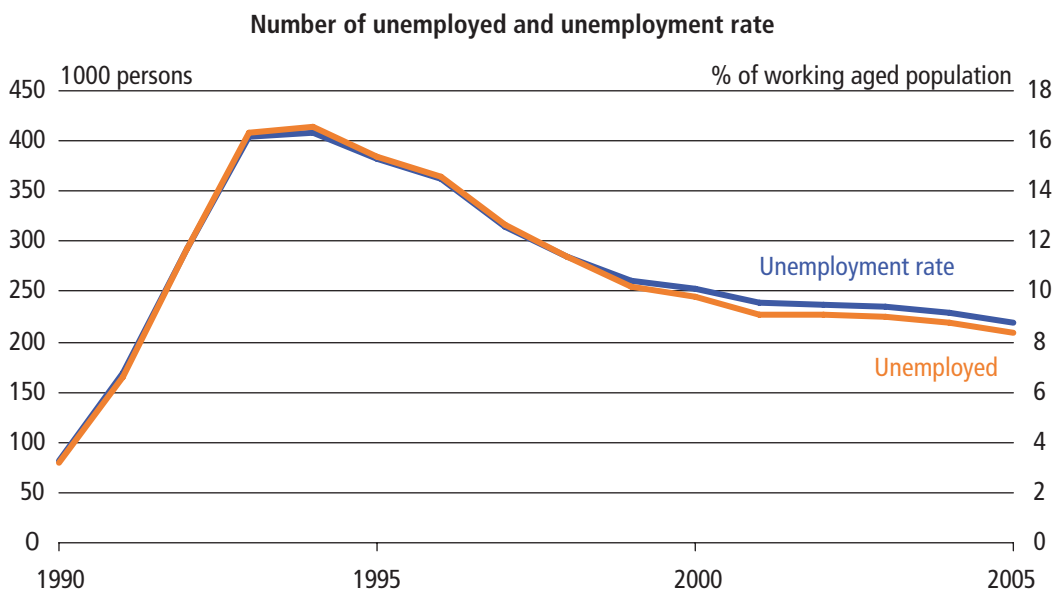
Scenario calculations indicate that the public economy deficit in relation to total production will exceed 3 per cent by the mid-2030s. The sustainability problem will become apparent much earlier in state and municipal sectors than it will in social security funds. Pension funds are expected to remain at a surplus. Other areas of the public economy (state and municipalities) are expected to remain at a deficit, and that deficit is expected to grow all the time. Permanent deficit increases debt, and the public debt in relation to total production is expected to exceed 60 per cent by the beginning of the 2030s. Under these development conditions, it will become difficult to fund public services and pensions.

The tax rates in new future EU member states are low. There will be strong competition in corporate taxation. Competition for highly qualified experts will also become tougher. Thus, international tax competition means that the pressure to increase expenditures cannot be funded by increasing taxation.

An increase in the tax rate would weaken economic growth, which is already slowing in the long term as a result of population ageing.

- Finland's objective in the future is also to retain its position as a welfare society, for which the good competitiveness of its national economy and a stable public economy provide the preconditions. Good employment, educational, health and social policy as well as a healthy environment lay the foundation for a stable society, subsequently strengthening the competitiveness of Finland. Thus the dimensions of sustainable development become intertwined. Parallel activities in different policy sectors will become essential in order to achieve sustainable development.

Figure 31



Source: Labour Force Survey, Statistics Finland

- Ultimately, public sector financing depends on the employment of a sufficient number of the population. Employment and social cohesion are prerequisites for sustainable development. A 75 per cent employment rate is the precondition to provide a sustainable foundation for a welfare society. The financing base for the public economy will be improved by furthering well-being at work for people of working age, preventing

loss of working capacity, quick access to education and graduation as well as lifelong learning. Controlled work-based immigration will also be needed to supplement the offering of labour in areas where there is a shortage of domestic labour.

- Success in global competition requires specialisation, readiness for change and the ability to take advantage of strengths. Finland will utilise its own strengths, which are education, stable labour market relations, technology, a high level of environmental protection and good governance, access to welfare services and equality, and will invest in these in the future as well.
- The target is a dynamic information society that takes advantage of opportunities and has efficient production in terms of the environment. Finland's economic growth and well-being are based on successful enterprises, an open economy, strong human competence, and a high level of environmental protection. Finland's target is to offer enterprises and people an operating environment that attracts activity in Finland and from Finland in the future as well. Finland has to guarantee a competitive operating environment for its enterprises. This will require functional labour markets, an effective innovation system, sound basic structures (infrastructure) and viable basic services as well as a good regulation environment.
- Measures will be promoted to allow industry to renew and produce innovations and business that observe the principles of sustainable development. This will reinforce the success of Finnish industry and further employment and the retention of high quality human capital in Finland.
- A competitive and environmentally sustainable economy needs new, growing and eco-efficient enterprises that are ecologically, socially and economically sustainable. The skills to develop, spread and utilise technological and social innovations will be created. Industrial policy will be used to promote an atmosphere that favours a service society and entrepreneurship, develop the quality of the operating environment for enterprises, create a favourable environment for entrepreneurship, ensure access to markets for enterprises, and promote the growth of enterprises, particularly those in the start-up phase.

- In the future, Finland's economic success and well-being will continue to be based on a high level of competence and ensuring equal educational opportunities for the entire population. Attention will be particularly focused on ensuring that the structure of education meets demand in future decades. Simultaneously, lifelong learning for those already working must be developed. The challenge in terms of education is moving from the teaching of information to learning skills and creating new knowledge and innovations as well as searching for solutions.
- Ensuring a high level of income requires the continuous improvement of productivity. Good productivity development, in both goods and service production, requires that employee well-being at work and the incentives for the growth of human resources and innovation activities are sufficient. Taxation will be developed so that it supports doing work and commissioning work in Finland, promotes sustainable use of natural resources and attracts foreign investment and experts to Finland.
- Mankind over-exploits the planet's natural resource reserves. At the global level, consumption of natural resources should be placed on a sustainable foundation. In this matter, Finland and other industrialised countries have a particular responsibility, and they must significantly reduce their economies' consumption of natural resources and environmental hazards.
- Finnish enterprises will be encouraged to participate in implementing the goals of the UN's Millennium Declaration. Companies will also be encouraged to direct their interest and activities at the least-developed countries, with the target of promoting co-operation and partnerships between the public and private sector.

Photograph by Antero Aaltonen





Photograph by Martti Lintunen

7 FINLAND AS A GLOBAL ACTOR AND BEARER OF RESPONSIBILITY

Key challenges

- How can Finland promote sustainable development in different international forums?
- How can the national and international consistency of different actors and policy sectors be ensured in global development and environmental matters?
- How can the structures that cause and maintain inequality in the international system be identified?
- How can poverty be reduced and the ecological and social sustainability of economic growth in developing countries be promoted?

7.1 Finland's operational principles in international co-operation

Social, economic and environmental problems can, if they worsen, cross state borders, combine with each other, take new forms, and spread quickly to develop into regional or global security risks. The dependency of Finland's internal and external security on the international situation has increased in pace with globalisation.

Finland's membership of the European Union also provides a wealth of opportunities for pursuing its fundamental goals globally. Although Finland is a small actor globally, the EU has considerable influence on sustainable development in the UN and in other multilateral organisations. The instability of the world economy, inequality of labour markets, challenges related to the creation of worldwide markets, global environmental problems, health threats and poverty require worldwide solutions.

- Finland will act constructively, actively and initiatively on behalf of the broad realisation of sustainable development, democracy, freedom of speech, good governance, human rights, equality, the principle of constitutional state, and a functional market economy in the world. Finland will also strive to exert as much influence as possible on the

decisions made in international relations and processes, which reflect on Finland and the security and well-being of Finns.

- Finland will support strengthening the UN as an important multilateral co-operation organisation, for which the impact of decisions must be improved and the consistency of activities must be furthered. As part of UN reform, Finland supports the establishment of a United Nations Environmental Organisation.
- Finland promotes the broad commitment of the world's countries to international agreements. Broad commitment to international agreements and mutual rules will also create demand for services and products that promote sustainable development.
- Finland will strive to implement the targets of sustainable development in accordance with the commitments and principles to which Finland has internationally committed within the framework of the United Nations, for example, in the UN Economic and Social Council (ECOSOC), UN Commission on Sustainable Development (CSD), UN Environmental Programme (UNEP), and the UN Development Programme (UNDP).

7.2 Development of neighbouring regions

Further reinforcement of the economic integration and environmental protection of the Northern Dimension and the Baltic Sea area will increase the attractiveness of the region as a market area and promote investment. Simultaneously, it will also create opportunities for Finnish enterprises.

The community structure and cultural background of the Nordic countries have many similarities, a fact which has furthered Nordic co-operation in matters of sustainable development: politically stable conditions, close co-operation between countries in the region, constitutional functionality and well-educated citizens as well as well-functioning labour market relations. Many common problems also help lay a foundation for close co-operation towards development of the regions. On the other hand, the Nordic countries are also aware of their responsibility for sustainable development outside the region and simultaneously work towards positive changes in the near future.

- From Finland's perspective, it is particularly important to have stable development in our neighbouring regions. Joint efforts will continue and be condensed, especially in terms of blocking threats to the vulnerable environment of the Baltic Sea and Arctic region and increasing environmental responsibility. Regional co-operation must also focus particular attention on developing infrastructure and logistics, energy co-operation, preventing communicable diseases, and removing barriers to trade and investment.

7.3 Influencing EU policy

The European Union's Lisbon Strategy and the EU Strategy for Sustainable Development are complementary policy documents. Together they form a foundation for the European model of economy and society. Sustainable development is confirmed in the Treaty Establishing the European Community as one of the main objectives in all Community policies.

The European Union's Strategy for Sustainable Development was approved in June 2001. The Commission provided a communication on the review of the Strategy for Sustainable Development in December 2005 and the revised Strategy was approved in the European Council in June 2006. The most important targets of the Strategy are related to climate change and clean energy, transport, sustainable production and consumption patterns, management of natural resources, public health, social exclusion, demography and migration, and global poverty and development challenges.

Implementation of the targets of the Lisbon Strategy can create the economic preconditions for promoting the Strategy for Sustainable Development. The objective is to provide enterprises that invest in competitive and diverse know-how and high technology with the opportunity to develop and implement new environmental technology, make the investments needed to reduce environmental hazards, and produce new innovative solutions.

- Finland will promote the continued improvement of the European Union's possibilities and ability to act as an initiator and an active actor in international development, human rights and environmental policy.
- Finland will work towards ensuring that sustainable development and EU competitiveness become clearer focuses of EU activities. Sustainable

development must be more strongly integrated into all EU policy sectors. Finland will utilise its own achievements in influencing the EU and promote issues in the EU that are important for the success of Finland and the entire Union. These issues include functional internal markets that take the European social dimension into consideration, a stable economy, a high level of environmental protection, the promotion of entrepreneurship, strengthening human capital, strong investment in research and development work, and attractiveness as an operating environment. Instead of increasing regulation, the EU should look for solutions through incentives.

- For Finland, the EU represents an important channel for furthering the targets of sustainable development in the UN and other international organisations. In order for the EU to influence international decision-making in accordance with its economic and political significance, it must be strengthened internally. Furthermore, it has to find its place in the accelerating globalisation and international distribution of work.

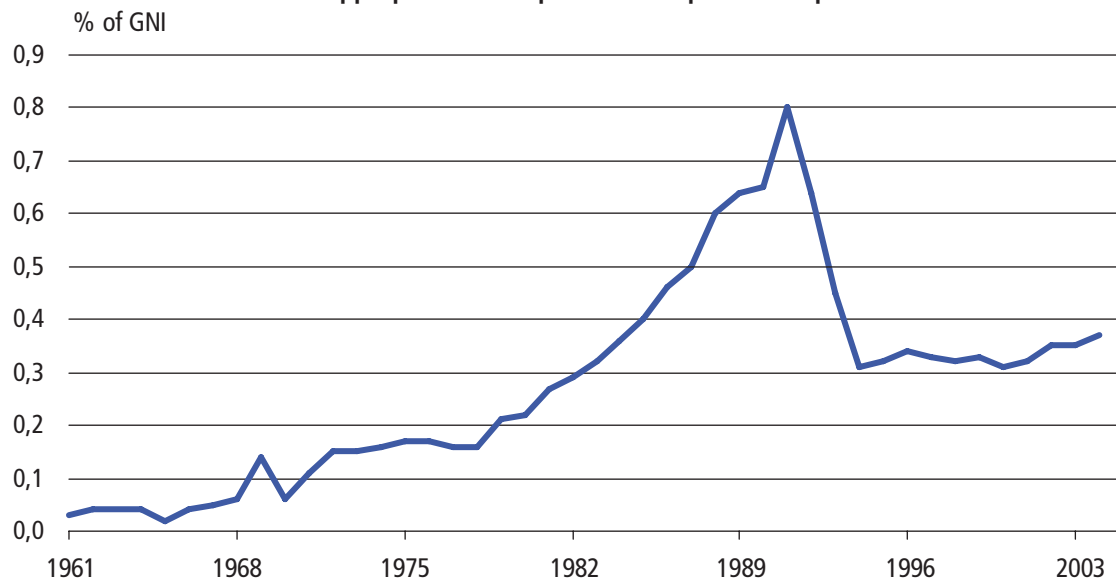
7.4 Finland as a global bearer of responsibility

Global population growth, inequality and poverty are the greatest challenges to sustainable development. Unresolved social and economic problems often lie in the background of various conflicts. Many environmental problems result from a lack of options for work and earning income, which subsequently lead to activity that is hazardous to the environment.

The mutual dependency of industrialised and developing countries has increased as a result of globalisation. Since the 1990s the international community has looked for mutual understanding of the problems related to development and the means of solving those problems. The process culminated in autumn 2000 with the UN Millennium Summit and its Declaration. The World Trade Organisation's (WTO) Ministerial Conference in Doha (2001), the International Conference on Financing for Development held in Monterrey (2002) and the Johannesburg World Summit on Sustainable Development (2002) further outlined the joint targets and methods and promoted the implementation of the Millennium Declaration.

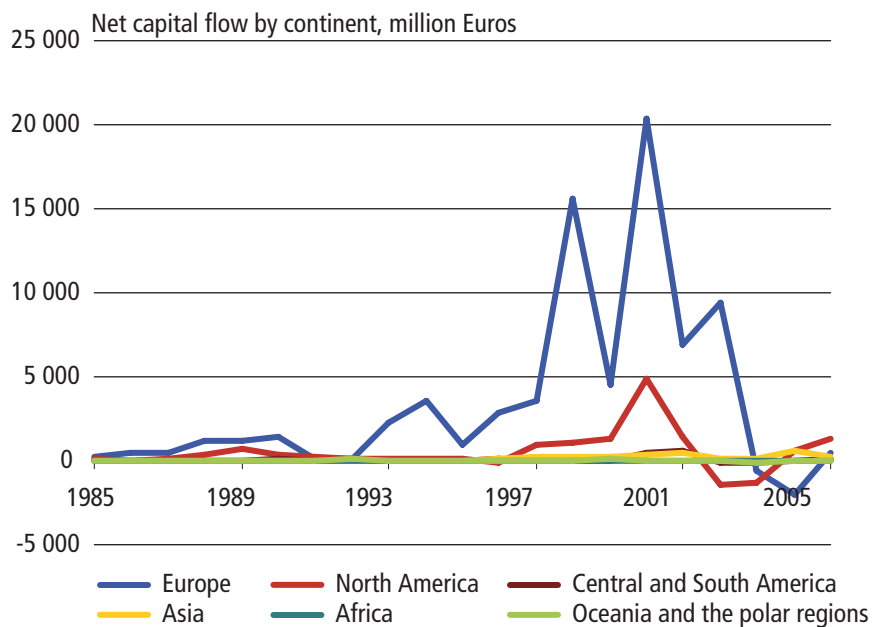
- The reduction of poverty is only possible through influencing the causes of poverty and the inequality behind it. Finland will strive to influence

Figure 32 Appropriations for public development co-operation



Source: Finnish Ministry for Foreign Affairs

Figure 33 Direct investments from Finland in other countries



Source: Bank of Finland, Financial Markets and Statistics

more just development of globalisation, and the eradication of poverty and inequality. More balanced development of well-being requires the focusing of attention on the poorest and intervention in the structures that maintain poverty, such as corruption. In terms of alleviating poverty, it is essential to focus attention not only on economic growth but also on the quality of economic development. Economic growth must be such that the poor also participate in creating it, contributing to it and benefiting from it.

- Finland is committed to the UN's Millennium Development Goals, which include promoting peace and security as well as reducing poverty in various ways. Finland is committed to consistently furthering development policy goals in all areas of international co-operation and national policy that influence the position of developing countries.
- Finland is committed to increasing its development co-operation contribution to 0.7 per cent of gross national income, as agreed in the UN. The quality of development aid must be taken into consideration when increasing the amount of aid. Finland's contributions will be directed at supporting the recipient countries' own targets, which are determined in a democratic and participatory manner. However, the support must be focused on targets that genuinely have an impact in terms of sustainable development, such as good governance and the education of women and girls. Finland and the EU are committed to promoting equality also on a global basis.
- Strong international organisations and contractual arrangements will be needed to influence globalisation. A multilateral system must be based on responsible and accountable institutions and on co-operation between public institutions, markets and civil society actors. There is a need to increase the opportunities for developing countries to exert influence, especially in international financial institutions. Increasing the possibilities for democratic influence in terms of non-governmental organisations will also provide added value for the functionality and approval of the international system. The search for solutions to global governance problems will continue. The Helsinki Process created at the initiative of the Governments of Finland and Tanzania in 2002 also provides a good foundation for this work.

- Finland will promote the availability of new technologies and information technology in developing countries and join forces with the private sector to identify information and communications technology solutions that are suitable for developing countries and serve to further achievement of the goals of the Millennium Declaration. In particular, Finland has a lot of experience in the energy, transport, water management, forestry and biotechnology sectors. Simultaneously, enterprises can benefit from the new markets.
- Economic growth produced by private business activities functioning on a sustainable foundation is important to increasing well-being and jobs as well as reducing poverty in all countries. Economic growth must serve the targets of human well-being without endangering the environment or biodiversity. The challenge is to create opportunities for sustainable sources of livelihood that guarantee a sufficient income while protecting and renewing natural resources. Good employment development is also essential to reducing poverty. Investing in development of working life that takes human rights into consideration is one part of sustainable development.
- The education system must provide skills for world citizenship and widen the perspective on environmental and development issues and the needs and possibilities for more just distribution of well-being.



Photograph by Anitta Koli

8 SUPPORTING SUSTAINABLE CHOICES

Key challenge

- How can people and enterprises be encouraged to make sustainable choices?

In addition to values and culture, behaviour is guided by socio-political incentives, for example, taxation and other economic instruments, legislation and informative measures, that are essential in promoting sustainable development. The development of an information society will also increase the opportunities for citizens and enterprises to make more sustainable choices.

Problems have become more complicated in today's world and there is a lot of uncertainty linked to development paths. Assessing cause-and-effect relationships has become even more difficult. Furthermore, changes are rapid and there are no ready solutions available.

Sustainable development requires citizens and companies to make choices to support it. This process is influenced by people's values and the opportunities people have to actually make these choices. Strict regulation does not necessarily lead to the desired result anymore, because it does not provide sufficient room for new, creative solutions. Although legislative control is still effective and necessary in many cases, new tools, such as policy instruments, to encourage more sustainable choices and spontaneous activity are needed to an increasing degree. However, internationally agreed rules must be observed. The policy instruments must also be acceptable to citizens.

There is no easy way to achieve an undisputed common foundation of values. Thus, values discussion is necessary, as is education and communication that support sustainable choices. Information concerning sustainable development should be readily available, easy to adopt, and based on scientific facts.

8.1 Education to promote sustainable development

The UN declared 2005–2014 to be the Decade of Education for Sustainable Development. The objective is to integrate sustainable development into the education systems of all countries within the next decade.

In 2002, the Ministers of Education of the Baltic Sea countries approved the Education for Sustainable Development in the Baltic Sea Region Programme (Baltic21E), which Finland used as the basis for drafting its own programme to cover the national education system in 2006. The National Strategy of Education and Training for Sustainable Development and Implementation Plan 2006–2014 was prepared by a broad-based Committee and approved in March 2006 by the Finnish National Commission on Sustainable Development. These strategies are supported and supplemented by the Global Education – proposal for an action programme (2006) drafted from a global perspective, which has been prepared in co-operation between the Ministry of Education, Ministry for Foreign Affairs, Finnish National Board of Education and non-governmental organisations. One area of this proposal addresses sustainable development.

Education policy is built around the principle of lifelong learning, and its starting points are the participation and equality of the entire population. This will reinforce the cohesion of society, active citizenship and well-being.

According to the Constitution of Finland, everyone is responsible for nature and its diversity, the environment and cultural heritage. Education must develop skills for taking responsibility for the well-being of nature and people. Education that promotes sustainable development aims at developing the information, skills, readiness and wisdom necessary for adopting a sustainable lifestyle, and at building a future with citizens that understand the basic preconditions for sustainability. People building up a sustainable future must understand the scope of the needs for change and the ethical responsibility for sharing national and global equality and well-being, and have the competence to reconcile between various interests and to make changes.

There is no universal model for education that promotes sustainable development. The targets of education to promote sustainable development must be set on the basis of the country's own cultural and local social, economic and environmental conditions, but it is also important to have a comprehensive understanding of the field of global responsibility.

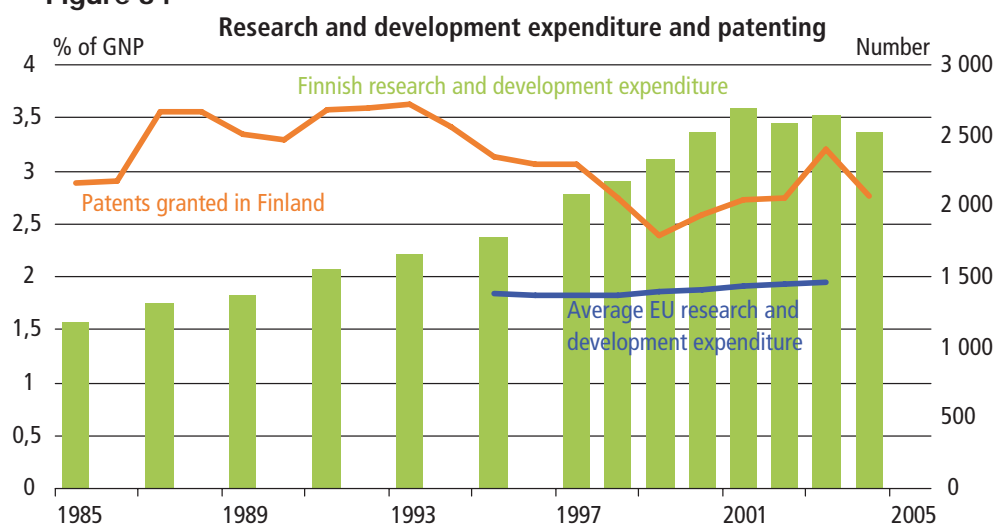
In addition to the education and environment administrations, other administrative sectors, business life, parishes, organisations and the media have to take responsibility for increasing environmental awareness and learning how to live a sustainable lifestyle. Each actor has its different focuses for its education targets.

- Targets for development presented in the National Strategy of Education and Training for Sustainable Development (2006) will be implemented in accordance with the implementation plan approved by the Finnish National Commission on Sustainable Development.
- In the future, education will include information and teaching concerning the formation of values and attitudes as well as sustainable choices. Success in this will require investment in basic and in-service education for teachers.
- The challenge of more comprehensive learning will be concretised in the co-operation between subjects, development of the operating culture and closer interaction with the surrounding society. Learning to use solutions that observe the principle of sustainable development and transferring them to everyday practices will require co-operation between teachers and between teachers and other experts and parents.
- The importance of sustainable development will be strengthened in education policy and the basic and in-service education for teachers. Sustainable development must be made a priority of the strategies concerning the teaching sector and early education, and provide support for education and training in the strategies of other administrative sectors and actors.
- Learning materials and guides will be developed to meet the needs of teaching sustainable development and to support multi-professional co-operation in schools, and in the activities between schools, and between schools and other actors.
- Means of participation and influence that have been developed and found successful will be spread and established in educational organisations. New means of participation and influence will be developed, for example, through research.
- The environmental certificate for institutions will be expanded to include the social and cultural dimension of sustainable development. The target is for all schools to have a sustainable development action programme in place by 2010, and for 15 per cent to have external recognition or certification of their activities by 2014.

8.2 Research and development, know-how and innovations

The economic and societal development in Finland in recent years has been essentially based on the development of high technology, its successful utilisation and a deliberate increase in export. The result has been a significant improvement in Finland's position in international competition. Finland invests about five billion euros annually in research and development activities, or 3.4 per cent of gross national product, which is second only to Sweden in a comparison of OECD countries.

Figure 34



Sources: Statistics Finland, Research and Development Activities; Finland's National Board of Patents and Registration; Eurostat

According to international comparisons, Finland has been able to successfully combine broad production and economic utilisation of information and know-how with other targets, such as well-being and promotion of sustainable development. New need-oriented innovations can also be built on the basis of technology competence, and used to find solutions for the future challenges related to employment, industry and public services. Successful organisations are often linked by the ability to innovate and create something new. On the other hand, new innovations often develop at the interfaces of sciences.

So far, purposeful utilisation of new information technology in environmental protection has mainly been limited to the use of electronic information, monitoring and measurement devices in processes. However, products from the electronics industry also have an indirect influence on eco-efficient development in other sectors as well as on societal developments and lifestyles. The indirect impacts

include major opportunities to promote production methods, lifestyles and consumption habits that observe the principle of sustainable development.

In many production sectors, environmental issues are the strongest factor driving technical development in the field. In any case, preventing climate change, reducing the use of hazardous substances and waste, sustainable transport solutions and ensuring the availability of clean water will require worldwide investments in new technology. The environmental technology markets in developing countries will grow even faster than those in industrialised countries.

The objective of the EU's Lisbon Strategy is to provide enterprises that invest in competitive and diverse know-how and high technology with the opportunity to develop and implement new environmental technology, make the investments needed to reduce environmental hazards, and produce new innovative solutions.

- In terms of creating innovations, it is important to develop a know-how society, in other words, operating environments and strong centres of expertise that support the creation and application of new information. Skills related to bottlenecks in the innovation system, including risk financing, business competence, commercialisation and internationalisation, will be developed. Finnish enterprises need to learn new skills, especially in the areas of functionality, design and commercialisation of services. Turning inventions that support sustainable development into successful products on the market will be promoted and strong investment in research and product development will continue.
- Successful commercialisation of innovations is a key factor in the success of individual citizens, groups, enterprises and societies. The basic preconditions for this are top-level know-how in technology and business. However, purposeful investment in the production of social innovations is also needed in addition to technological innovations, so that societal and social development do not diverge from economic and technological development.
- In addition to developing the key strengths of know-how, there will also be investment in promising research fields and achieving sufficient volume and a good level of quality in them. Such fields include bio and environmental science, the welfare cluster and knowledge-intensive services. Promotion of innovations in accordance with sustainable

development will require consistent policy in different sectors, and the development of regulation so that it rewards innovation activity that supports sustainable development.

- It is important to ensure the innovativeness of sustainable development policy by means of networking co-operation and programmes of the administration, scientific community and civil organisations, and economic life. Diverse researcher training and research and innovation activities will create the preconditions for sustainable development. Adult education, non-governmental organisations and the media will also play an important role.
- The principles of sustainable development must be integrated into research. The challenge is to make the research influential, in other words, ensuring that citizens and decision-makers are aware of the research results which provide an information base for sustainable choices. In order to promote the impact of research, end users of research information must be included in the research process right from the planning stage.

8.3 Economic policy instruments

Behaviour is guided by socio-political incentives; for example, taxation and other economic instruments are a key method of promoting sustainable development.

Several new projects have been launched in order to increase the steering effect of the taxation system in environmental policy. For example, the possibilities to implement tax control that is not related to fuels is being examined in transport taxation, a change which would have a positive impact on reducing emissions in the long term. Policy instruments to promote the use of biofuels in transport are being examined, as is the use of a tax instrument to regulate nitrous oxide emissions in energy production. There is a clear need for environmental policy control to reduce the amount of waste, and increasing the effectiveness of the control will be examined in conjunction with the preparation of the new national waste management plan. In terms of reducing carbon dioxide emissions, taxation has lost its significance as a steering method, because the European Community's Emissions Trading Scheme controls emissions in the emissions trading sector very strongly and also has an indirect impact on other areas of the national economy.

- Finland will use the most cost-efficient and effective policy instrument for each specific situation. The steering of choices must observe strong scientific evidence and the precautionary principle, which is based on probabilities. The policy instruments must be developed systematically and patiently on both a national and EU basis.
- Economic measures will be developed that reduce the use of non-renewable natural resources and environmental hazards as well as promote recycling and the energy efficiency of products, their consumption and energy use. The possibilities to decrease subsidies that are harmful to the environment and sustainable development will be examined.
- Policy instruments will provide the opportunity to promote sustainable production methods, consumer habits and lifestyles, make environmental steering more efficient, and increase the cost-efficiency of environmental policy. The already initiated work to increase the steering effect of the taxation system will be continued systematically and patiently from the standpoint of environmental needs and obligations while taking economic requirements into consideration. The opportunities provided by new market-oriented measures will be examined and implemented as part of the development of the policy instruments.
- The development of new technology is essential in achieving permanent results in terms of sustainable development. Access to markets for new environmentally friendly energy technology will be assisted by means of an energy subsidy granted for investments and studies to support such investments. A production subsidy for electricity produced with renewable energy will be granted through the taxation system.
- Co-operation and common solutions within the European Union will make it possible to increase the impact of the economic instrument system and reduce the costs of adaptation resulting from new steering. The long-term target is to obtain agreement on the use of effective policy instruments in international co-operation when responding to global environmental challenges.
- It is important to support the implementation of economic policy instruments through informative measures.



Photograph by Annika Lindblom

9 IMPLEMENTATION AND MONITORING OF THE STRATEGY FOR SUSTAINABLE DEVELOPMENT

Key challenges

- How can good and open governance, a civil society and citizens' participation as well as societal dialogue be utilised in implementing the Strategy?
- How can implementation and monitoring of the National Strategy be linked to the implementation and monitoring of the European Union's reviewed Strategy for Sustainable Development?

9.1 Actors and responsibilities

The Finnish National Commission on Sustainable Development approves the Strategy. The Strategy is valid until further notice.

Finland's sustainable development policy is based on institutional learning and broad participation wherein various societal actors take part in the definition and implementation of sustainable development. The Government established the Finnish National Commission on Sustainable Development in 1993 to promote sustainable development, and the Commission has operated continuously since that time. The Prime Minister has chaired the Commission from the start. The Commission, based on broad, open dialogue, has inspired national discussion of many important themes of sustainable development, supported the work of various actors and functioned as a valuable builder of national coherence in sustainable development matters.

The inclusion of sustainable development in the strategies and programmes of various administrative sectors has been significant in Finland. Sectoral programmes have been important tools in the promotion and implementation of policy measures that observe the principles of sustainable development. Integration has also served to commit different administrative sectors to the promotion of sustainable development and increased ownership in the sectors. As a result of sectoral integration, the principle of sustainable development is apparent in many policy instruments, such as legislation, taxation and environmental impact assessment.

Strategies and programmes for sustainable development have also been drafted and actions evaluated in municipalities, organisations and enterprises.

- The objective is to guarantee the continuity of sustainable development policy. The main responsibility for the guidelines and implementation of sustainable development lies with the Finnish Government, which will direct the work by means of government and policy programmes as well as the decisions-in-principle of the Finnish Government.
- The objective is for the sustainable development guidelines presented in the Strategy to be taken into account in the programmes and strategies of various administrative sectors and in those of other actors involved in the Strategy. Within the framework of the Finnish National Commission on Sustainable Development, a process shall be initiated in which various bodies, in co-operation and separately, promote the proposals of the Strategy.
- The comprehensive and Prime Minister-led activities of the Finnish National Commission on Sustainable Development will be ensured in the future as well.
- Ensuring the consistency of policy between global, regional, national and local programme work is another target of Finland's sustainable development policy. Co-operation between different levels of administration will be improved and dialogue between them increased. The effects on the preconditions for regions and municipalities to make decisions that support sustainable development will be taken into consideration when making national solutions.
- Citizens, municipalities, regions, various organisations and enterprises are actors whose choices have a decisive impact on the implementation of sustainable development. Sustainable development has progressed in many ways at the local and national level. The challenge at the local level is to make sustainable development work a part of municipal strategy work and the planning system as well as to link the regional level more closely to the sustainable development process. Adoption of an operating culture that assembles the viewpoints of various actors will take time and effort.

- It is appropriate that the National Strategy for Sustainable Development be handled in all Parliamentary Committees in which the strategic guidelines apply to the sector.

9.2 Assessment and follow-up

The success of sustainable development policy will be monitored by methods that include national indicator work. The sustainable development indicators will be developed and updated in the national indicator network between the different administrative sectors.

It is important to ensure the innovativeness of sustainable development policy by means of networking co-operation and programmes of the administration, scientific and civil organisations, and economic life.

Implementation and monitoring of the reviewed EU Strategy for Sustainable Development approved in June 2006 will set requirements for the Member States and various actors. The National Strategy for Sustainable Development will be assessed every two years, and it will be linked to the EU's assessment process. The Finnish National Commission on Sustainable Development will report to the Government on the results of the assessment.

As a continuation of the Strategy, a systematic model will be developed to enable assessment of the Strategy's impacts at the national, regional and local level. This will allow comparison in the assessment of the impacts of different programmes.

The renewed EU Strategy emphasises closer links and co-ordination between the EU and national sustainable development policies. Finland will participate in the work of the European Sustainable Development Network (ESDN) and the European Environment and Sustainable Development Advisory Councils (EEAC). These networks and the peer reviews proposed by the EU Strategy will be used to strengthen and unify policies at the European and national level.



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