

GETTING MORE FROM LESS

THE COMMITTEE ON SUSTAINABLE CONSUMPTION AND PRODUCTION, FINLAND

Getting more and better from less

- Proposals for Finland's national programme to promote sustainable consumption and production (June 2005)

The proposals have been unanimously agreed by the KULTU Committee - a widely based committee including the representatives of various stakeholder organisations, appointed by the Ministry of the Environment and the Ministry of Trade and Industry

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Finland's proposed programme to promote sustainable consumption and production is one of the first such national programmes to be drafted anywhere in the world. Detailed proposals for the programme were presented in June 2005 to the Minister of the Environment Jan-Erik Enestam and Minister of Trade and Industry Mr Mauri Pekkarinen. Finland's national programme is being produced as a result of a decision made at the UN Sustainable Development Summit in 2002 to create ten-year framework programmes to promote sustainable forms of production and consumption.

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The key objectives of the programme are to increase the efficiency of the usage of materials and energy through all stages of product life cycles, and to promote environmental education and the development and adoption of environmental technologies. The committee was chaired by the Chancellor of the University of Helsinki, Professor Kari Raivio; and its 31 members included officials from various ministries as well as representatives from industrial, business, environmental and consumers organisations.

The new proposals for the national programme to promote sustainable consumption and production and consumption are to be presented to the Government and the Finnish National Commission on Sustainable Development, and will be circulated for official statements during early autumn 2005.

Further information

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Abbreviations for Ministries

MaF	Ministry of Agriculture and Forestry
Med	Ministry of Education
MFA	Ministry for Foreign Affairs
MoJ	Ministry of Justice
MoE	Ministry of the Environment
MoF	Ministry of Finance
MoL	Ministry of Labour
Mol	Ministry of the Interior
MSAH	Ministry of Social Affairs and Health
MTC	Ministry of Transport and Communications
MTI	Ministry of Trade and Industry

Motiva	A public sector enterprise that works to make markets more favourable to renewable energy sources and energy-efficiency
Tekes	National Technology Agency of Finland
Sitra	The Finnish National Fund for Research and Development
Stakes	National Research and Development Centre for Welfare and Health

1. The need for a programme to promote sustainable consumption and production in Finland

In September 2002 the UN World Summit on Sustainable Development in Johannesburg resolved to establish a 10-year framework of regional and national programmes and projects designed to promote sustainable consumption and production patterns. This initiative came jointly from Finland and the EU, and was one of the

most important outcomes of the summit negotiations, with the industrialised countries committing themselves to take a leading role in this task.

The KULTU Committee was set up by Finland's Ministry of the Environment and Ministry of Trade and Industry in November 2003 to draft proposals for a national programme to promote sustainable consumption and production, aiming to increase the efficiency of the use of materials and energy in all stages of product life cycles. Part of the programme will also promote environmental education and the development and adoption of environmental production technologies.

For three years running Finland has been top-ranked in comparisons of countries' environmental sustainability made by the World Economic Forum (WEF). International comparisons have also praised Finland's air and water quality, levels of scientific and technological know-how, private sector initiatives and environmental administration.

Finland nevertheless faces serious challenges linked to sustainability, particularly concerning the need to reduce carbon dioxide emissions, the consumption of natural resources, and the amounts of waste generated. The high material affluence of Finnish society is also increasingly affecting the environment outside Finland's boundaries, since the globalisation of production chains means that the environmental impacts of the production of consumer goods are increasingly being felt outside Finland and the EU.

The idea of shifting to sustainable consumption and production represents a tremendous challenge within a single country and at global level, and the achievement of such a goal requires a long timeframe. The KULTU Committee has therefore decided to create a vision for the future and set the related goals with a timeframe of about twenty years. The Committee has also set out various measures that could be implemented to help achieve these targets. In some cases, preparations for the implementation of these measures could begin immediately, whereas other proposed measures can only be initiated after more research and investigation.

The proposed programme's wide-ranging measures affect various social and economic sectors, but are not yet fully comprehensive – rather they represent the first step towards the creation of a fuller set of measures needed to achieve sustainable consumption and production patterns. Policies and actions aiming towards sustainability are part of a process that needs to be continuously improved through co-operation at national and international level.

The proposed goals and measures are intended for full consideration and due implementation within the sectors concerned, with environmental issues mainstreamed into administrative policies and economic activities.

2. A vision for the year 2025

The UN Johannesburg Declaration highlights the following global targets:

- Economic growth must be delinked from harmful environmental impacts and the increasing use of natural resources.
- Clean water and sanitation must be provided for half of the people now without such services by 2015.
- Energy availability, energy-efficiency and the use of renewable energy sources must be increased
- Current trends in the depletion of natural resources must be halted.
- The decline in biodiversity must be slowed considerably by 2010.
- Environmental and health risks related to the production and use of harmful chemicals must be minimised by 2020.

Finland will strive to change domestic production and consumption patterns to support these global targets, and also promote such actions through the EU and other international co-operation.

In the future Finland will base its economy on forms of production that increase national wealth and well-being without depleting biodiversity or exceeding the carrying capacity of natural systems through their environmen-

tal impacts. This will give rise to new business opportunities and jobs in sectors that promote well-being and environmental innovations. The eco-efficiency of production in Finland will rise throughout the product chain, with Finland being among the world's leading countries in this respect.

Natural resources and energy will be used more efficiently and sparingly to create well-being, with renewable resources used in place of non-renewable resources. People will have the motivation, opportunity, and access to knowledge to allow them to make choices that support sustainable consumption and production patterns, as well as opportunities to participate in planning processes and decisions affecting their surroundings. New eco-efficient product-service systems, sustainable high-quality products and social innovations will encourage a shift away from the accumulation of material goods to more service-based consumer cultures.

In the future, the use of Finland's own natural resources and diverse domestic markets will become increasingly important with regard to employment and the production of well-being, since economic globalisation imposes serious pressures on Finnish society. Where levels of know-how, training and policies affecting businesses in Finland are concerned, the following factors will be particularly important:

- community structures that facilitate the provision of services and reduce the need for transportation
- increased self-sufficiency in food production; local and organic production; more businesses based on nature tourism
- the flexible long-term use of the existing building stock; increased use of timber in construction
- increased use of renewable and low-emission energy sources
- environmental technologies, eco-efficiency improvements and social innovations designed to improve the quality of life and create new sustainable jobs
- responsibility for environmental impacts throughout product chains taken by both the public and private sector
- policies including financial incentives and voluntary initiatives
- intensified co-operation between different stakeholders

Various new kinds of policy instruments will be needed to help reach these goals, in addition to financial policy instruments. A society with sustainable consumption and production patterns will also involve intensified networking and dialogue between different sectors, with environmental and social innovations effectively promoted, and expert advice provided on the efficient use of materials. The public sector must set a good example in its own policies and procurements, while also working to increase awareness of environmental issues.

3. Forms of production that save materials and energy

Due to the globalisation of production chains, the environmental impacts of the production of consumer goods used in Finland are increasingly being felt outside Finland and the EU. Imports of raw materials and the related material flows have grown rapidly. The increased material affluence of Finnish society is thus increasingly leading to environmental impacts outside Finland's boundaries.

Finland's total energy consumption is expected to continue to rise. Energy scenarios drawn up for the Ministry of Trade and Industry estimate that without new measures energy consumption will grow over the period 2002–2020 by some 16%, due to changing consumption patterns, and increases in traffic and energy-intensive industrial production. The amounts of natural resources consumed per capita in Finland are high, even when the production of goods for export is left out of calculations.

Administrative and legislative controls may not alone be sufficient to curb the consumption of energy and raw materials and reduce the amounts of waste generated to acceptable levels. Attitudes must also be changed, and information made more widely available. Consumption and production patterns can be made more sustainable by integrating environmental costs into prices, and by supporting sustainable innovations.

Vision

Levels of eco-efficiency in production in Finland have risen throughout product chains, and are among the highest anywhere in the world. The amounts of value added to the products of material- and energy-intensive industries are higher than ever before. Finnish companies particularly strive to meet their social responsibilities when procuring raw materials and unfinished products from abroad. Environmental and social innovations frequently give rise to new business opportunities and jobs.

An energy supply system based on diverse energy sources supports Finland's stable economic development. Energy technologies have developed significantly in recent years, and environmental loads related to energy use have correspondingly shrunk.

Levels of natural resource use do not exceed the capacity of the natural environment. The efficiency of material use has increased, and the usage of non-renewable resources has declined considerably. The amounts of wastes generated have also decreased, and wastes are being more efficiently recovered for reuse.

Objectives

- Economic instruments must be effectively applied to promote sustainable production and consumption.
- Quantitative and qualitative targets must be set for material- and energy-efficiency and specific emissions, with a view to the international discussion on medium-term international goal of doubling well-being while halving the rate of consumption of natural resources.
- Environmental impacts throughout product life cycles must be considered during the planning and development of products and services, in order to reduce the overall burden on the environment.
- International co-operation and controls must be enhanced to improve the state of the environment and working conditions, and to ensure that companies can work in international markets with a level playing field.
- The supply of energy from diverse, environmentally acceptable sources at competitive prices must be guaranteed.
- Improvements in energy-efficiency and energy saving must halt the rising trend in energy use within a decade, with the use of energy from renewable sources increased in line with Finland's National Climate Strategy and the programme to promote renewable energy. Cost-efficient biofuel technologies must be promoted to replace of fossil fuels in the generation of heat and electricity, and as fuels for transportation, without endangering the availability of raw materials for industry.
- The declining trend in biodiversity must be halted by 2010.
- The amounts of waste generated and the associated hazards must be reduced, while recycling and waste recovery rates must be increased.
- Definitions of waste types must be clarified to promote reuse.

Proposed measures

1. A material-efficiency service centre should be set up in connection with some existing organisation to produce expert advisory services that promote eco-efficient production and consumption. Its clients would include producers, industry, trade, services, administrative organisations and individual consumers. The centre would produce material-saving services for industrial production, as well as concepts designed to improve eco-efficiency. It would also maintain an

information bank on best practices, financial calculations, life cycle inventories, material-efficient product planning and the environmental impacts of raw material use. (MoE & MTI)¹

2. New long-term policy guidelines should be defined in order to reshape the taxation system and systematically continue the ongoing preparation work on the basis of international assessments, a detailed report (MoF 2004) on ecological tax reform, and complementary reports. The taxation system should cost-efficiently promote sustainable development, the sparing use of natural resources, and reductions in burdens on the environment, while encouraging favourable innovations and new technologies, improving the scope for services, promoting enterprise and employment, and encouraging foreign investment in Finland.

The ministries should co-operate closely and effectively to develop new environmentally favourable measures in the long term, with the help of well established networks. The ministries should find areas within their responsibility where they can adopt new fiscal policies to replace or complement present policies. They should also examine what kinds of measures are practicable with regard to the needs of the economy, administrative finances, the fiscal system, Community Law, Finland's competitiveness and the need for international standardisation.

To develop an improved system of policy controls, the ministries and their subordinate organisations should work with the scientific community to increasingly channel the available resources into the systematic long-term research and assessment work needed as the basis for new policies. Progress with such research work should be monitored by an expert group consisting of ministry representatives and researchers. The results of such work should be discussed openly before policy decisions are made. (MoF, MoE, MTI, MTC, MAF, MSAH, MoL)

3. The harmful environmental impacts of material flows related to consumption and production in Finland, and the costs of reducing these impacts should be assessed in co-operation with the related research institutes. Research should also focus on the global impacts of material flows related to Finland, and the limitations to consumption set by the capacity of the natural environment. Such research data can improve the effectiveness of environmental protection work, and also create a basis for open discussion related to the significance in Finland of natural resources and their usage. Such knowledge will also help Finland to participate in the development of related measures at European and global level. (MoE, MTI, research institutes)
4. Research into technical and financial opportunities to prevent the generation of waste should be launched with a view to developing policy instruments in various sectors and activities. (MoE, TEKES, research institutes)
5. Constructive dialogues should be initiated between companies, business sector organisations, researchers and administrators to set comprehensive targets for material- and energy-efficiency throughout the life cycle of products, and to prevent waste in different sectors: these dialogues can also lead to commitments and the signing of voluntary agreements. Trials and pilot projects should be launched in various sectors to assess the potential for such improvements and to help set related targets. The applicability in Finland of goals defined in international discussions should also be considered during the setting of such targets. (MTI & MoE, industrial and trade organisations, companies, SITRA, TEKES & research institutes)
6. Energy-saving agreements should be renewed to give more incentive to use renewable energy sources and develop and adopt new environmental technologies. Tools designed to improve energy-efficiency throughout the production chain should be developed and tested. (MTI, MTC, MoE, Motiva, industrial and trade organisations, companies, TEKES & research institutes)

¹ The authorities mentioned first bear primary responsibility for the implementation of the measures as specified.

7. In addition to traditional nature conservation methods, new means such as natural values trading and the establishment of natural management areas should be exploited to safeguard biodiversity and ecological sustainability. Funding must be secured for the continuing implementation of national nature conservation programmes. Finland's network of protected areas should be expanded, particularly in the south, applying positive experiences obtained during pilot schemes within the METSO forest biodiversity programme. (MoE, MAF, forest industry, research institutes, forestry advisory organisations, environmental organisations)

4. Fewer material goods, but a higher quality of life

Consumption in Finland has become more diverse, more individualistic, more material and more urban. The use of private cars has increased. The number of single-person households is rising, and is already high in comparison to other industrialised countries. Although energy is used efficiently in Finland, consumption rates per head are still high.

Shifting away from dependence on the abundance of material goods to a more service-based consumer culture can make society more sustainable in social and economic terms, as well as environmentally. But there are few practical examples of such changes as yet. Businesses and society as a whole must create innovations and change cultures to encourage a shift away from mass production towards a made-to-fit economy.

Developments in information and communications technology (ICT) now make it possible to adopt alternative practices and solutions that have been discussed for many years, such as remote working, video conferences, internet shopping, and the mass tailoring of products. But in spite of these technical innovations, the newly available production and consumption practices have so far been slow to catch on.

The most significant environmental loads created by households are related to energy use in homes and cars, and the consumption of foodstuffs. These areas are covered in separate sections of these proposals.

Vision

The rising trend in material consumption has peaked. Consumers are willing and able to favour sustainable and high quality goods and services, and clear and accessible information is available to help them make such choices. Consumer goods are used, maintained and improved so as to reduce environmental loads.

Objectives

- Rising living standards must be based on sustainable goods, services, cultural and nature-based pastimes, and ecologically sustainable tourism.
- Competitively priced eco-efficient services must be provided as an alternative to the purchasing of new goods, particularly where maintenance, repairs and rental services are concerned.
- Clear and accessible information on the characteristics of goods and services and the best ways to use them must be available to help consumers make sustainable choices.
- Durable and expensive goods must be communally used and rented more widely.

Proposed measures

8. The competitiveness of services in comparison to the acquisition of new goods should be improved, for example by expanding tax deductions related to domestic service, and through measures that promote rental and repair services. (MoF, MTI)
9. Information banks should be compiled on the environmental impacts of products and services, as well as local and regional lists of the providers of eco-efficient services. (MSAH, MTI, MoE, Mol, Finnish Environment Institute, Material-efficiency service centre)

10. Environmental certification, labelling and standardisation systems should be promoted for issues that facilitate sustainable consumer choices, including environmental management, organic production and ethical production. (MTI, MoE, MAF, Finnish Standards Organisation, Finnish Trade Association, Finfood, Association for Finnish Work, environmental and consumer organisations)
11. User-friendly models should be developed to allow everyone to assess the environmental impacts of their own consumption. (MTI, Finnish Environment Institute, Consumer Research Centre National Food Administration, National Consumer administration, the Finnish Food and Drink Industries' Federation, Finfood, environmental and consumer organisations)
12. The reuse of used goods and building components should be promoted by developing resale markets, such as municipal goods exchange centres, and by setting up component stores or private second-hand goods trading services. (municipalities, businesses)
13. Opportunities and barriers related to the adoption of environmentally favourable ICT solutions should be assessed. (MoE, MTI, MTC, MSAH, MEd, research institutes, ICT industry)

5. Building pleasant and functional communities

Finland is a sparsely populated country. The spatial structures of communities today have been gradually shaped by geographical conditions, changing local livelihoods and the development of transportation networks. Communities are still today adapting to ongoing demographic trends, technological developments, and economic, social, cultural and political changes, as well as the need to promote sustainable development.

Regional differences have increased in recent decades in Finland. The population has become more urbanised, and the total number of people living in sparsely populated rural areas has declined over the last twenty years by about 400,000. Almost half of the population now live in the country's ten largest urban areas. As a consequence of these trends, major growth centres are thriving and gaining in competitiveness.

Due to the expansion and specialisation of urban communities the distances travelled to work and services have increased, and traffic has consequently intensified. Increasingly dispersed developments, often in communities that were already fairly sparsely built-up, have reduced the competitiveness of public transport.

Communities can only achieve balanced economic development if their spatial structures and infrastructures function well. Since the emphasis in consumption and production is very much on urban areas and their fringes, the spatial planning of these areas has a very high significance in terms of promoting sustainable production and consumption patterns.

Vision

Communities are attractive and diverse. Their viability is guaranteed through the availability of jobs, services, transportation, diverse housing, and natural surroundings for recreational purposes. Communities have been developed wherever possible by building in "brown field sites", and on the basis of well functioning transport links. Communities use minimal levels of energy and natural resources, and produce low levels of waste and emissions. A pleasant living environment helps people to control their lives and thrive. Residential environments are safe places to raise children, and for the elderly to live comfortably in their own homes.

Objectives

- Planning principles must be designed contribute more effectively to sustainable development in different types of communities. Traffic and particularly dependency on private cars must be reduced. The availability and usage of public transport must be improved, with steps also taken to encourage cycling and walking.

- Living environments must become more attractive and socially sustainable, with residents given more opportunities to influence their surroundings. Steps must be taken to safeguard natural areas near homes, air and water quality, opportunities to enjoy silence, cultural landscapes, architectural heritage and biodiversity. The availability of leisure facilities in residential areas and nearby recreational areas must also be improved.
- Technological and telecommunications facilities such as broadband internet connections must be expanded to reduce the need for transportation, by promoting developments including electronic commerce, internet shopping, and remote working. Such developments can also help to boost living standards in rural areas, and thus promote equality.
- Impact assessments and political programmes must be designed to ensure that regional, taxation, housing and employment policies support the objective of reducing the negative impacts of traffic.
- The goal of enabling the elderly to continue living in their own homes or in suitable old people's service centres must be supported through planning practices, especially related to the provision of services and public transportation, and through the increase use of ICT solutions designed to improve the safety and comfort of the elderly in their homes.

Proposed measures

14. Planning principles should be better designed to support sustainable developments. Opportunities for people to get by without using cars should be promoted in residential areas as well as city centres. Cycling and walking should be promoted by improving the safety, accessibility and attractiveness of routes. Trends in car usage in city centres should be monitored, with steps taken to limit car usage through economic instruments where necessary. The locations of workplaces and commercial services should be particularly controlled to ensure they are compatible with existing infrastructures for services, public transport and energy. The use of local renewable energy resources and local waste management facilities that reduce the need for transportation should be increased. The efficiency and accessibility of municipal waste collection and sorting systems should be improved. (MoE, MTC, Association of Finnish Local and Regional Authorities, municipalities, research institutes)
15. Regional planning co-operation and co-operation between national and local government should be strengthened. Co-operation should particularly be intensified with regard to the planning of new developments and transport systems in large urban areas, in order to make public transport more accessible and attractive. New regional eco-efficiency modelling methods should be applied in the drafting of regional land use plans. Smaller built-up areas should increasingly co-operate and take advantage of ICT solutions to safeguard their viability. (MoE, MTC, MTI, Association of Finnish Local and Regional Authorities, regional councils, municipalities)
16. A diverse range of pedestrian-friendly residential environments with accessible services, designed to meet people's needs, should be provided through careful planning and design. Facilities should be provided to ensure residents can thrive independently and socially, and adopt consumption patterns that promote sustainable development. This may involve reserving suitable spaces in residential areas for communal use, for instance. Flexible planning practices should be exploited to allow for suitable changes in the use of existing properties. Perspectives related to sustainable development, residents' well-being and the aesthetic aspects of residential environments should be increasingly considered during the systematic monitoring of changes in communities. (MoE, Association of Finnish Local and Regional Authorities, municipalities, construction firms and their organisations, residents' associations)
17. Co-operation projects should be initiated involving the authorities of various cities, towns and urban areas to help enhance their central pedestrian zones and outdoor recreation areas, and to

increase the accessibility of commercial services and the desirability of residential areas. (MoE, municipalities, organisations, construction firms)

18. Co-operation between national and local government on the spatial planning of communities should be intensified to harmonise land use and help promote sustainable forms of transportation. Municipalities and the State should particularly channel increased funding for transportation towards sustainable solutions for urban areas such as public transport and cycle paths. Accessibility should be a key objective behind local planning and transport planning. Plans should recognise the need to preserve traditional landscapes and areas with low noise levels. (MTC, MoE, MSAH, National Road Administration, national rail administration, Civil Aviation Administration, Association of Finnish Local and Regional Authorities, regional councils, municipalities)

6. Improving the quality of construction

The construction and use of buildings involve high usage of energy and raw materials. Most of Finland's national wealth is tied up in buildings. Buildings also have many environmental impacts during their long life cycles, and the nature of these impacts is largely determined by decisions made during the design and construction stages. From the perspective of sustainable production and consumption, vital factors include building design, the quality of construction, and the efficient usage, maintenance and repair of buildings.

Environmental impacts during the use of buildings are largely the consequence of energy consumption rates. Households, services and the public sector are all using energy more than ever before, even though the energy-efficiency of the construction of new buildings has improved. Legislation, education and energy pricing are among the best ways to encourage improvements in the efficiency of energy use.

In spite of continuous increases in the average amount of space per inhabitant in homes in Finland, Finnish homes are still small by European standards. Housing costs amount to about a fourth of households' consumption costs. Different types of people at different stages of their lives have varying desires, needs and opportunities with regard to their housing. The requirements for housing in Finland will change considerably over the coming years as the population ages.

Vision

People in Finland live in well-constructed, energy- and material-efficient buildings that are healthy, pleasant, durable, and functionally suitable for their needs. Both new and older buildings are used and maintained efficiently. The construction and usage of buildings involve the consumption of less energy than today, and result in lower CO₂ emissions.

Objectives

- The buildings constructed in Finland must be durable and easy to repair. Buildings must be serviced and maintained according to carefully timed schedules. Wood must increasingly be used in construction. Smaller amounts of energy and materials must be used during the construction and entire life cycles of buildings.
- The versatility and adaptability of buildings must be increased, together with residents' opportunities to influence how they are used. Desirable and socially sustainable forms of housing must be available for people of all ages.
- The overall quality of construction must be improved, with quality indicators increasingly used. Fewer problems related to humidity, indoor air quality or noise must arise as consequences of poor design or construction.
- The future of Finland's architectural heritage must be safeguarded, by enhancing the purposeful and permanent use of the building stock. New forms of support for the maintenance of this heritage must be developed.

Proposed measures

19. Objectives should be set for material- and energy-efficiency in construction. Trial schemes involving energy- and material-efficient buildings should be financed jointly by the public and private sectors. The construction of communal spaces should be encouraged, for instance by making suitable changes to State housing production subsidy schemes, and by adding related conditions to the contracts made when land is transferred to private ownership for building. (MoE, MTI, Motiva, VTT, municipalities, Association of Finnish Local and Regional Authorities, organisations in the construction sector)
20. Training and educational materials related to forms of construction that improve material- and energy-efficiency and construction using wood should be improved and expanded. Training on energy assessments and repair work should also be enhanced. More information should also be made available for building users about ways to improve material- and energy-efficiency. (MoE, MEd, MTI, Motiva, construction sector)
21. Economic or other incentives should be used to encourage environmentally favourable renovation work (with regard to energy-efficiency, waste management and water usage), including the restoration of buildings that form part of Finland's architectural or cultural heritage. Investments in reparation work should be accelerated where necessary using financial incentives. The use of renewable energy for heating should be promoted, especially in rural areas. The adoption of billing systems based on individual households' metered consumption of heating and water should be promoted in new buildings and during major renovation work. (MoE, MTI, MoJ)
22. Quality systems should be developed for developments, construction and design, with guarantees extended so as to improve the quality, reparability and maintenance of buildings. (Construction sector organisations and construction developers)
23. New product-service concepts should be developed to encourage the adoption of environmentally favourable waste management, wastewater and energy solutions. Efforts to control the environmental impacts of buildings should be enhanced through training, networking, and the adoption of new technologies and environmental management systems. (MoE, construction sector organisations and firms)
24. Steps should be taken to promote the lowering of unnecessarily high room temperatures. Improve guidelines should be provided for ventilation and cooling systems as well as energy-efficiency, without jeopardising indoor air quality. Advice and support for related product development should be increased. The adoption of automatic energy-efficient heating and lighting applications should be promoted. (MoE, MTI, construction sector organisations and firms)
25. Possible means to promote the rental of existing holiday homes or otherwise increase their usage should be examined. (MoE, MoF)

7. Getting transport on the right track

Traffic levels in Finland are growing by 2-3% a year. The fastest increases are in the use of private cars and air travel – which are at the same time among the most environmentally unsustainable modes of transportation. In passenger transportation the rising trend is steepest for journeys for leisure purposes, while in goods traffic shorter and faster journeys are becoming more common. The levels of energy consumption and greenhouse gas emissions from private cars have started to rise again, since in spite of technological improvements people buying new cars have tended to choose less energy-efficient models. Drivers are also evidently spending more time on the road than previously. Transportation is today demanding increasing amounts of space, natural resources and energy. Traffic-related noise problems have also been increasing.

Vision

More sustainable forms of transportation are more widely used in Finland, including public transport, cycling, walking, rail transportation and water traffic. Qualitative improvements have made sustainable transportation options more attractive and more widely available. The growth in road traffic has been curbed. The need for transportation has been reduced, and deliveries of goods have been made more efficient thanks to new technologies, new service concepts, and new logistics and telematics (combined telecoms and information technology) systems. Cost-efficient low-CO₂-emission fuels have also been increasingly adopted. The environmental and health risks associated with traffic have been minimised, and the usage of natural resources reduced. All citizens have equal access to suitable forms of transportation. Transport infrastructures are well maintained.

Objectives

An eco-efficient and socially sustainable transport system where:

- Public transport, rail, water traffic, cycling and walking account for increasing shares of all journeys.
- Traffic-related health risks (noise and particulate emissions) and accidents are reduced. Transport infrastructures and services are planned with accessibility and people's practical needs in mind.
- Traffic-related environmental problems are reduced, ensuring that CO₂ emissions from traffic in Finland in 2010 do not exceed 1990-levels, and that traffic-related emissions of both nitrogen oxides (NO_x) and volatile organic compounds (VOCs, including hydrocarbons HCs) are reduced to 25 % of their 1990-levels by 2010.
- The use of natural resources in transportation is reduced.
- The short-distance transportation of goods by sea, rail, and combinations of these modes is promoted through logistics services.

Proposed measures

26. Reports on ways to develop annual motor vehicle taxation to incorporate conditions related to vehicles' carbon dioxide emissions should be completed, with related tax reforms implemented as soon as possible. (MoF, MTC)
27. Opportunities to increase the usage of public transportation and renewable fuels through cost-efficient economic incentives should be assessed. Investment programmes related to existing rail networks should be more rapidly implemented and expanded (especially with regard to the metro link between Helsinki and Espoo, and the construction of a rail-link to Helsinki-Vantaa Airport). Funding should be safeguarded for spending on national public transportation services and subsidies for local authority public transportation systems. Integrated transport services and interchange centres should also be developed. (MoF, MTC, Association of Finnish Local and Regional Authorities, municipalities and their contracted service providers).
28. Needs and opportunities should be assessed in relation to the promotion and adoption of systems where new location systems and telematics technologies can be used to develop systems of charges for traffic, and to meet other transport policy goals. (MoF, MTC, National Road Administration, research institutes, vehicle importers, service providers)
29. Active steps should be taken to find global solutions to meet the need for economic instruments over aviation (e.g. fuel taxation or emissions trading). If no global solutions can be found, Finland should support the adoption at EU level of economic controls (e.g. a variable system of airport charges set according to environmental loads), which would promote reductions in the burden on the environment without weakening Finland's air links. (MoF, MTC, Civil Aviation Administration)

30. Impact assessments and cost-benefit analyses should be improved to give more emphasis to the effects on health and well-being of different forms of transportation. The time-saving benefits of new routes should also be more thoroughly examined. (MTC, MoE, transport route authorities)
31. Opportunities to promote the adoption of gas- or hydrogen-fuelled buses should be assessed, especially in the light of good examples from other countries. New clean technologies should be favoured in public sector procurements. The use of biogas and other alternative fuels should be promoted, especially for public transport and the transportation of wastes. (MTC, MTI, MoF, TEKES, Motiva, Association of Finnish Local and Regional Authorities, municipalities)
32. Favourable service concepts should be developed and promoted, including well-linked tourist centres, cycling centres, other activity centres, mobile shops and services for rural areas, car sharing, car pools, travel cards as job perks, benefits for the users of energy-efficient vehicles, and new services exploiting ICT solutions. (MTC and other ministries, provincial authorities, Association of Finnish Local and Regional Authorities, municipalities, Helsinki Metropolitan Area Council, firms, employers, Motiva)
33. Cycling and walking should be made more attractive options through improvements to the safety, accessibility and design of cycle paths and footpaths. Other infrastructure for cycling should be improved, including signposted routes, cycle storage facilities and cycle parking racks. (MTC, MoE, municipalities, National Road Administration and service providers)
34. The purchasers of transportation services should require that service providers operate environmental management systems and commit themselves to energy-saving programmes and other favourable practices such as economical driving techniques, environmentally friendly vehicle fleets, and other energy-saving measures. (MTC, municipalities, businesses, transport firms)

8. Sustainable food production from the farm to the table

About a third of all the environmental impacts of consumption are linked to food consumption, although the proportion of household expenditure spent on food is considerably lower than a third. Changing and diverging habits and modern consumption patterns have led to increases in the transportation of food globally, and left many natural food sources in Finland's forests unexploited. Urbanisation and changes in lifestyles have increased the consumption of "fast foods", frozen foods and processed foods, leading to increased packaging and more food waste.

Eating habits have many impacts on public health. People are widely consuming excessive amounts of energy-rich fats, sugar and alcohol. The general decline in physical activity is also becoming a serious health problem. Obesity and its related conditions are costly health problems today in the industrialised countries.

Measures to reduce the environmental burdens caused by agriculture must be further intensified. Over the next few years EU agricultural subsidies will have to be reassessed in the light of WTO rules on trade in agricultural products, with direct subsidies expected to decline and be replaced by other forms of support.

Vision

Food is still produced and processed around Finland, in order to promote regional development, preserve the environment, and guarantee both the quality and availability of the food supply. Foodstuffs and catering services are produced sustainably. Organic farming is widely practised in Finland. Finland's strengths in farming and the production of foodstuffs are promoted through support for local and organic forms of food production. The negative impacts of food production have been considerably reduced throughout product life cycles, from the fields and farms through packaging and transportation all the way to the dining table. Health standards in Finland have improved due to healthier eating habits and increased physical activity.

Objectives

- Agricultural policies must consider the natural bases for food production and the need to reduce environmental impacts. Sustainable farming must be further strengthened through subsidy schemes.

- Higher priority must be given in agriculture to improving the state of water bodies, curbing eutrophication, safeguarding agricultural environments and biodiversity, and using energy more efficiently and self-sufficiently. Environmental subsidies must be more effectively channelled.
- Some 10% of arable land must be farmed organically by 2010, and 25% by 2025. Organic ingredients must be used more widely in processed foods, and organically produced choices must be available in almost all product areas. The proportions of organic and locally produced foodstuffs used in the canteens of public sector organisations and firms must be increased by 10-15% a year.
- Weight problems must decline in Finland, thanks to lower consumption of animal fats and increased physical activity. Effective steps must be taken to reduce problems related to tobacco and alcohol consumption.
- Information about healthier and more sustainable foodstuffs and catering services must be made widely available. Food production chains must be transparent, so that consumers and purchasers can have enough information about the origins of food and production methods to enable them to make sustainable choices. Clear criteria must be defined for functional foodstuffs on the basis of research data. Health education, publicity and catering services in the public sector must all help to increase the availability of organic food, locally produced food, and "slow food", with more of an emphasis on vegetables than today.

Proposed measures

35. Agri-environmental subsidies should be developed during the next subsidy period (2007-2013) to improve their effectiveness in promoting water protection, the preservation of biodiversity, organic farming (including investments in less crowded livestock facilities), and the adoption of environmental management systems. Environmental subsidies should be raised by 30 million euros, as set out in Finland's Baltic Sea Protection Programme, as part of the overall agricultural subsidies system. (MAF, MoE, Finnish Farmers' and Forest-owners' Union, Central Union of Swedish-speaking Agricultural Producers in Finland, agricultural advisory organisations, environmental organisations)
36. Assessments should be made of needs and opportunities to reduce the use of chemical fertilisers and pesticides through economic incentives, if environmental subsidy schemes prove not to be sufficiently effective in this respect. (MoF, MAF, MoE)
37. Biogas recovery on farms should be improved through trial schemes, increased research, and support for investments. Research and product development related to organic farming and livestock production should be intensified, aiming to promote environmental protection throughout life cycles. Such measures could include direct seeding and the elimination of weeds through mechanical methods or crop rotation. Research can also support the development of functional foods and risk analyses and assessments of food production methods. (MAF, research institutes)
38. A food panel should be set up in co-operation with the MAF's quality chain and the national nutrition advisory council, in order to get stakeholders from throughout the product chain to decide what kinds of objectives should be set for raw materials and processed foodstuffs with regard to quality, health factors and environmental impacts -- and to assess how these objectives can be reached. (MAF, MTI, Agrifood Research Finland, Finnish Food Marketing Association, Finfood ry, Finnish Food and Drink Industries' Federation, Finnish Farmers' and Forest-Owners' Union, Central Union of Swedish-speaking Agricultural Producers in Finland, householders' organisations, environmental and consumer organisations)
39. Criteria should be set for public sector procurements to promote sustainably produced foods, locally produced foods and fair trade products. Catering services in the public sector should al-

ways provide vegetarian and organic alternatives (MAF and MTI, Association of Finnish Local and Regional Authorities, municipalities)

40. Consumers should be encouraged to choose healthy and environmentally favourable foods and drinks, and to ensure they enjoy balanced diets. Measures to increase this type of awareness should include publicity campaigns and improvements to labelling schemes designed to inform consumers clearly about production methods, the origins of foodstuffs, and health factors. Ways should be found to provide consumers with easily comprehensible information to help them assess the environmental impacts of their choices. (MTI, Finnish Environment Institute, National Consumer Research Centre, National Food Administration, National Consumer Administration, Finnish Food and Drink Industries' Federation, Finnish Food Marketing Association, Finfood ry, environmental and consumer organisations)
41. Measures designed to reduce alcohol consumption should be stepped up. (MSAH)

9. Promoting well-being in workplaces and leisure activities

Significant challenges related to working life include unemployment, labour shortages in certain areas, increases in non-standard employment relationships, the ageing of the Finnish population, and the frequency of early retirement. Work is becoming ever more specialised, and increasingly being done through information systems, meaning that the concepts of working hours and the workplace are becoming more diverse and flexible, while the boundaries between work and free-time are becoming blurred. Electronic and remote working practices are becoming more common, which can lead to increases in job satisfaction, motivation and productivity, while reducing the need for transportation.

Some types of jobs are also widely done unpaid, such as housework and child-raising. People have more free time than ever before, and this time is increasingly spent watching television or surfing on the internet. Less time is spent on studying or socialising. The most significant environmental impacts of leisure activities concern the related travel and traffic.

Vision

Finland's welfare society is based on high levels of know-how. There is enough work for everyone, and enough qualified people to do all the necessary work. Jobs are satisfying, improving, suitably challenging and productive. The quality of working life and job motivation are improved without reducing the value of the services produced. People have enough quality free time to help them cope at work. Factors in the competitiveness of production include the high quality of working life, high levels of innovation and effective networking. Working life helps to develop the social and human capital of society, businesses and individuals, as well as social responsibility. The consumption of natural resources and other negative environmental impacts of working life and leisure activities are minimised.

Objectives

- Jobs must be organised so that older people are able to continue working longer. Working conditions and safety levels must be good, and work should be satisfying and increasingly productive. Equality in the workplace must be promoted through measures such as sharing the costs of family leave.
- The environmental impacts of journeys to work must be reduced through measures including improvements in logistics and spatial planning. Remote working and the innovative use of ICT solutions must be encouraged.
- The negative environmental impacts of working life must be reduced by increasing environmental awareness and promoting environmental management systems and other favourable practices.
- Environmental loads related to traffic caused by leisure activities must be reduced, for instance by promoting local recreational activities and providing more multiple-use facilities.

- Awareness of the environmental impacts of free-time activities and the related traffic should be increased.
- Cultural activities and hobbies related to nature must be promoted.

Proposed measures

42. Enterprise and employment opportunities should particularly be promoted in fields related to the provision of eco-efficient products and services. Administrative organisations can help to provide work in such areas as environmental rehabilitation and habitat restoration. (MoL, MoE, MTI)
43. Remote working can be encouraged by supporting favourable changes in organisational and management cultures, and by ensuring that effective and reasonably priced information and communications systems are available to everyone. (MoL, MTC, labour market organisations)
44. Employees' environmental awareness should be increased in workplaces. Good practices and environmental management systems should be promoted. It is recommended that systems designed to reduce material and energy consumption (such as the WWF's Green Office system) should be set up by 2015 in all workplaces with more than 50 staff. (MoE, public sector organisations, firms, environmental organisations, sectoral organisations)
45. Facilities and opportunities for environmentally favourable leisure activities should be expanded. Local attractions and opportunities should be better exploited, through publicity and signposting, the increased provision of farm holidays, improved facilities for nature tourism, fishing and other hobbies related to nature, presentations on cultural history etc. Such measures can also help to diversify rural economies and support small businesses. Activities such as fishing, berry-picking and mushroom-picking, where people take advantage of their free right of access to the land, should be promoted. This involves preserving suitably diverse natural environments near residential areas, and providing suitable instruction. (MAF, Finnish Forest and Park Service, MoE, MTI, MEd, municipalities, Association of Finnish Local and Regional Authorities, local firms, organisations)
46. Libraries and other facilities and services where goods are used communally should be supported and their use encouraged. Other ways to use leisure equipment more efficiently should be assessed, such as rental facilities, shared ownership and common use. Workplace benefits and leisure activity organisations may be useful in this context. (MEd, municipalities, private service providers, organisations)
47. Environmental criteria should be created for the funding of public sports, recreational and cultural facilities. (MEd, MoE)

10. Setting an example in the public sector

Environmental issues are considered to varying degrees in public sector purchasing and the production of public services today. National and international reports have indicated that the public sector in Finland is not leading the way as much as possible in increasing the demand for environmentally favourable products.

The public sector's high purchasing power means it can be very influential in setting trends. Finland's hospitals, schools, day-care centres, government offices and ministries together spend about 15% of the country's GNP, or 20 billion euros, on public sector procurements. Purchasing power on this scale directly impacts product development and the success of products already on the market. Environmentally friendly procurement policies directly reduce the burden on the environment, and can also be economically advantageous.

There is still a lack of information on opportunities to promote eco-efficiency in the provision of welfare services.

Vision

Welfare services are easily available, and are produced economically and with high energy and material-efficiency, using new technologies where this is beneficial. The public sector is economically sustainable, and provides scope for the provision of services through partnerships and experimental means. All public procurements are ecologically and socially sustainable, while supporting employment with regard to the use of natural resources, and promoting environmental technologies and demand for eco-efficient products. Finland's public sector leads the way by increasingly helping environmental technologies and eco-efficient and environmentally favourable products to reach markets.

Objectives

- National and local government organisations must make public commitments to continuously improve the ecological and social sustainability of their activities and procurements, and report regularly on how these promises are met. Organisations and individuals responsible for public sector procurements must have sufficient information, tools and capabilities to enable them to make ecologically and socially sustainable purchasing choices.
- The proportion of environmentally favourable public procurements must increase annually.
- The effectiveness of renewed legislation on public purchases must be monitored from the perspective of sustainable consumption and production. Efforts should be made through co-operation in the EU and the World Trade Organisation negotiating rounds to influence the drafting of competition rules to ensure they allow environmental and social considerations to be given more weighting in the procurement of goods and services.
- The availability and social use of services should be promoted already during the spatial planning of communities, by allowing the social and health sectors and individual citizens to participate in planning processes, for instance. Planning should also aim to improve the material- and energy efficiency of welfare services, and reduce harmful environmental impacts.

Proposed measures

48. Ministries and the municipal sector should by 2010 draft procurement strategies that stress the importance of sustainable development. The implementation of these strategies should be closely monitored with the help of key indicators related to sustainable production and consumption. (ministries, municipalities)
49. A special EcoForum should be set up to facilitate networking among people working with public sector procurements, to set objectives, to find ways to promote ecologically and socially sustainable procurement in the public sector, and to share experiences with good practices (MTI, MoF, MoE, Finnish Environment Institute, public sector procurement advisory unit, Association of Finnish Local and Regional Authorities, networks of municipalities, Hansel Oy, The Finnish Institute of Public Management, Efeko Oy, Motiva, representatives of suppliers)
50. Research should be conducted to find out which products and services are most important in terms of their volumes and environmental impacts, to enable more specific objectives to be set. (MoE, MTI, research institutes)
51. Information and training should be provided for the public sector on the environmental, social and economic impacts of purchases, and ways to reduce negative impacts. The expertise and services of the public sector procurement advisory unit should be strengthened in the fields of ecological and social sustainability. Support should be provided for the development of useful tools to promote environmentally favourable public purchasing (guides, criteria, technical speci-

cations, model documents etc.) designed for both purchasers and providers. (MTI, MoE, Association of Finnish Local and Regional Authorities, Finnish Environment Institute, Motiva, Efeko Oy)

52. Public sector organisations should strengthen their commitment to increasing the share of ecologically and socially sustainable procurements, through the adoption of environmental management systems or tools such as the WWF's Green Office concept. (civil service and public sector organisations, WWF, Efeko Oy)
53. A research project should be launched to assess the environmental impacts of welfare services and opportunities to reduce negative environmental impacts in socially and economically sustainable ways. (MSAH, STAKES, MoE)
54. The eco-efficiency of publicly produced services should be enhanced. Environmental criteria and energy- and material-saving objectives should be set for public welfare services. Training on sustainable development should be organised in the social and health sectors. Environmental management systems should be increasingly adopted, with environmental fully considered in all organisations providing welfare services. Opportunities to improve the energy- and material-efficiency of public welfare services through information technologies should be assessed. (MSAH, MoE, STAKES, Association of Finnish Local and Regional Authorities, municipalities)

11. Increasing sustainability through new technologies and innovations

Meeting the long-term challenges of sustainability is not possible with today's levels of technology. More progressive technologies are needed, together with new types of services and other innovations that increase energy- and material efficiency. More effective controls and incentives related to sustainable product-service systems are also needed to complement new technologies, as well as social innovations and networks or associations where various stakeholders can work together to develop new technologies and services to enable consumers to make more sustainable choices.

Vision

Finland is among the leading countries in terms of environmental technologies and innovative eco-efficient services. Conditions are favourable for the development, adoption and exporting of innovations. Socio-economic controls and incentives are better developed and permanently support innovation, eco-efficient technologies and sustainable consumption patterns.

Objectives

- Environmental technologies must be increasingly used in production in Finland and to replace older technologies.
- Exports of environmental technologies and service concepts must rise considerably.
- Controls and incentives must effectively support the development and adoption of environmentally, socially and economically sustainable innovations. Innovations must be readily available on the markets, with particular consideration given to the needs of small and medium-sized enterprises and the service sector.
- Research funding organisations and other organisations responsible for developing technologies and product-service concepts must channel considerable funding into research projects that promote sustainable consumption and production.
- The developers, producers and future users of environmental innovations must work closely together throughout innovation processes. New forms of participation should be adopted for these purposes, using ICT and other means.

- Technological and social innovations must be used to promote the use of services, communal ownership and rental services in place of the ownership of consumer goods and capital goods.
- Sustainable consumption and production patterns must be promoted in Finland's development co-operation as well as poverty reduction, through suitable training and the use of environmental technologies and eco-innovations.

Proposed measures

55. Finland should participate actively in the preparation and implementation of the EU's environmental technology action plan (ETAP). Community funds should be used to promote environmental technologies and eco-efficient innovations, particularly through the 7th framework programme for research (FP7), the competitiveness and innovation programme, and structural funds. Initiatives can involve combined public and private funding, and should integrate social considerations and take advantage of social innovations. Finland should improve its capabilities to participate in the preparation of indicators for the effectiveness of products, services and processes. Steps should be taken to assess opportunities to measure the environmental effectiveness of environmentally favourable products and services, and their role in key product areas. (MEd, MTI, MoE, research institutes)
56. Finland's strengths in the environmental technologies field should be recognised, and long-term funding should be provided to encourage environmental innovations and help them reach markets. Innovations that help to curb climate change should also be promoted in neighbouring countries and developing countries. (MTI, MoE, TEKES, SITRA, research institutes)
57. The adoption of new product-service innovations should be promoted through co-operation between potential service-providers and service-users. The providers of funding for new businesses and activities should be involved as early as possible in development projects to ensure that new practices will be viable. Ministries should develop a new model for networks where stakeholders involved in specific innovations meet to find ways to promote the eco-efficient adoption of innovations, for instance through pilot projects. (MTI, MoE, MSAH)
58. Technology procurement programmes should be applied in public sector organisations. Public sector purchasers should set objectives related to energy-efficiency and other factors to challenge suppliers to make further improvements on today's best available technologies. Technology procurement programmes should commit public sector purchasers to procure applications that meet specific conditions and targets. (MTI and MoE)
59. The capacities of small and medium-sized enterprises to apply best available technologies should be supported in order to promote the adoption of environmental technologies. (MoE, MTI, Finnish Environment Institute, industry, research institutes and consultants)
60. In the context of Finland's development co-operation work, assessments should be made of opportunities to initiate technology programmes that can be applied in rural development schemes to help eliminate poverty and reduce environmental problems, or meet other goals in line with the requirements of the recipient countries. (MFA, MTI, MoE, TEKES)

12. Values, knowledge and skills

Education and training provide crucial opportunities to help reshape current social patterns of consumption and production to make them more sustainable. People of all ages need information and a good understanding of activities throughout society to enable them to participate responsibly and critically in shaping the future. Education and training can be improved by ensuring that various actors co-operate on the development of methods and practices that help to increase this understanding and find new solutions.

Another challenge concerns the need to incorporate the principles of sustainable consumption into organisations' planning, decision-making and everyday activities. Many attempts have already been made to change people's behaviour, largely through information and education. But such measures alone are not enough – infrastructures and economic incentives designed to support sustainable choices must also be put in place.

Vision

Citizens obtain the information, skills and motivation they need to make decisions and act as responsible members of society through education, training and publicity. This leads to changes in everyday behaviour and commits consumers to sustainable lifestyles. Decision-makers have fully internalised and accepted principles related to sustainable consumption and production. Citizens, businesses and administrators are able and willing to make choices that promote sustainable consumption and production. The media communicate information about related opportunities, and highlight issues related to sustainable consumption. Marketing and advertising no longer promote unsustainable consumer choices.

Education, training and communications that promote sustainable development, including sustainable consumption and production, are designed to increase awareness of the links between environmental protection and economic and social well-being, while also encouraging people to participate and influence decisions.

Objectives

- The education system must give prominence to training and education promoting sustainable development, including sustainable consumption and production. These issues must be integrated into all aspects of the activities of schools and educational institutes. Various means must be devised to promote the mainstreaming of sustainable consumption and production throughout the education system. The importance of sustainable development must be increased in both basic and supplementary teacher-training. Teachers and head teachers must be fully able to participate in related supplementary training.
- Administrators' communications policies must promote sustainable consumption and production.
- Civil society must be supported in the production and dissemination of information at grassroots level.
- Training for journalists must increasingly cover themes related to sustainable development, and the media should spread information that promotes sustainable consumption and production patterns.

Proposed measures

61. A "decision-makers' sustainable development forum/academy/course" should be set up to enable decision-makers from various sectors of society and the administration to learn more about current issues related to sustainable development. This should help decision-makers to find ecologically socially and economically sustainable solutions to current challenges. (SITRA, Finnish Environment Institute, MoE, MTI, MAF, MEd, Tekes, Academy of Finland, environmental organisations)
62. Research and assessment work should focus on ways to improve teaching, training and research in universities and polytechnics on themes related to sustainable development, and particularly sustainable consumption and production. This should result in proposals on ways and opportunities to strengthen the focus on these issues in education and research. The concretisation at local level in educational institutes of teaching objectives that promote sustainable development should be supported, for instance by developing suitable teaching materials. (MEd, National Board Of Education, Academy of Finland, Sitra, universities & polytechnics)
63. Active citizenship among young people should be supported through MEd and MoE projects. New ways should be sought to promote environmentally sustainable thinking through youth

work. (MEd, National Board Of Education, MoE, Academy of Finland, Sitra, universities & polytechnics)

64. Day care centres, schools and tertiary educational institutes should be encouraged to organise their environmental affairs systematically, possibly by applying environmental management systems or certificates. Administrative sectors must co-operate to ensure that adequate resources are available to support the development and upkeep of environmental education programmes and certification, ensuring that such activities are economically sustainable. Schools and educational institutes should be encouraged to create sustainable development action plans covering their own activities, particularly considering the need for sustainable production and consumption. (MEd, National Board of Education, MoE, Finnish Environment Institute, regional environment centres, environmental organisations.)
65. Publicity campaigns should be launched to improve consumers' capability and willingness to make choices that promote sustainability. Materials should be produced to explain citizens' rights and responsibilities in relation to environmental issues. (MTI, MEd, MoE, MTC, regional environment centres and municipalities, environmental organisations, consumer organisations)
66. The harmful impacts of advertising should be assessed from the perspective of sustainable consumption, and ways to reduce them should be found. The Consumer Ombudsman should particularly oversee the observation of rules on environmental and ethical claims in marketing. (MoE, Consumer Ombudsman/National Consumer Administration, ethical marketing board, marketing council)
67. The role of the regional environment centres in supporting sustainable consumption and production through education and networking should be strengthened, so that they can co-ordinate and enhance co-operation between key actors (recycling centres, youth centres, environmental schools, nature schools, other schools, nature centres etc.) Such networking should come under the joint responsibility of the environmental and educational administration, and receive increased resources to help build up and support local sustainable development projects. (MEd & MoE, National Board of Education, MAF, Finnish Forest and Park Service, regional environment centres, environmental organisations, consumer organisations)

13. An active international role for Finland

At the UN's World Summit on Sustainable Development in Johannesburg in 2002, UN Secretary-General Kofi Annan assessed the extent to which the objectives agreed ten years earlier at the UN Conference on Environment and Development (UNCED) in Rio had been achieved. His statement acknowledged that the biggest shortfalls concerned the lack of progress on sustainable production and consumption, and the fact that funding for development co-operation had not increased enough to reach targets set in Rio. Sustainable development perspectives have still not been effectively integrated into other policy areas covering investment, funding, technology and trade. Eliminating poverty and cherishing the environment must go hand in hand.

Vision

Sustainable production and consumption patterns are by 2015 a recognised element of the implementation of the UN's Millennium Development Goals and the Plan of Implementation launched at the Johannesburg Summit. The sustainable use of natural resources and the elimination of poverty both form crucial parts of the wider concept of global security. The EU actively supports efforts to promote sustainable consumption and production both inside the community and globally. International co-operation to increase security reduces the risks of conflicts and crises, and promotes crisis control and conflict limitation, thus helping to reduce military expenditure and improve opportunities to eliminate poverty.

Objectives

- Funding for development co-operation must be increased according to the existing national programme. The effectiveness of this funding must be improved, and environmental perspectives must be incorporated cross-sectorally into poverty reduction schemes and economic support, and also into sectoral programmes.
- Finland must work within the EU to promote the spread of sustainable consumption and production patterns, and to strengthen the application of the principles of sustainable development in trade.
- Finland supports actions that facilitate the monitoring and improvement of the social and environmental sustainability of processes, manufacturing and production conditions, and supply chains, as well as measures to promote corporate responsibility internationally.

Proposed measures

68. Finland's development co-operation and trade policies should promote the spread of information skills that aim to support sustainable production and consumption patterns as well as poverty elimination. Efforts should also be made to accelerate the adoption of sustainable technologies and practices, particularly in the energy sector, in water supply and sanitation services, and in forestry. Support should also be provided for UNEP's cleaner production programme, and for increasing information skills in developing countries in the context of the implementation of major environmental agreements. (MFA, MTI, MoE)
69. Finland should strive to ensure that international public finance institutions channel their investments to promote sustainable development, concerning such issues as the provision of infrastructure for waste management, transport and energy. Financial institutions' reporting should be improved, especially with regard to the environmental and development impacts of investments. (MFA, MoF, MTI, MoE)
70. Trade in environmental products, technologies and services should be promoted through national measures and international trade negotiations. Finland should work to eliminate subsidies that support environmentally harmful developments, maintain inequalities in labour markets, or distort trade patterns. (MFA, MTI, MoE, MAF)
71. Finland should actively contribute concrete, detailed and feasible proposals concerning sustainable consumption and production for various sectors (energy, industry, transport, agriculture) in order to facilitate the work of the UN Commission on Sustainable Development (CSD) and UNEP. It is important that the whole UN system participates in the implementation of these programmes. The content of the Framework of Programmes on Sustainable Consumption and Production Patterns should be specified, with decisions made on its continuation after 2011. (MFA, MTI, MoE, MAF)
72. Procurement policies that meet sustainability criteria should be promoted in the EU, throughout the UN, and in other international organisations and financial institutions. (MFA, MTI, MoE, MAF)
73. Eco-efficiency should be given high priority during the organisation of meetings during Finland's EU presidency and other major international meetings in Finland. (Prime Minister's Office)

14. The expected impacts of the Programme

The objectives defined in these proposals are intended for full consideration and implementation according to sectoral responsibility through mainstreaming in the activities of the various administrative and private sectors and actors. Many of the proposed measures require that impact analyses should be conducted during the continuing preparation of the Programme to Promote Sustainable Consumption and Production.

Most of the proposed measures have been designed to reduce material and energy flows in the long term. The measures support each other, and certain key measures create vital preconditions that will influence the effectiveness of other measures. The proposed material efficiency service centre, for instance, can serve as an umbrella organisation for various projects, and will also be involved in the initiation of a research project examining the environmental and economic impacts of the material flows associated with production and consumption in Finland. Another objective in this context is to assess technical and economic opportunities to prevent waste, and the necessary controls and incentives. This research work will create a knowledge base for dialogues through which companies, sectoral organisations, researchers and administrators can set material- and energy-efficiency targets covering entire product life cycles.

The Programme contains measures that aim to support Finnish know-how and livelihoods. The Programme thus aims to improve well-being and employment. The measures proposed by the Committee to promote dialogue and networking will also have positive social impacts. They also facilitate the harmonisation of the objectives and visions of various interest groups. In order to achieve these objectives, individual citizens must understand the importance of making their consumption patterns and choices more sustainable.

The measures proposed for the Programme involve expenses, which it is intended will be mainly met by re-allocating resources, even between different administrative sectors as necessary. Some measures will nevertheless require additional funding. Other measures related to research and environmental technologies will require resources to be redirected, within the national technology administration, for instance. At this stage it is still difficult to estimate the total expenses that will need to be budgeted for the Programme.

Some measures may have positive economic impacts in the medium term. Examples include dialogue projects and the promotion of environmental technologies, which can provide business opportunities and build up know-how by promoting networking between Finnish firms and enhancing their access to markets.

Not all of the Programme's impacts will be measurable in economic or financial terms.

It is proposed that an external evaluation of the Programme's environmental, economic and social impacts should be commissioned.

15. Monitoring of the programme

The Committee proposes that a report on the implementation of the Programme to Promote Sustainable Consumption and Production should be drafted, and that this report should form the basis for the revision of the Programme after a period of five years.

The Government should monitor the implementation of the measures proposed for the Programme as part of the updating of its strategic portfolio.

The measures proposed for the Programme form part of Finland's implementation of the Johannesburg action plan, which is monitored by the *Sustainable Development Committee* (chaired by Prime Minister Matti Vanhanen). Since this committee is also currently initiating the updating of Finland's sustainable development strategy, the KULTU Committee proposes that in future the Sustainable Development Committee should be responsible for the overall monitoring of the Programme to Promote Sustainable Consumption and Production.

The objectives set out in the proposals should be fully considered, and the related measures implemented according to sectoral responsibility through mainstreaming in the activities of *every sector of the administration*. It is also proposed that the monitoring of the implementation of the Programme can be conducted in connection with the monitoring reports required under the environmental and quality systems used in different sectors.

It is also proposed that the impacts of the Programme should be monitored comprehensively for the purposes of the *Finland's Natural Resources and the Environment* review. This review is produced annually together with the national budget, and describes progress towards sustainable development in Finland. The review features many indicators that can also be used to monitor progress towards the objectives of the Programme to Promote Sustainable Consumption and Production. The Committee therefore also proposes that the annual review should be duly developed and expanded for this purpose, particularly with regard to its indicators, which could in future be expanded to cover such issues as the total use of materials in the Finnish economy, the environmental impacts of natural resource use in different sectors, the environmental impacts of consumption in Finland, and the total turnover and employment impact of environmental technologies.