



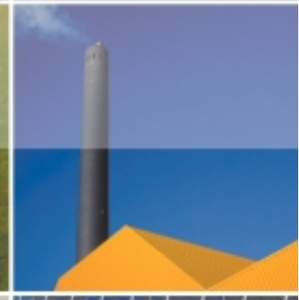
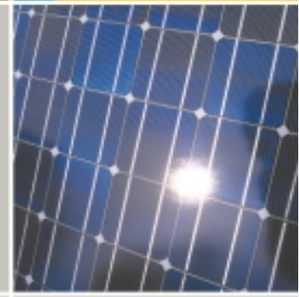

denmark's national strategy for sustainable development

prudent development – a shared responsibility

the danish government, june 2001

DENMARK'S NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT

PRUDENT DEVELOPMENT — A SHARED RESPONSIBILITY

THE DANISH GOVERNMENT, JUNE 2001

The Danish Government, June 2001
Denmark's national strategy for sustainable development
"Prudent Development – A Shared Responsibility"

ISBN 87-7944-873-9

Cover & design: Lars Møller Nielsen
Printed by: Richard Larsen Grafisk A/S
Photos: Scanpix Nordfoto, BAM
Number printed (first impression): 5.000

The publication is available at the bookstore:
Miljøbutikken
Læderstræde 1-3
DK-1216 Copenhagen K
Tel.: +45 33 95 40 00
Fax: +45 33 92 76 90
E-mail: butik@mem.dk

The publication can be downloaded from the webserver of the Danish Environmental Proctection Agency:
http://www.mst.dk
Any enquiries concerning this publication may be directed to:

Danish Environmental Protection Agency
Development and Data Division
Strandgade 29
DK-1401 Copenhagen K
Tel.: +45 32 66 01 00
Fax: +45 32 66 04 79
E-mail: mst@mst.dk

Foreword

"Prudent Development – A Shared Responsibility" constitutes Denmark's national strategy for sustainable development. In Denmark, this development must be balanced – economically, socially and environmentally. We must pass on a society where the economy is sound and the level of welfare considerable, and where there is a high degree of social equality. We must ensure the quality of the environment and nature. Future generations have a right to this.

The strategy is founded on eight objectives and principles which will provide the platform for Denmark's commitment to sustainable development:

- Denmark must develop the welfare society and decouple economic growth from environmental impact
- Denmark must create a safe and healthy environment for everyone and maintain a high level of protection
- Denmark must secure a high degree of biological diversity and protect the ecosystems
- Denmark must use resources more efficiently
- Denmark must take action at the international level
- Denmark must ensure that environmental considerations are taken into account in all sectors
- Denmark must ensure that the market supports sustainable development
- Denmark must ensure that sustainable development is a shared responsibility, and we must measure progress

Sustainable development presents national and global challenges. At the UN Rio Conference in 1992, all countries were urged to draw up national strategies for sustainable development. This strategy is the Danish response to the request.

The strategy will form part of Denmark's contribution to the World Summit on Sustainable Development to be held in South Africa in September 2002.

The summit will take place during the Danish EU Presidency presenting us with a unique opportunity to place sustainable development at the top of the international agenda. Sustainable development requires global cooperation and international solutions. Everyone must participate if we are to find lasting solutions. For this reason, Denmark will work to create a Global Deal between the North and the South concerning sustainable development.

At the same time, we must not relax our efforts on the home front. In the Danish national strategy for sustainable development, the Government first and foremost presents what we will do in Denmark to ensure a society in balance.

The strategy establishes the priorities and objectives for Denmark over a twenty-year period, and in the years to come this strategy is to be realised. Creating sustainable development requires the active participation of all involved – from the Government to the business community, municipalities and counties, schools, associations, voluntary organisations and the population. It is our hope that all will be as active when the strategy is to be realised as they were while it was being prepared.

Contents

INTRODUCTION

1. Vision and objectives 1
2. Results and challenges 9
3. Contents of the strategy 13

CROSS-CUTTING ACTIVITIES

4. Climate change 17
5. Biodiversity – nature protection and public access to nature 21
6. Environment and health – chemicals, environmental pollution, food, physical working and indoor conditions 25
7. Resources and resource efficiency 33
8. Denmark's international activities 37

SECTORS

9. Food production – food safety, agriculture and fisheries 45
10. Forestry 55
11. Industry, trade and services 59
12. Transport 65
13. Energy 71
14. Urban and housing development 75
15. Tourism 79

MEASURES AND IMPLEMENTATION

16. Measures and knowledge base 83
17. Public participation and Local Agenda 21 89
18. Implementation, monitoring of progress and follow-up 93

INTRODUCTION

Photo: Scanpix

1 Vision and objectives

This is Denmark's national strategy for sustainable development. The strategy starts from a description of how Denmark contributes to promoting global and national sustainable development that focuses on the interests of future generations and on nature protection.

The World Commission on Environment and Development (better known as the Brundtland Commission) defined sustainable development as: *"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*

It further reads: *"In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations."*

The definition set out in the Brundtland Report (Our Common Future) sums up a number of thoughts and visions relevant to us all. The definition still underpins Denmark's view of sustainable development.

Denmark is to be a society where economic progress can go hand in hand with an improved environment. The population should enjoy greater equality in employment, living conditions, social conditions and quality of life. Sustainable development implies that we must face up to economic, environmental and social challenges at one and the same time. Future generations should be offered at least as favourable opportunities for a good life as we have at present. We must ensure sound economic development that is socially balanced, development that respects the limits of nature and the environment and which has no negative impact on human health.

Sustainable development cannot be achieved in one country alone. The vision for global sustainable development foresees a world of economic progress, increased welfare and better environmental protection. This development is for the benefit of everyone, including the weak and poor in other parts of the world. Therefore, sustainable development also presupposes transparency, democracy and respect for human rights. Being an affluent nation, Denmark has special responsibility for taking the lead in the development of a global, sustainable community. Hence, Denmark will continue to be actively committed to international co-operation on the environment and development.

Sustainable development requires global co-operation and international solutions. At the same time, we must not relax our efforts on the home front. In the Danish national strategy for sustainable development, the Government first and foremost presents what we will do in Denmark to ensure a society in balance. The strategy represents Denmark's response to the challenge presented at the 1992 Rio Conference.

As the economic and social dimension of Danish policies for sustainable development are included in other Government policies, this strategy has its main focus on how to take into account the environmental dimension in policies for sustainable development.

The Danish vision of sustainable development is founded on eight objectives and principles:

1. *Denmark must develop the welfare society and decouple economic growth from environmental impact*
2. *Denmark must create a safe and healthy environment for everyone and maintain a high level of protection*
3. *Denmark must secure a high degree of biological diversity and protect the ecosystems*
4. *Denmark must use resources more efficiently*
5. *Denmark must take action at the international level*
6. *Denmark must ensure that environmental considerations are taken into account in all sectors*
7. *Denmark must ensure that the market supports sustainable development*
8. *Denmark must ensure that sustainable development is a shared responsibility, and we must measure progress*

These eight objectives and principles reflect the areas where a special need exists for Denmark to work at achieving sustainable development.

1. Denmark must develop the welfare society and decouple economic growth from environmental impact

Denmark must halve its public sector debt by 2010, and we must repay our foreign debt. Over the next 30 years, we will see a rapid increase in the number of older people, while economically active persons will account for a steadily diminishing share of the population. If we maintain the government budget surplus, we can repay a large share of our national debt in the years ahead. The money we are currently paying as interest can be redirected towards meeting the rising costs of pensions, home-help schemes, old-age care, hospitals, etc.

All Danes must be guaranteed a dignified and safe old age – whether or not they have had an opportunity to save. State retirement pension will continue to play a pivotal role in the pensions system of tomorrow, which will be financed by the interest expenses saved and by labour market reforms which increase the workforce. In addition, Danish labour market pensions will expand as the ratio of older people to the population at large grows. Labour market pensions and privately provided pensions will thus supplement the state retirement pension.

We must create a more socially inclusive labour market where more persons join the workforce and there is room for those who do not fully meet the high demands for efficiency. Conditions for members of the workforce aged 50 or over need to be improved to reduce the number of people claiming early-retirement benefits, anticipatory pension, etc. Flexible working arrangements should also be facilitated. Development must not hurt the weakest groups. We must become better at using the workforce resource represented by immigrants, at ensuring that fewer claimants require cash benefits and at preventing sickness absence.

The achievement of sustainable development calls for enhanced initiatives. In various important areas we have managed to decouple economic progress from pollution problems. This applies to the energy area, for example. Other areas, however, still present sweeping challenges.

Some impacts on our health, environment, nature or resource utilisation are so critical as to demand new solutions. For example, the impact on the climate system is crucial because even small impacts on the balance of the system are expected to have serious implications for life on Earth.

Sustainable development implies a balance between generations. We must pass on to future generations a society in a state that will offer them at least as favourable opportunities for a good life as we have. Therefore, we must safeguard our economic, social and environmental resources. We must avoid critical impacts on the environment, nature and health, and we must protect and preserve special and unique natural values, which cannot be restored if they disappear.

These challenges should be met through a broad range of measures. Regulation in the form of prohibitions and orders must be supplemented with instruments such as taxes, subsidies, transferable quotas, information and dialogue. Research into causal relations and into new environmental and societal problems influences society's ability to take the proper, preventive decisions at an early point and thereby to achieve sustainable development.

Indicators can tell us whether society is heading for sustainable development. These may include indicators measuring impacts on critical nature and environment factors and indicators showing whether economic growth is being decoupled from pressures on the environment and nature. The "Genuine Savings" concept is an economic indicator for developments in the total wealth of society. This concept is used to determine the value of economic, social and environmental resources. The Genuine Savings concept is being developed and must be supplemented by analyses of critical impacts on health, the environment and nature. Combined with the other indicators, Genuine Savings can provide a picture of whether or not developments can be described as sustainable. The first analysis from 1998 seems to indicate that Genuine Savings are positive in Denmark.

2. Denmark must create a safe and healthy environment for everyone and maintain a high level of protection

The environmental quality in Denmark must not be harmful to humans, animals and plant life. Steps must be taken to ensure that the soil, air and water are sufficiently clean and free from harmful substances and microorganisms so as not to be hazardous to the health of humans, plants and animals.

Climate changes are among the greatest global challenges of this century. Therefore, we should stabilise the concentration of greenhouse gases at a level that prevents harmful, man-made effects on the climate system. To live up to the Kyoto Protocol, Denmark has undertaken to reduce total emissions of greenhouse gases by 21 per cent from the 1990 level in the years 2008 to 2012. The benchmark is to halve CO_2 emissions by 2030.

The manufacture, use and disposal of products and goods must not be harmful to the environment and human health. The Government is formulating a comprehensive strategy, focusing on the measures that are being or can be taken in relation to the health impact of environmental factors. Consumption of hazardous chemicals must be reduced to a minimum. Industry must assume responsibility for examining the hazards of chemicals and ensure that they can be used without jeopardising health and the environment. We are taking active steps against hazardous chemicals, and in 2020 it will not be allowed to market or use any products containing chemicals that entail particularly undesirable effects on health or the environment

A high level of protection for humans and the environment is important. The precautionary principle will be instrumental in securing this protection and is a principle recognised in EU and Danish policies. We must take action at the smallest hint of any unacceptable risk or hazard.

3. Denmark must secure a high degree of biological diversity and protect the ecosystems

Nature and the ecosystems are vital to all life on Earth. The development potential of both present and future generations depends on viable and varied natural resources. This is why we must enhance the quality of nature and double the forest area.

International projections show that global economic development over the next 20 years will endanger the world's biological diversity. That is why we must reduce the physical impacts on nature and in particular the discharge to nature of nutrients and environmentally harmful substances. In the interests of our descendants, industries that are detrimental to nature must adjust their use of natural resources.

Certain values inherent in cultural and natural landscapes, special landscape types and the diversity of species and genetic pools are irreplaceable. We must strengthen and target the initiatives to protect biodiversity by developing an interconnected network of natural areas and enhancing the quality of existing natural areas. We must ensure the population improved access to outdoor recreation and enjoyment of nature in all forests and in the open country. Finally, we must safeguard our cultural environment, including cultural traces in the landscape and the cultural heritage that lives on in rural districts and coastal regions.

4. Denmark must use resources more efficiently

Over the coming years, we can expect a growing population and increasing economic wealth – also in developing countries. We must therefore use the available quantity of natural resources in a sustainable way. Danish companies must continue adjusting production to a smaller input of resources per unit produced to be successful in the global market, where scarcity of resources must be anticipated.

Production and consumption generate waste and cause pollution. We must adjust our patterns of consumption and methods of production so that the production and consumption of goods and services are less detrimental to the environment and offer improved resource utilisation. During the years ahead, resources must be used more efficiently to limit waste volumes and cut down the dispersion of pollutants.

A long-term benchmark is to improve resource efficiency substantially within a generation. Above all, we must limit consumption of natural resources that are scarce, particularly sensitive or polluting. In the long term, we must limit resource consumption to about 25 per cent of the present level. In the even longer term, resource efficiency may have to improve still further. This should be seen against the backdrop of international discussions on the formulation of targets for resource efficiency improvement in the order of a factor 4 over the next two or three decades and a factor 10 in the longer term. This process was initiated at the UN Special Session of General Assembly (UNGASS), held five years after the Rio Conference. Factor 4 means that resource efficiency is increased by a factor of four compared with the present level – i.e. a 100 per cent increase in utility value combined with a 50 per cent reduction in resource consumption. The factor ten concept implies a 50 per cent cut in global material flows and an equal distribution of resource consumption among the global population. This means that the industrialised countries will have to achieve resource efficiency improvements in the order of factor 10.

Technological breakthroughs and innovation are necessary. We must continue to develop new technology, new materials and new solutions to redirect society towards sustainable development. The wider use of existing technologies and new technological breakthroughs present an opportunity to develop more sustainable methods of production. New sources of energy, for instance fuel cells, will be capable of reducing CO_2 emissions significantly. The use of new types of materials can lower resource consumption and open up more recycling possibilities. Information – and biotechnology may also pave the way for new environment-friendly production methods and products. Therefore, it is important to provide the right framework and a strong platform for the development and dissemination of new environmental technologies and for the removal of any barriers to the market access of such technologies.

5. Denmark must take action at the international level

Denmark will continue to work actively to promote global sustainable development. In the areas where we possess special knowledge or that are high on the political agenda, Denmark is ready to take the lead.

Denmark will contribute to creating a world of peace and stability building on democracy and respect for human rights. Denmark must sustain its efforts to reduce poverty and achieve growth and social development in the poor countries of the world. Economic and social development in the poor regions of the world must contribute to global sustainable use of resources and conservation of nature and environment. Denmark's development assistance currently accounts for one per cent of its gross national income, approximately DKK 12.7 billion. To this should be added the actual environmental assistance in the order of DKK 2 billion. Denmark will continue to give priority to multilateral and bilateral assistance to developing countries in partnership with governments, civil societies and business communities in these countries. This contribution has been instrumental in strengthening Denmark's international credibility and goodwill.

Many of the environmental problems we are facing are global or regional. Thus, they can only be solved through international co-operation. Denmark is working actively to improve European and international environmental protection through EU co-operation. We will continue contributing to the ongoing follow-up and implementation of the EU's Sixth Environment Action Programme. Denmark will help integrate environmental considerations into EU sector policies, and attaches importance to ensuring that the EU heads of state and government follow these endeavours. Denmark will hold the EU presidency in the second half of 2002. This will afford us a special opportunity to set high-priority objectives on the agenda. Not only in an EU context, but also in the broader contexts where the EU plays a role. Denmark will work for an active follow-up to the OECD's sustainable development strategy along the lines of the OECD Ministerial Council Meeting on sustainable development held under the Danish chairmanship in May 2001.

The World Summit on Sustainable Development is scheduled for September 2002 in South Africa. Denmark, holding the presidency of the EU, will work for the creation of a new global agreement on sustainable development and global partnership. Elements of such a deal could be that industrial countries undertake to decouple economic growth from environmental impact and support developing countries in their possibilities of realising growth and reducing poverty. Elements could be improved market access, debt relief, investments and technology transfer. At the same time, all countries must live up to their international commitments and integrate environmental considerations into their production and administration.

6. Denmark must ensure that environmental considerations are taken into account in all sectors

The integration of environmental considerations into policies and decision-making processes is a prerequisite for achieving sustainable development where economic growth, increasing environmental impacts and growing resource consumption are decoupled from one another. This makes all sectors and authorities responsible for integrating considerations for the environment, health and sustainable development into all decision-making processes within their respective areas. This applies at the central as well as the local level.

An important model is the work within the EU to integrate environmental considerations into sectoral development, the so-called "Cardiff Process". This process means that all sectors are responsible for developing strategies and indicators for the integration of environmental considerations within their policy areas, with a view to achieving sustainable development.

In Denmark we have worked at integrating environmental considerations in various ways and at different levels. Bills and other Government proposals presented to Parliament are required to undergo a strategic environmental impact assessment to ensure that the environmental consequences form part of the decision-making basis. Similarly,

the environmental impacts of large-scale, central-government engineering works have to be assessed. Over the past decade, environmental action plans have been drawn up in a variety of policy areas.

Today, only 10 to 20 per cent of Danish companies regard environmental aspects as a competitive parameter. The vision is for the vast majority of Danish companies to turn the way they undertake their social responsibility into a strategic advantage in the market. This goal will mainly be accomplished by ensuring that companies integrate environmental considerations into their decision-making processes. The Government is formulating a green industrial development strategy, due for publication next autumn. The strategy focuses on strengthening environment-friendly behaviour and competitiveness in Danish companies.

However, there is still a need for strengthening the comprehensive and cross-sectoral approach. The integration of environmental considerations into sectors, policies and decisions will remain a crucial element in Denmark's commitment to sustainable development.

7. Denmark must ensure that the market supports sustainable development

Sustainable development and economic progress are not mutually incompatible. Companies engaged in significant environmental initiatives generally do well in competition. A forward-looking commitment to the environment and sustainable development may stimulate competitiveness and transition to the knowledge economy.

It should pay to show environmental concern. One of the ways of achieving this is to ensure that those who produce, supply, dispose of or consume products and services pay the environmental costs. Prices that reflect the actual costs to society encourage consumers and producers to make sustainable choices. The polluter-pays principle must be followed consistently.

Green taxes, subsidies and tradable quotas represent some of the economic instruments that can be used for this purpose. The Government wishes to step up the use of economic instruments to solve environmental problems in the most cost-effective manner for society.

The Government will uphold green taxes and consider the possibility of introducing new ones. Denmark will also work for taxes internationally, for example an international tax on aviation fuel. Green taxes and all other measures must be designed so as to offer an optimal environmental effect and an appropriate balance between environmental, economic and social considerations. The choice between different measures depends on the challenge to be addressed. It will often be necessary to choose a combination of measures that together generate the right changes in behaviour.

Achieving a market that supports sustainable development calls for consumers and, therefore, the market to make more demands on environmental initiatives by companies. The demand for and supply of environmentally friendly products and services must grow. Reliable information about how products affect the environment is important. The public sector must help provide the incentives and framework conditions that make it attractive for both manufacturers and consumers to supply and demand sustainable products. This will help assure that market forces succeed in achieving the environmental objectives in an efficient manner.

The public sector itself is an important consumer and therefore has the potential for influencing the market. The public sector must take the lead by pursuing a green procurement policy.

8. Denmark must ensure that sustainable development is a shared responsibility, and we must measure progress

Sustainable development is only achievable if all parties make a contribution and assume responsibility for integrating and promoting considerations for the environment and sustainable development in their decisions. Consumers and producers, employees of companies, society's institutions, children and young people are all key players in the cause of sustainable development. They must be involved and share in the responsibility. Information, education and teaching can disseminate knowledge about sustainable development and thereby change attitudes and behaviour.

The Aarhus Convention, specifying principles about the environmental rights of citizens, has now been introduced in Denmark. This means that every member of Danish society has easy access to information, is able to participate in decision-making and has access to justice in environmental matters. If we are to achieve sustainable development globally, these principles must also apply in other countries. Therefore, Denmark will work to ensure that the principles of the Aarhus Convention are employed more extensively in global and international conventions and legal instruments.

Research and development will assure us an updated, solid knowledge base, which includes research into fundamental causal relations and into how activities in society have a bearing on people and the environment. This will enable us to make the right decisions, prioritise activities and choose the right measures. Environmental economics, environmental behaviour, forecasts and scenarios for the anticipated development are core areas. Environment policy must be knowledge-based.

The Government will continuously monitor and report on the progress made in implementing this strategy. A set of indicators to cast light on the objectives and activities of the strategy has been proposed. A special website for sustainable development will be presented on the Internet. The indicators will be updated every year making it possible to keep abreast of our progress in meeting the objectives.

Photo: Polfoto

2 Results and challenges

The Agenda 21 document from the Rio Conference invites governments to formulate national strategies for sustainable development. This strategy has been drawn up in response to that invitation and will be an integral part of Denmark's contribution to the UN World Conference on Sustainable Development – Rio+10.

This national strategy for sustainable development should be seen in the context of the international strategies for sustainable development in which Denmark participates. The EU is discussing its Sixth Environment Action Programme, which sets the framework for EU environment policy and for the integration of environmental considerations into all policy areas over the next ten years. The Sixth Environment Action Programme points to five main areas of activity for the next decade: climate; nature and biodiversity; environment, health and quality of life; sustainable exploitation and management of natural resources and waste; and international activities. At the European Council summit in Gothenburg in June 2001, the European Council adopted a long-term strategy for sustainable development, setting up specific objectives for health and the environment. The strategy advocates that environmental sustainable development be discussed at the EU spring summits under the Lisbon process on a par with socially and economically sustainable development.

Under the auspices of the OECD, Denmark has worked actively for sustainable development and the integration of environmental considerations. In May 2001, Denmark chaired the OECD Ministerial Council Meeting on sustainable development, where ministers for the environment, economy and finance all participated. At the meeting, the OECD countries adopted a strategy for sustainable development, which sets up a framework for integrating economic, social and environmental objectives and for decoupling economic development from environmental stress. On Denmark's initiative, the outcome of the meeting was that the OECD will develop sustainable development indicators to measure progress. These indicators will be incorporated into the OECD's evaluation of member countries. Denmark will strive to ensure that member countries follow up the OECD's work on sustainable development.

During the Danish presidency, the Nordic Council of Ministers has completed a cross-sectoral strategy for sustainable development, targeted at integrating environmental considerations into sectors. It became effective on 1 January 2001, and the coming years will see a continuous effort to follow up objectives and activities where the individual sectors in the Nordic Council of Ministers are responsible for integrating environmental considerations within their respective areas.

Results

The 1990s was a period of economic stability, which benefited most Danes. Denmark has managed to achieve higher levels of employment and income, mainly through reforms of the labour market, the tax system and educational pro-

grammes. There are surpluses on the government budgets and the balance of payments. At the same time, social inequality has not widened. Although much still remains to be done, we have a strong basis for preserving and improving a welfare society of a high standard, which is to the benefit of all.

Denmark has followed up on the recommendations from the 1992 Earth Summit in Rio de Janeiro. Denmark has considerably intensified its international initiatives for sustainable development. Total assistance for sustainable development – including the development assistance framework and Danish environmental assistance – now accounts for 1.18 per cent of gross national income. Denmark has been, and will remain, an active co-player in global negotiations on ensuring development and trade, global conventions and EU rules in the environmental area that have a high level of protection. Denmark is the first country in the western world to ratify and implement the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters.

During the past decade, Denmark has emphasised the importance of integrating environmental considerations into other policy areas and of fighting and preventing pollution and its impact on nature. Various targeted action plans have strengthened the concrete initiatives to decouple economic growth from adverse effects on nature and the environment.

The action plans and strategies include Transport 2005, Energy 21 and the Electricity Reform, Climate 2012, City of Tomorrow, the Urban Ecology Action Plan, Green Education and Training, Waste 21, Pesticide Action Plan II, the Product-Oriented Environmental Strategy, the Chemical Strategy and action plans for particularly problematic chemicals, Aquatic Environment Plan II, the Natural Forest Strategy and the Strategy for Sustainable Forestry.

While the economy showed a strong upswing during the 1990s, Denmark also managed to reduce emissions of various pollutants – especially SO_2, NO_x and CO_2 – and total energy consumption stabilised. The objective of limiting the discharge of nutrients to the aquatic environment from municipal wastewater treatment plants and industry has been met, and progress has also been recorded in the agricultural sector. More than 200 of the most harmful pesticide products have been removed from the market. Over the past ten years, more than 8,000 ha of lakes, streams, meadows and moors have been restored, and about 18,000 ha have been planted with trees.

The results of the initiatives taken so far have been accomplished through regulation and a wider use of economic measures. With the Danish tax reform of 1993 and subsequent adjustments, the Danes were among the first to implement a "green tax reform" – a switchover from tax on personal income to tax on environmental impact. The reform served a dual purpose: making environmental costs more transparent to consumers and boosting the incentive to work.

Challenges

Growing international trade and the higher pressure on the Earth's natural resources have made the individual countries more interdependent. The globalisation of the economy means that many problems, including environmental ones, can only be solved through international cooperation. Projections on the state of the global environment indicate that growth in the world economy, global population growth and significantly higher consumption levels will intensify the pressure on natural resources. According to international forecasts, the world population is expected to grow to some 7.5 billion over the next twenty years, and per capita consumption is expected to increase by one third over the same period.

The new global market terms involve sharper competition. Moreover, the enlarged European market opens up new business opportunities. Environmental aspects are becoming a competitive parameter, and Danish companies already enjoy a strong position. New technology, information and communication technology and the Internet will increasingly change the day-to-day lives of companies and people. This facilitates the exchange of knowledge, but also entails steadily higher expectations for openness and transparency in companies and the public sector and for transparency in the decision-making process.

The global knowledge economy is riding a new industrial wave where scientific and industrial breakthroughs in fields such as biotechnology, microelectronics, energy technology, telecommunications and new materials will change the world. Several of these technologies can potentially contribute to decoupling economic development from environmental impact and resource consumption. At the same time, technological advances may involve risks and uncertainty, for example in conjunction with the release of genetically modified organisms into the environment.

Denmark must take active steps to meet the challenges and ensure that growth in the economy and living standards does not step up pollution and cause more damage to the natural environment. Within the past two decades, Denmark has managed to implement targeted initiatives that limit and reduce the environmental impact per unit produced. Even so, increased consumption has offset the reduction in environmental impact in a number of cases. Denmark is responsible for ensuring that its reduction in environmental impact does not result from transferring polluting production to other countries.

One of the greatest challenges at the global level is to meet the threat from climate changes. Climate changes will alter the basis of the natural environment and, in particular, threaten the already poor countries and small archipelagic states. The world's biodiversity is under pressure from various human activities. Poverty, hunger and scarcity of basic natural resources are the causes of conflicts, which give rise to severe refugee problems in some regions.

In Denmark one environmental challenge in the years ahead will be the large number of chemicals from products, emissions, discharges and waste, which spread to the environment through many routes and can affect health, the environment and nature. Other challenges will be to decouple economic growth from the impact on the environment and human health in areas where this has not yet been accomplished. The growing demand for transport contributes to global climate changes and to local air pollution in cities. Improved resource utilisation and reduced waste volumes are other challenges for the coming years. Danish nature is exploited intensively, both in rural areas and at sea. In spite of the measures taken, species and landscape types are still decreasing in number. The challenge lies in developing and introducing more environment-friendly production methods that prevent any deterioration in biodiversity.

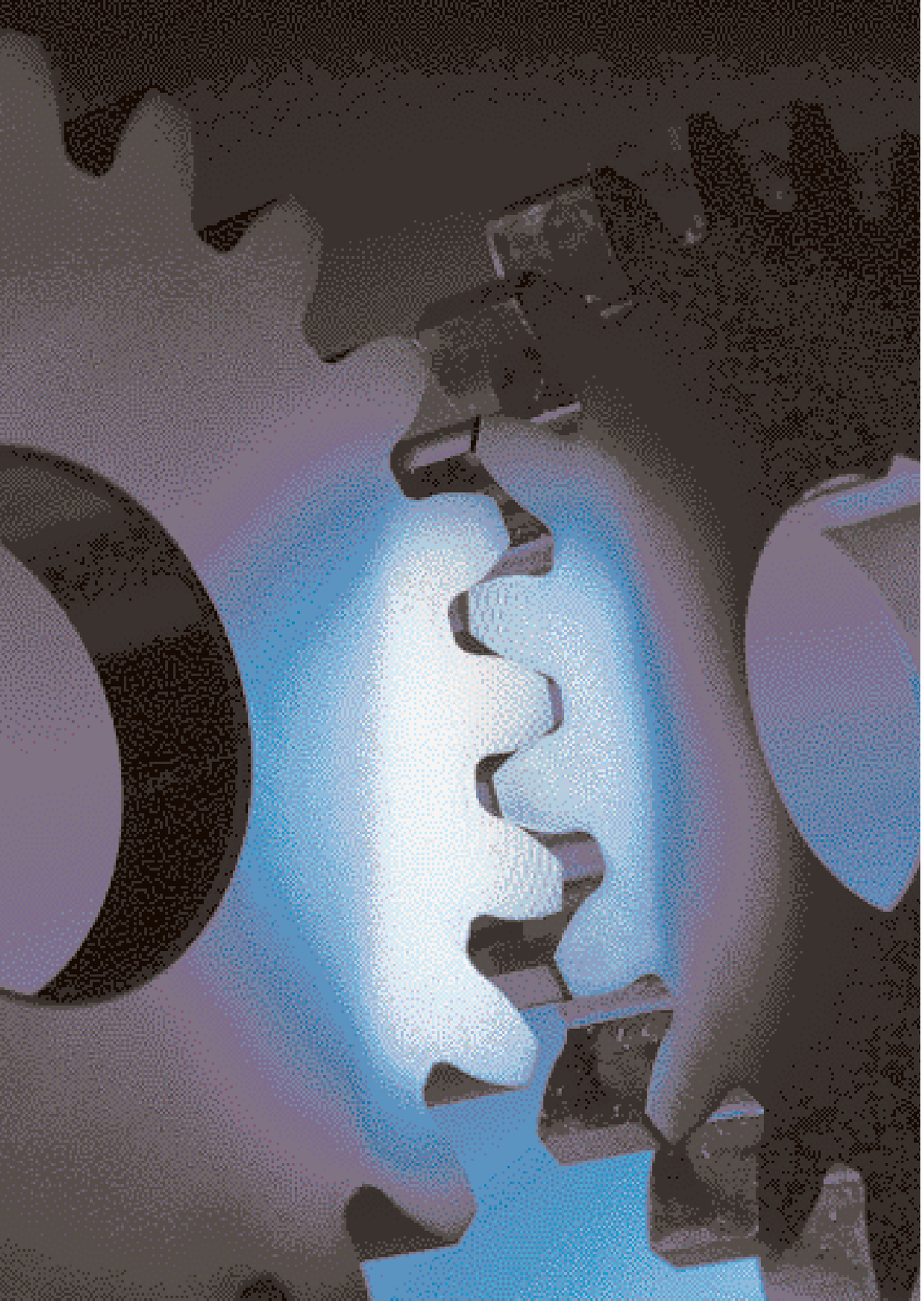

Photo: Scanpix

3 Contents of the strategy

Sustainable development incorporates three interdependent and mutually reinforcing dimensions:

- the economic dimension (economic resources, development and growth)
- the social dimension (social resources, solidarity and poverty reduction) and
- the environmental dimension (natural resources, protecting and exploiting nature sustainably and preventing and combating pollution).

Sustainable development is an ongoing process that involves improving the integration of environmental, economic and social considerations.

In recent years Denmark has been successful in its efforts to integrate environmental considerations into policies and decisions. Over the coming years Denmark will continue to give high priority to making further strides in achieving sustainable development in this manner. The integration of environmental considerations into sector policies will open up opportunities for the promotion of growth, employment and welfare while raising awareness of environmental concerns.

The social dimension is another integral part of Denmark's general vision and objectives for sustainable development and a sustainable society. In the strategy, measures to fight poverty and social inequality are an essential element in Denmark's international efforts and issues such as employment and employee involvement are some of the efforts undertaken in the sectors. Challenges such as employment, public services, taxes and debt are also dealt with separately in the Government's programme for the next ten years: "A Sustainable Future – Denmark 2010" (January 2001). The macroeconomic framework is continuously monitored in the Government's publication, "Economic Overview". Moreover, the Government has issued the publication entitled "A Sustainable Pensions System" (January 2000). The distributional aspects of the socioeconomic development are considered in the annual publication, "Families and Income".

The national strategy for sustainable development describes the objectives and activities required to enable Denmark to contribute to sustainable development. Sustainable development affects all activities in society, and in the strategy it has been necessary to focus on the most important key sectors and policy areas. The strategy focuses on the work to integrate environmental considerations in eight selected sectors. The sectors are agriculture and fisheries (under the heading of "food production"), forestry, industry, trade and services, transport, energy, urban and housing development and tourism.

The strategy also deals with important social challenges such as the threat from man-made climate changes, the correlation between the environment and health, more efficient resource consumption and the protection of biodiversity. The international initiatives, measures and knowledge base and

the population's participation are important to all sectors and areas and are therefore necessary elements.

The strategy covers a period of twenty years. For each area of activity, Denmark presents its long-term objectives and benchmarks towards 2020. Development perspectives and challenges as well as objectives and activities for the first period from 2001 to 2006 are described. The strategy is a combined framework for Denmark's national initiatives for sustainable development.

The visions and objectives of the strategy will be followed up by action plans, programmes and concrete initiatives within the sectors and areas concerned. In its present form, the strategy does not specify expenditure for the individual areas since this serves no purpose in a perspective of twenty years. A decision about expenditure in an area requires the preparation of a concrete decision-making basis to assess the relationship between the advantages and costs of a given initiative. Measures to ensure sustainable development in the form of specific initiatives, action plans, etc. will be included in the ongoing socioeconomic prioritisation.

Indicators for sustainable development enable us to monitor how far we have come in meeting the objectives. The Government will develop indicators that can follow Denmark's progress in fulfilling essential objectives and activities in the strategy. The strategy will be adjusted at least every five years to ensure that a new edition is ready for a UN event five years after the World Summit on Sustainable Development.

CROSS-CUTTING ACTIVITIES

Photo: BAM

4 Climate change

In the long term, the atmospheric content of greenhouse gases must be stabilised at a level sufficiently low to prevent man-made hazardous impacts on the climate. Unavoidable climate change must take place at a pace that allows ecosystems to adapt and ensures that food production is not threatened. At the same time, economic development must be maintained on a sustainable basis.

In an international context, Denmark has a high emission of CO_2 per inhabitant, which gives us a special responsibility. Via the agreement to reduce emissions of six greenhouse gases by 21 per cent between 1990 and 2008-12, Denmark makes a serious contribution to the Kyoto Protocol and thus to the prevention of global climate change. Because of the scale of the problem, there is a great need to further reduce emissions after 2012. The Government's target is therefore to halve CO_2 emissions by 2030.

According to the most recent analyses from the UN Intergovernmental Panel on Climate Change, climate change is considered the greatest global environmental problem and possibly the biggest global challenge of this century. Today, CO_2 concentration in the atmosphere is about 30 per cent higher than before the industrial revolution, and in all likelihood this figure will double within a few decades. During the same period, the global mean temperature has risen by 0.6°C, triggering changes in snow and ice caps, heavy precipitation and other climate conditions, demonstrating that there is a high probability that climate change is already taking place.

In its latest report, the Intergovernmental Panel on Climate Change concluded that we may expect further increases in global temperatures of between 1.5°C and 6°C during the next century. Climate change, a rise in sea levels of between 15 and 95 centimetres, changes in the level of precipitation and, probably, more extreme weather conditions will be the consequences. The greatest negative impacts of climate change are expected in developing countries, not least in the light of threatening floods and reduced scope for food production. In Denmark, climate change may result in warmer winters, increased precipitation and more storms in the long term. This may impact on biodiversity and sectors such as agriculture, forestry and fisheries. Low-level areas may be flooded as a result of the rise in sea levels.

Since 1990, Denmark's national objective to reduce CO_2 emissions by 20 per cent by 2005 compared to 1988 has formed the basis of Danish pol-

icy. The Energy 21 action plan from 1996 strengthened Denmark's position as a frontrunner in the energy field. In other sectors, such as transportation, agriculture, forestry and waste, the strategies and/or action plans adopted also play a key role in the prevention of greenhouse gas emissions.

Under the Kyoto Protocol of 1997, the participants agreed that total greenhouse gas emissions from the developed countries must be cut by at least 5 per cent in 2008-2012 compared to 1990. Against a scenario without the implementation of the Kyoto Protocol, this amounts to a 20-30 per cent reduction. The Kyoto Protocol is the first important step towards implementation of the 1992 UN Framework Convention on Climate Change. However, several issues concerning the instruments of the Kyoto Protocol must be clarified before the agreement can expected to enter into force.

Based on the conclusions of the UN Panel on Climate Change, the EU ministers for the environment recommend stabilisation of greenhouse gas concentrations in the atmosphere at a level slightly under twice that of pre-industrialisation concentrations and that the global temperature increase should not exceed 2°C compared with pre-industrialisation levels. If this recommendation is to be met, by the end of this century the developed countries must most likely reduce their emissions of greenhouse gases to a level corresponding to 10-15 per cent of today's emissions. This calls for considerable cuts in greenhouse gas emissions – between 2 and 2.5 per cent per year.

This presupposes a drastic reduction of resource consumption. Considerable technological progress is needed, as is a change of consumption and production patterns in the developed countries. At the same time, significant restraints in the long term must clearly be implemented in the developing countries, which can expect continued population growth and major economic developments.

Despite such reductions, it is a fact that climate change cannot be averted completely; it can only be lessened. The effects of climate change may also be mitigated through provident adjustment. To achieve sustainable development, research and knowledge are needed, not only on reduction potentials, but also on future climate change and its effects as well as the options for adjustment. This is paramount if we are to live up to national and international challenges, especially in the long term.

Objectives and activities 2001-2006

In 2005, the aim is to cut Danish *CO_2 emissions* from energy consumption by 20 per cent compared to the 1988 level. Pursuant to EU agreements on distribution of EU emission reductions under the Kyoto Protocol, Denmark must reduce total greenhouse gas emissions by 21 per cent in 2008-2012 compared to 1990. In addition, the target is to halve the greenhouse gas emissions of the industrialised countries by 2030. If, in the long term, greenhouse gas concentrations in the atmosphere are to be reduced further, international goals must be set for much bigger reductions after the expiry of the Kyoto Protocol in 2012.

The Government regularly monitors *progress* and whether we are "getting our money's worth of environment". To meet the objectives of the Kyoto Protocol, the Government has taken a number of new initiatives and strengthened existing initiatives in all sectors, for example energy production, transport, agriculture, forestry, industry and households.

In terms of *energy production*, a green electricity market and new CO_2 quotas will result in increased use of renewable energy and natural gas.

In the area of *transport*, the objective is for this sector to reduce its emissions of CO_2 by 7 per cent compared to a business as usual scenario. Innovations in more energy-efficient transport technologies supported by economic instruments, behaviour influences and better physical planning must contribute to achieving this objective.

Agriculture must also contribute considerably to the reduction of climate gases such as methane and nitrous oxide (laughing gas). In the spring of 2001, the Government presented an action plan for ammonia that will contribute to a reduction of climate gas emissions from agriculture. But initiatives such as expanded biogas plants can also contribute to reducing emissions.

With respect to *forestry*, the increase in woodland areas will lead to absorption of CO_2 during the generation of new forests, increasing the scope for biomass use. This is one reason why the Government aims at doubling woodland areas within one tree generation (80 to 100 years).

It is necessary to reduce emissions of heavy *industrial greenhouse gases* such as HFCs, PFCs and SF6. Taxes on these gases have therefore been introduced.

The Danish Energy Savings Act of 2000 provides for strengthened planning, coordination and prioritisation of overall energy savings initiatives.

At *international level*, Denmark is working actively to make the Convention on Climate Change and the Kyoto Protocol efficient instruments in the fight against climate change. Danish development assistance under the developing countries' framework and the Environment, Peace and Stability Fund (MIFRESTA) helps developing countries and countries in Central and Eastern Europe to comply with the Convention on Climate Change, for example in the form of technology transfer and capacity development. These activities are and should be in accordance with the priorities of the countries in question as specified in the Convention.

Environmental assistance may also encourage the use of the flexible mechanisms of the Kyoto Protocol by implementing projects to build up specific knowledge and capacity in developing countries and countries in Central and Eastern Europe. This initiative may enable the partner countries to better evaluate the sustainability of various projects. For example, Denmark participates in a pilot programme on Activities Implemented Jointly in the Baltic countries. But these flexible mechanisms should only be used to the extent that they result in genuine environmental improvements.

Denmark also supports *The Global Environment Facility* (GEF), which since 1991 has donated more than USD 1.2 billion to developing countries and countries in Central and Eastern Europe for climate issues. Denmark also supports the UNEP's Collaboration Centre on Energy and the Environment at the Risø National Laboratory in Denmark.

Denmark regularly reports to the Convention on *Climate Change* regarding the prevention of climate change, expected results of climate change, compliance measures, research and monitoring initiatives and Denmark's activities with regard to technology transfer and capacity building in the developing countries. The third report will be available by November 2001.

We must realise that climate change cannot be averted completely, only lessened. Based on the most recent report of the Panel on Climate Change, the Government will conduct an analysis of *possible climate effects* and draw up potential development scenarios to establish a foundation for the necessary emergency measures. We must therefore also carry out research on the consequences of climate change. Increased focus on knowledge will aid important political decisions.

More renewable energy

From 1988 to 2000, CO_2 emissions (adjusted for climate variations and net electricity exports) fell by 11 per cent. A "double decoupling" has taken place: during a period of considerable economic progress, energy consumption has all but stagnated and CO_2 emissions have been reduced significantly. An important explanation of the decline in CO_2 emissions is that, during the same period, production of renewable energy increased considerably from just under 6 per cent to just under 11 per cent of total gross energy consumption. The aim is for this share to increase to 35 per cent by 2030.

Electricity production from wind turbines quadrupled between 1994 and 2000. The value of wind turbine production now amounts to over DKK 13 billion. The greater part of this production is exported.

Photo: Scanpix

5 Biodiversity

Nature protection and public access to nature

Sustainable development means that we must safeguard nature's scope for development out of consideration for future generations. Important instruments include the protection of species and genetic diversity, the establishment of green networks and the restoration of destroyed ecosystems.

Public awareness must increased for people to understand that certain values associated with natural and man-made landscapes, habitats and the diversity of species and gene pools are unique and irreplaceable. Denmark must reduce its emissions of nutrients and environmentally harmful substances, and utilise nature in a way that allows future generations access to the same natural resources as found today.

Outdoor recreation and nature experiences are important to people's well being and quality of life. Providing greater access to nature, forests and other open landscapes will help insure that the public is supportive of sustainable nature and environmental policies.

Since the 1992 Rio Conference, Denmark has increased its efforts to prevent the decline of nature and to strengthen biodiversity. The biodiversity strategy of 1995 forms the basis of this intensified activity.

Under the Danish Nature Protection Act, vulnerable habitats corresponding to 9 per cent of Denmark's area are protected and 4.5 per cent of this area is preserved. During the last 10 years, more than 14,000 hectares of new natural areas, forests and outdoor recreational areas have been created, and 13,000 hectares of new forests have been established through private afforestation. 194 international nature reserves have been established as part of implementing the EEC directive on the conservation of natural habitats of wild fauna and flora (the Habitats Directive). Since 1994, nature and wildlife areas have been doubled and they now cover 330,000 hectares. These initiatives have curbed the decline of Denmark's natural areas, and the numbers of certain species, such as waterfowl, which Denmark has an international commitment to protect, are increasing.

The quality of nature in agricultural land, the sea and protected areas continues to decline, however. The 1997 Red List of extinct, endangered, vulner-

able and rare plants and animals states that in Denmark, about 30 per cent of species are "acutely endangered and vulnerable". 1,500 species are experiencing such a decline that their continuing existence in this country is threatened. Denmark has also registered a negative development in the case of several ordinary species and natural habitats that are given priority in the EEC Habitats Directive.

Habitats and biodiversity are exposed to harmful sources such as nutrients and other environmentally damaging substances or physical impacts. A major challenge is to ensure that these impacts are considerably reduced. To achieve this aim, all sectors affecting nature – agriculture, forestry, fisheries, households, transport and energy – must meet nature policy objectives and integrate nature considerations into their sectoral activities. Strategies and production methods taking increased account of nature must be developed, particularly in agriculture and fisheries.

To avoid the loss of more species and habitats, we must also restore semi-cultural areas and support a number of species through nature restoration and increased protection in green networks. A growing challenge is the existence of GMOs and the introduction of non native species on land, in lakes, watercourses and the sea.

Furthermore, man-made climate change will have a major impact on the development of flora and fauna in the years to come.

Authentic nature and culture experiences are an important part of welfare in modern society.

To increase awareness of cultural environments, local culture and identity must become more visible. Villages, burial grounds and churches from the Middle Ages are examples of important elements of identity in local and national cultural history. Cultural environments may be the foundation of uniting local communities and tourist needs alike and may also contribute to maintaining and developing viable local communities. The balance between conservation and utilisation must be maintained.

Objectives and activities 2001-2006

The Government will be intensifying its efforts to protect and restore habitats for indigenous animals and plants in order to have large viable populations on land and in freshwater and marine environments. The efforts will include areas where nature is allowed to develop freely with no significant degree of human influence.

The Government has set up a broadly composed committee (the Wilhjelm Committee) to strengthen the scientific basis for prioritising activities aimed at safeguarding biodiversity and protecting nature. This will form the background for a *national action plan to safeguard biodiversity and protect nature* as a follow-up to the Biodiversity Convention.

The action plan will lay the framework for future initiatives to secure, strengthen and target activities to safeguard biodiversity and nature protection. One way of achieving this objective is to ensure that activities in agriculture, forestry, fisheries and other sectors are carried out on a sustainable basis to take nature and biodiversity into account.

Ecosystem restoration results in the return of rare gallinaceous bird

In 1998, an ecosystem restoration project in the Varde river valley and water-meadows of the bay of Ho in Jutland commenced on the initiative of the farming community in the hope that the rare land-rail would return. Today, the call of the land-rail can once again be heard in the Varde river valley.

The project has established a green network of water-meadows in the river valley. Extensive grazing increases the dynamics and variation of the area while safeguarding a high degree of biodiversity. Today, large parts of the river valley are semi-natural areas and form a mosaic of wet, non-fertilised meadows and areas with increased vegetation. The National Forest and Nature Agency and the European Union (LIFE-nature) have contributed over DKK 9.5 million to the ecosystem restoration project, but great efforts have also been made locally to achieve the objective.

The action plan is to explore different ways of further targeting the current activities more precisely, including developing a green network of protected nature areas, continuing the protection of species and genetic diversity, and supporting preventive measures against the introduction of non native species into nature.

Research and nature monitoring are to be expanded to increase knowledge about sustainable use and protection of nature. Authorities and citizens affected must interact to realise the intensified nature protection activities. Education and information about managing biodiversity and nature must be promoted.

Outdoor recreation increases the quality of life, experiences of nature and a greater awareness of natural and cultural environments. The public should have the best opportunities for enjoying nature. The aim is to improve the opportunities of the public for enjoying the countryside and the forests. A broadly composed *access committee* set up by the Minister for Environment and Energy is to formulate a strategy to improve public access. The committee expects to complete its work in 2001.

Further efforts will be made to create a network of paths and to establish new forests near old country towns and major cities. Rangers and nature schools, etc., are to contribute to increasing children's knowledge about nature. Easily accessible information about options for outdoor recreation like the www.naturnet.dk website is to be promoted.

Local, regional and national cultural identity must be strengthened while creating the dynamic between development and history. The Government has therefore set up an intergovernmental committee on cultural heritage. In 2001, Denmark will formulate the basis for a coordinated, general political vision with an action-oriented strategy for the future national policy on cultural heritage.

Photo: BAM

6 Environment and health

Chemicals, environmental pollution, food, physical working and indoor conditions

Denmark should be a country where the impact of pollution from products, food, health and safety, traffic and physical indoor conditions concerning life quality and health is constantly reduced. Damage to animals and plants from pollution should also be limited. The protection level must take account of especially sensitive groups of people – such as children, pregnant women, people who suffer from allergies or from chronic illness – and of particularly vulnerable ecosystems.

Today, the mean life expectancy of Danes is among the lowest in the European Union, and during the last 30 years it has only risen by two years. The primary reason for our low life expectancy is our lifestyle. The Government's Public Health Programme 1999-2008 is to contribute to the reversal of this unfortunate trend and to improve public health. The quality of the environment also affects health. Chemicals, microorganisms and physical environmental factors may be harmful to the health of people and animals and to the environment. The quality of the environment is crucial in a sustainable society.

Objectives and activities 2001-2006

Denmark must reduce harmful impacts on human health and on the environment to the greatest possible extent, no matter what the source. The Government plans to formulate an overall strategy for the connection between environmental factors and health, which is to clarify and prioritise measures against harmful impacts on health from, for example, environmental factors, chemicals in products and goods, food, health and safety, physical indoor conditions and traffic.

6.1. Chemicals

Chemicals used in society must not have any undesirable impact, such as carcinogenic effects, reproduction toxicity, mutagenicity or effects on vulnerable ecosystems. By 2020, no products or goods on the market may contain chemicals or have highly problematic effects on health and the environment.

While chemicals provide many advantages in a modern society, they also entail a number of disadvantages. We do not know enough about the effects on health and the environment of most chemicals today. While needing to expand our knowledge, we must also meet the objective of carrying out fewer animal tests. Computer models and other alternative test methods accommodate both aims.

International, active and future-oriented initiatives in the chemicals field are imperative, because chemicals disperse across borders – primarily through trade in goods but also via the environment. While Denmark must continue to be very active in the European Union and other regional forums, we must also contribute to ensuring that

binding international agreements and conventions address major global environmental problems.

The precautionary principle is an important political instrument, and the Government must endeavour to ensure that this principle contributes to a sufficient and high protection level for approval of pesticides and for the use of other chemicals. Pesticides are approved on the basis of a risk assessment, and they must be prohibited if their use has unacceptable effects on the environment and human health.

Another important instrument to protect people and the environment against the harmful effects of chemicals is the substitution principle. Substitution means that harmful substances, products or processes are substituted by other less harmful substances, products or processes with the same function. Substances with the least impact on the environment and health must be used as substitutes.

We must focus particularly on the protection of specially sensitive and vulnerable groups of people, especially children and pregnant women. Special attention is being paid to endocrine disrupters.

Objectives and activities 2001-2006

Manufacturers, importers and authorities alike must make sure that chemicals, pesticides and biocides can be used in a way that is safe for human health and the environment.

Denmark must take active measures with respect to chemicals by phasing out hazardous chemicals by 2020 that, on the basis of new knowledge, prove to have harmful effects on health and the environment.

In the next few years we must focus on the most hazardous chemicals. Denmark will work for the implementation of the EU chemicals strategy. Increased knowledge about the effects of all chemicals – a set of basic data as a minimum – has top priority. By 2005, basic data must be available for all chemicals on the market for subsequent screening by means of alternative assessment methods, such as computer models. In the European Union, Denmark will work for a ban on substances where no industrial data are available within fixed deadlines.

The use of chemicals must be limited, and whenever relevant any chemicals with highly undesirable effects on human and animal health and on nature must be prohibited. We must avoid unnecessary tests on experimental animals, including repetition of experiments that have already been carried out. At the same time, we must ensure that the tests carried out entail as little suffering as possible to the animals.

Chemicals manufacturers must be responsible for examining all chemicals before they are marketed and to provide comprehensible information on how to handle products without risk to the user or the environment.

Full information on chemicals

Companies can use the List of Undesirable Substances and the Effects List containing information on chemicals that should be limited or discontinued in the long term. Companies can use the lists to decide not to purchase or use problematic substances in their products or to substitute them.

Consumers can contact the Hotline of the Chemicals Division of the Danish Environmental Protection Agency or check its eco-labels for further information. The Hotline of the Chemicals Division of the Danish Environmental Protection Agency has been a valuable source of information on chemicals and the environment since 1998.

It is important to retain a high level of protection in assessments of the effects of *pesticides and biocides on health and the environment*. Biocide consumption must be reduced as much as possible or substituted by less hazardous substances. The Government must endeavour to use the substitution principle in pesticide assessments. With a view to reducing consumption, pesticide taxes have been introduced, and in March 2000, the Government presented its Pesticide Action Plan II to reduce the overconsumption of pesticides in Danish agricultural production. In the long term, the use of pesticides must be phased out to the greatest possible extent. The Government must limit the use of pesticides in private gardens. Pesticides must be prohibited if their use has unacceptable effects on the environment or human health.

Nationally and internationally, the Government must ensure that children, pregnant women and other vulnerable groups of people are not exposed to hazardous amounts of endocrine disrupters. Dioxin is suspected of being an endocrine disrupter. Dioxin emission from known sources must be minimised, and knowledge concerning previously unknown sources must be increased.

6.2. Environmental quality and other environmental factors

The environment must be of high quality in Denmark to avoid the impact of pollution on human health, animals or plants. Contaminated soil must not threaten drinking water or human health. By 2020, there must be no impact of emissions on air, soil or water on human health and the environment. By 2020, pathogenic microorganisms must be reduced to a level that does not pose a threat to human health.

The quality of the Danish environment has improved over the last two decades. However, a number of areas remain where the environment is so polluted that it may affect human health or have negative consequences for nature and animals.

One cause of air pollution is suspended soot particles from diesel vehicles. Recent surveys indicate that suspended soot particles impact on health. The scope of this impact is uncertain. The existing particle level is considered to aggravate conditions, particularly for people with respiratory diseases, and to increase mortality rates. The particle level is considered to have a negative impact on the population's mean life expectancy, but it is uncertain by how much it is reduced. Much can be achieved through cleaner technology, diesel and petrol quality requirements, filters on diesel-driven vehicles and trains and requirements concerning cleaning the smoke from incineration plants. At the same time there is a need for more knowledge about the health impact of the various particle sizes and the population's exposure to suspended soot particles.

Ground-level ozone may cause respiratory problems and damage trees and crops. The yield loss due to ozone is estimated at approximately 10 per cent. The greater part of ozone in the air above Denmark is transported here from the south. Ground-level ozone must be limited by reducing NO_x and VOC emissions in the countries south of Denmark.

Many people are exposed to noise nuisance. Traffic is the most important source of noise with road traffic being the largest contributor. According to recent estimates, more than 500,000 dwellings are exposed to noise from road traffic of more than 55 dB, the recommended limit value for new housing areas. For approximately 145,000 of these, the exposure exceeds 65 dB. The vast majority of dwellings exposed to road traffic noise are in big towns, and more than half are in the greater Copenhagen area. Thanks to the ongoing initiatives of the Danish National Railways Agency, for example setting up sound barriers, the number of dwellings exposed to more than 65 dB from train traffic has fallen to about 7,000. Due to the phasing out of the noisiest planes, the number of dwellings exposed to more than 65 dB from air traffic has dropped to about 1,500. In addition, an estimated 75,000 to 100,000 dwellings are exposed to noise exceeding the recommended limit values from companies and noisy leisure activities, such as shooting ranges and racetracks.

The ozone layer, high up in the atmosphere, must be preserved. It protects the Earth from hazardous ultra-violet radiation from the sun, which in excessive doses increases the risk of skin cancer in humans and impedes plant growth. The greenhouse effect accelerates ozone depletion. In coming years, the thin ozone layer will aggravate the damage.

Industrial waste and air pollution have led to soil contamination – especially in old urban areas.

Lead and tarry compounds in the soil are a health problem in particular to children living or playing in these areas. Other substances cause problems because they spread to the groundwater. Pesticide residues, chlorinated solvents, the MTBE petrol additive and oil and petrol may pose a threat to clean groundwater.

Denmark is one of the few countries in Europe to extract almost all drinking water from groundwater that requires very little treatment at water utility companies. Clean drinking water has always been a high priority as it is a vital resource, and its quality is crucial to human health and to industry. Groundwater and drinking water monitoring shows, however, that in some areas groundwater quality is threatened. In rural areas, groundwater is threatened because of the use of pesticides in agriculture, and nitrogen handling in some parts of Denmark constitutes a major problem. Contaminated soil threatens the groundwater because of the inappropriate handling of chemicals in former times. Pesticide use in urban areas also causes pollution of the groundwater.

Discharge to the aquatic environment of metals and xenobiotic substances may affect animals and plants in the short as well as the long term. Many substances accumulate in the food chains and are thus transferred to humans through the food we catch at sea.

Microorganisms are everywhere. Some are vital, others may be pathogenic. We have knowledge of some microorganisms from, for example, beach water, but the risk may also come from waste, sludge and sewage.

Objectives and activities 2001-2006

The content of *suspended soot particles* in the air must be so low as to have no negative impact on the quality of the life and health of the Danish population or on environmental quality. Denmark must focus on reducing the content of suspended soot particles in the air. First, we must get a precise overview of the extent of the problem in Denmark. At the same time we must increase our knowledge about the effects of various measures and technological solutions as a basis for future regulation. The European Union has established limit values for emission of soot particles from trucks and buses. Denmark must establish similar limit values for new passenger and commercial vehicles.

Denmark must reduce *acidification, eutrophication and ground-level ozone*. Effective implementation of international regulations on the emission of SO_2, NO_x, VOC and NH_3 in Denmark by 2010 has top priority. In the long term, it will be necessary to set new goals and launch new initiatives to ensure that these environmental problems are solved completely.

In 2002, the Government will present a strategy for reduced noise from road traffic. This strategy must ensure that the objective of lowering the number of heavily affected dwellings to 50,000 by 2010 can be achieved. All dwellings exposed to train traffic noise exceeding 65 dB are expected to be offered noise protection by 2010. Noise is an important parameter for environmental approval of heavy polluters. Companies requiring an environmental authorisation often draw up action plans for noise reduction.

Ozone depletion must be halted to reduce the number of skin cancer cases in humans and improve the growing conditions of plants. Denmark must continue its efforts to phase out ozone-depleting substances.

It is important to continue our measures against *soil contamination*. We must make sure that soil contamination in urban areas and contamination that may threaten the current or future supply of drinking water does not give rise to health problems.

Clean drinking water remains a high priority. The ban on pesticides endangering the groundwater must remain in force. As a part of the Pesticide Action Plan II, initiatives have been launched to form the basis of identifying areas that are especially sensitive to pesticide leaching. When this has been realised, pesticide use in these areas will be regulated. Regional and local authorities and water utility companies must now implement the groundwater mapping framework and groundwater protecting measures to secure clean groundwater in the long term. Denmark must continue its efforts to minimise the threat to groundwater posed by the MTBE petrol additive, preferably by permanently phasing out this substance. Groundwater monitoring must continue to evaluate whether the measures taken to protect the groundwater are effective and to track new problems. Standards must be set for the approval of materials used to distribute drinking water.

Finally, the Drinking Water Directive and the Water Framework Directive must be implemented in Danish legislation. The Water Framework Directive implies further protection of the aquatic environment. A new system must be established to define specific environmental objectives for ecological conditions in water districts. Concrete initiatives must be implemented based on the nature of and the human impact on individual water bodies. Finally, a water plan must be drawn up which has regard to planning and monitoring results.

It is important to limit emissions to the *aquatic environment* of metals and xenobiotic substances accumulating in the food chain. By 2020, emissions of environmentally harmful substances must be stopped (the generation objective). Sewage treatment in the open country must be improved. This will also further improve beach water quality. Finally, the risk of known pathogenic microorganisms must be assessed. Pathogenic microorganisms must not be dispersed in the environment to a damaging extent.

6.3. Food

Food must be safe and healthy and of high quality. Food safety must be absolute and the presence of chemical pollutants must be minimised. Denmark must be able to assess risks and effectively control the presence of hazardous substances.

The variety of food has increased and changed over the last decades, inter alia because of trade and food technology developments. There is increased focus on food quality and safety. The environmental effects of food include inadvertent occurrences of hazardous substances. Recent years have witnessed increased focus on pollutants in food, for example dioxins, hazardous metallic compounds, TBT (tributyltin), residuals from packaging and pesticides.

Consumer confidence in food is essential for the sale of products and thus for food production. Residues of pesticides in food products must be minimised. Food must not contain pesticide or pharmaceuticals residues. The authorities must promote consumer confidence in food by ensuring a high degree of transparency about regulations and controls, but producers alone are responsible for the food products.

To safeguard the population against unacceptable residues of environmentally harmful substances and pathogenic microorganisms, the authorities must lay down rules in this field and implement monitoring programmes.

The Dioxin Action Plan of 1999 must provide an overview of the population's dioxin exposure. Subsequently, the need for intervention will be assessed.

For the subject of food safety, reference is made to chapter 9.

Objectives and activities 2001-2006

The effort to achieve an absolutely high level of *food safety* continues. Foodborne illnesses must be combated. The use of additives must be limited as much as possible, and limit values must be established for concentrations of undesirable residuals in food.

Limit values for environmental pollution must be established having regard to the precautionary principle. They must be as low as possible. Limit values must be adapted in parallel with new knowledge. Safety assessments, risk analyses and control of chemical pollutants and chemicals in production must be continued and strengthened.

The Government wishes to give higher priority to EU efforts to establish common limit values for

pesticides as there are still several hundred substances without common limit values. In this connection, the Government will emphasise restrictive regulation of chemical pest control in agricultural production.

The Dioxin Action Plan, including dioxin mapping in the environment, animal feed and food, must continue. Subsequently, we must determine where to intervene to reduce pollution with dioxin and dioxin-related substances.

Food labelling must be improved and misleading information avoided.

6.4. Health and safety

All Danish workplaces should form a safe and healthy basis for creativity, quality and productivity. By 2020, no employee may be exposed to chemical substances, organic solvents, heavy metals or any other hazardous health impacts during work.

The Action Programme for a Clean Working Environment 2005 focuses on intensified preventive health and safety measures. The objective is to provide health and safety conditions to completely avoid or minimise fatal accidents, impacts of carcinogenic chemicals and brain injury due to organic solvents or heavy metals. At the same time, we must avoid injury to children and young people from heavy lifting and monotonous, repetitive work, health injury caused by psycho-social risk factors and diseases or serious nuisances due to poor physical working conditions.

As a part of the implementation of the action programme, an action plan to improve health and safety must be realised to bridge the health gap between various job groups. The action plan provides for special measures for 10 particularly hazardous job groups and has subsequently been followed up by designating another 10 particularly hazardous job groups. The 20 job groups encompass approximately 270,000 employees or 10 per cent of the economically active population.

Measures of individual companies must contribute to creating safe, healthy and developing workplaces. An important element of sustainable development in companies is collaboration between management and employees in the environmental, health and safety fields, which should be strengthened further. Chemical substances are often used in high concentrations in workplaces and may affect the health of employees. Employees therefore run the risk of serious health problems, such as carcinogenic effects, reproduction toxicity, brain damage or development of allergies. The hazardous substances may also develop during the work process.

Objectives and activities 2001-2006
In coming years, health and safety measures must also concentrate on implementing the seven visions of the Action Programme for a Clean Working Environment 2005.

Workplace assessments must identify health and safety impacts, and companies must draw up action plans to minimise impacts.

The use of *chemicals* at workplaces must be minimised. Work-related damage caused by exposure to carcinogenic substances and organic solvents or heavy metals must be avoided by using the least hazardous substances or materials (the substitution principle). Companies must receive clear directions for use from manufacturers. Health and safety conditions must be included at the planning stage. Suppliers must be motivated to develop products that take health and safety into account. Both the employers and the employee's organisations must support initiatives to phase out problematic substances.

6.5. Physical indoor conditions

Physical indoor conditions must not constitute a nuisance to residents. Construction and housing materials should be of a quality that neither emits nor develops hazardous substances.

We spend a great deal of time in our homes. We must therefore focus on good daylight conditions, suitable temperature levels, good air quality and good sound conditions in our buildings. Building products and materials must be healthy and must not emit substances or vapours that may be harmful to health. Possible health effects are headaches, respiratory difficulties and allergies.

In recent years, Denmark has developed a scheme for physical indoor conditions with respect to construction products. Harsh measures have been introduced against problems of mould fungus and increasing numbers of people who are allergic to house dust mites. Requirements concerning physical indoor conditions and ventilation in building regulations have been tightened and information provided on suitable measures against humidity and ventilation in housing.

Objectives and activities 2001-2006
The Acceleration Programme for Ecological Construction must support increased utilisation of healthy building products that may improve physical indoor conditions in housing.

Instruments to document the effects of building products on the environment and physical indoor conditions must be developed.

Photo: BAM

7 Resources and resource efficiency

It is necessary to utilise the resources of nature. They are used as production and consumption input. Resources form the basis of increased welfare. Sustainable development implies that increased welfare takes account of the Earth's ecosystems and the amount of renewable and non-renewable natural resources.

A long-term aim is to increase resource efficiency significantly during the course of one generation. First of all, we must limit the use of natural resources that are particularly scarce or vulnerable or particularly harmful to the environment when exploited. In the long term, we must limit resource consumption to 25 per cent of the present level. In the even longer term, additional increases in resource efficiency may be called for. This should be seen in the light of international discussions of factor 4 and factor 10 as a resource efficiency goal. There is a need for further specification of initiatives concerning the use of resources in the future.

The use of natural resources affects the environment. We must view resource consumption and environmental impact in an international perspective, keeping in mind national and international resource consumption as well as its environmental impact. It is imperative to give high priority to natural resources and to use them prudently. Consumption must increasingly be based on renewable resources and recyclable materials. But renewable resources must be used at a pace that allows for regeneration. The use of non-renewable resources must take into account total volumes and possibilities of replacing the resources with other materials.

Natural resources are utilised for many activities in society. Energy is used in industry and households, for transport and heating. Raw materials are used to manufacture products. Soil is a natural resource on which houses and roads are built and crops and forests grown. Water is also a resource used for people and animals as drinking water, production input or as habitat for fish, animals, plants, etc. The sea also represents a great food resource.

Denmark has already made much progress through targeted initiatives. For example, total Danish energy consumption remained fairly constant during the 1990's despite economic growth.

Many companies have introduced environmental management, cleaner technology and work with cleaner products, thus reducing total resource consumption and environmental impact. Because of measures taken in the chemicals field, more substances harmful to the environment will be removed from waste in the future. Finally, water consumption has dropped considerably over the last decade. But more drastic steps are needed to ensure sustainable use of natural resources.

In Denmark, land is a scarce resource to be used with care. Intensification of agriculture and consideration for the environment and recreational interests have increased competition for land. The most acute needs must therefore be given priority. And raw materials must be extracted in a careful manner to allow subsequent use of the area for other purposes.

Resource consumption in the construction sector is vital to society's total resource consumption and environmental impact. Construction and operation of buildings account for half of Denmark's energy consumption, while consumption of construction materials constitutes the major part of raw materials consumption in Denmark. Construction generates large amounts of waste, but the greater part is recycled. In 1999, the recycling share amounted to 90 per cent.

Total waste amounts in Denmark have risen over the past decade, but developments indicate a stabilisation towards the end of the period mainly due to a reduction of waste from energy production. However, waste amounts from a number of sectors continue to grow, and measures must be taken to reduce them. We must all contribute to minimising waste generation and to increasing recycling, but we must prioritise individual material flows.

Not all materials are equally popular ingredients in waste and, first of all, measures must be targeted at materials containing substances that have the most serious environmental impact.

Unavoidable waste must be recycled to the greatest possible extent to retain resources in the cycle. Denmark has a long tradition of recycling a large part of all waste. In 1999, recycling amounted to 64 per cent of total waste amounts. But we must do even better. New treatment technologies will be needed to ensure the efficient utilisation of resources and the elimination of problems of environmental impact. However, when we decide on the form of treatment, we must balance environmental, energy and resource conditions against economic conditions.

Major Danish company reduces waste anounts despite increase in activities

The company is an international market leader. Environmental management includes mapping and sorting of waste and scrap metal to achieve the greatest possible degree of recycling and reuse. 80 per cent of the company's waste is scrap metal and 20 per cent is other waste. The amount of scrap metal has been cut by reducing production waste to under 1 per cent through "operator self-control" and by utilising steel rolls 10 per cent better in a new advanced machine. The scrap metal is sorted and sold for recycling purposes outside the company.

Other waste includes one third of chemical waste. This share has been reduced considerably, mainly because the company has reduced the number of chemicals used from 1,365 to just under 600 different chemicals. The amounts of chemical waste dropped by 37 per cent from 1997 to 1999, resulting in waste disposal savings of DKK 340,000 per year.

These results were achieved thanks mainly to strong management support and through staff involvement in the environmental work in autonomous production groups.

All the company's production units around the world are ISO 14001 certified, and the European companies are also EMAS registered.

Objectives and activities 2001-2006

Resource consumption must be reduced. Today, Danish environmental policy aims primarily at promoting a balanced use of resources. In the future, measures must focus on finding data and developing methods to assess the overall resource consumption and environmental impact of products and materials, including hidden material flows. In concrete terms this is a question of finding the best combination of instruments, including exploring the possibility of increased taxation on packaging. If we do not succeed in considerably reducing resource consumption, we may have to introduce taxes on raw materials and other materials. Product prices should fully reflect the resource consumption and environmental impact of products.

Product-oriented environmental initiatives are important. Companies are therefore encouraged to develop and market more clean and environment-friendly products and consumers to choose them to a greater extent. We must focus on cleaner products to replace products with greater resource consumption or greater environmental impact. New technology will undoubtedly play an increasingly important role in the development of cleaner products.

It should also be easy and attractive for consumers to *choose green products*. Consumers must have sufficient and relevant information on the impact of products and goods on the environment. But individual citizens must also commit themselves to environment-friendly consumer patterns and lifestyles. Instruments may include eco-labels and energy labels and environmental declarations of contents.

All players must cooperate to prevent waste. In 2001 the Government will present a strategy to *reduce waste generation*. Production, marketing and consumption of environment-friendly and less resource-intensive products and services are key priorities of this strategy.

By recycling waste we save virgin resources. The objective of the Government's waste plan, *Waste 21*, is to recycle 64 per cent of waste amounts by 2004 and to reduce disposable waste amounts to 12 per cent. The plan focuses on quality in waste treatment by utilising waste resources and limiting problems of environmentally harmful substances.

In Denmark, *sustainable use of raw materials* must be achieved by developing new technologies, increased coordination of the extraction of raw materials, and increased knowledge concerning total remaining raw material reserves. Recycling and use of substitution materials for non-renewable raw materials remain key priorities.

Oil and gas production must take maximum account of health, the environment, and flora and fauna. This should be achieved in collaboration with North Sea countries through targeted management of substances discharged to the sea. This applies not only to local discharge to the marine environment, but also to transboundary pollution through the air or via the food chain. In its effort to substitute scarce oil and gas resources, the Government aims at developing renewable energy resources, etc.

Increased competition for the scarce *Danish land resources* makes heavy demands on planning. Various considerations must be combined to minimise conflicts between different uses of the same piece of land. Outside urban areas, diversified land use must be promoted.

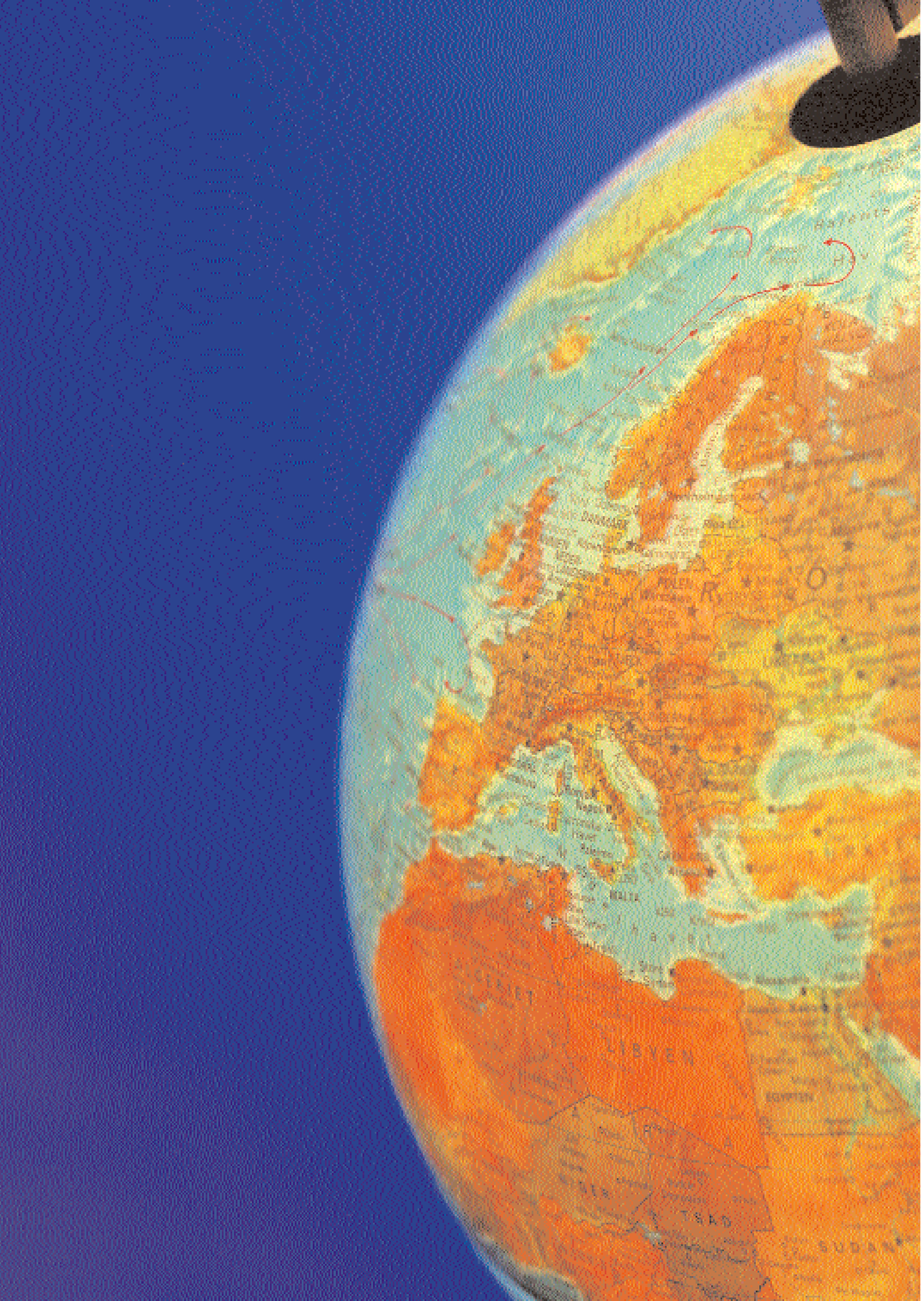

Photo: BAM

8 Denmark's international activities

Denmark's vision for regional and global sustainable development foresees a Europe and a world enjoying economic progress, increased welfare and better environmental protection. It encompasses a world market with free trade based on high environmental and social standards coupled with respect for human rights, democratisation, openness and administrative accountability. Denmark wishes to take the lead by putting words into action. Through both its foreign and environment policy, Denmark will work actively to promote international endeavours. It will expand international assistance as agreed, and cement the interconnections between development, environment and trade policies. Denmark favours a strong global structure aimed at promoting all the elements of global sustainable development, including a structure that furthers international environmental cooperation and control. Denmark will work towards a global deal on sustainable development and global partnership.

Activities aimed at promoting sustainable development nationally are closely linked to the challenges for global sustainable development – and vice versa. Growing trade and international capital flows, conflicts and refugee problems together with the heightened impact on natural resources have made individual countries more dependent on the surrounding world. Consequently, Denmark has a major interest in contributing to sustainable development through national activities, through the EU, the OECD, the UN and the international financial institutions.

We are facing a multiplicity of regional and global problems and challenges. Half the population of the world live at or below the subsistence minimum. One fifth of the world's population live without access to clean water and sanitary appliances, a state of affairs particularly affecting women, children, indigenous peoples and other vulnerable groups. The struggle for scarce natural resources has frequently given rise to violent conflicts which cause severe refugee problems in developing countries. The climate is becoming warmer as a consequence of mankind's activities, primarily posing a threat to poor countries and small island states. Biodiversity is under mounting pressure, and natural resources are often exploited on a non-sustainable basis. The use of hazardous chemicals constitutes a growing threat to human health and animal and plant life. The rich part of the world reinforces these problems through its reluctance to increase aid volumes and open its markets.

Poverty and environmental problems are often interlinked. The poorest people are generally hardest

hit by environmental degradation. Poverty limits the possibilities of using natural resources sustainably and restricts the resources available for investment in environmental protection. Poverty contributes, for instance, to impoverishment of the soil and desertification in Africa. Conversely, unchecked economic growth also leads to intensified use of natural resources and heavier impact on the environment. In all its international activities, Denmark weighs the need for integrating and balancing the economic dimension (poverty-based growth), the social dimension (equal distribution internally in a country, between countries and between generations) and the environmental dimension (environment protection).

In the field of environment policy, through its EU cooperation Denmark has participated actively in improving European environmental protection. In a number of areas, EU environmental control measures have made Europe a world leader in the field of environment, and examples abound to demonstrate how EU regulations have reinforced Denmark's environmental protection. With the adoption of the Amsterdam Treaty, sustainable development became an overall objective for the EU, and it became mandatory to integrate environmental considerations into EU sector policies. EU economic-political guidelines contain a special section on sustainable development. Denmark has – primarily through the EU – advocated binding and effective controls of international environmental problems through regional and global environmental conventions. This applies to the conventions concerning biodiversity, climate and desertification, as well as to the Basel Convention on transboundary movements of hazardous wastes and to conventions on chemicals, for instance the Stockholm Convention on Persistent Organic Pollutants. Denmark has campaigned in favour of coordinating and enforcing the conventions efficiently and of giving the precautionary principle a pivotal role in the regulations.

Denmark is one of the few countries that have led the way to making increased, new (additional) means available to developing countries and countries with economies in transition. Official development assistance has increased to 1 per cent of the gross national product (GNP) in the course of the 1990s. Furthermore, Denmark has set up the Environment, Peace and Stability Fund as a direct response to the 1992 Rio conference. In 2001, this facility is deploying 0.18 per cent of GNP (corresponding to more than DKK 2 billion) for environmental activities in Central and Eastern Europe, developing countries and the Arctic regions. The share will increase to 0.25 per cent of GNP in 2005. Under the Environment, Peace and Stability Fund another 0.18 per cent is used for refugees and conflict prevention.

Environmental assistance is primarily granted bilaterally – from Denmark directly to another country. But Denmark also provides multilateral assistance through the Global Environment Facility (GEF) and the Multilateral Fund under the Montreal protocol aimed at financing the phasing-out of ozone-depleting substances etc. Bilateral environmental assistance under the Environment, Peace and Stability Fund is distributed via separate facilities for Central and Eastern Europe (Dancee), for the Arctic regions (Dancea) and for the poorest developing countries (Danida) and selected developing countries (Danced). In Central and Eastern Europe, environmental assistance is targeted at solving urgent environmental problems and implementing the EU's environmental regulations in the candidate countries. Since the fall of the Berlin Wall, a wide range of concrete environmental projects have been realised that in many ways improve the environment in Denmark's neighbouring areas. In the developing countries, assistance to the poorest countries is focused on alleviating poverty-associated pressure on nature and the environment. In the richer developing countries with higher economic activity, assistance is aimed at helping countries to protect nature and the environment, primarily by strengthening the capacity of the countries themselves to solve the problems and by raising environmental awareness. In the Arctic regions, transboundary pollution is monitored as an indicator of regional and global pollution because the polar area is extremely environmentally fragile. Finally, a range of environmental projects are being implemented in Greenland.

Denmark's official development assistance amounts to an annual 1 per cent of GNP (DKK 12.7 billion in 2001). The overall objective is to reduce poverty so that neither natural nor social resources are over-exploited. Considerations for the environment, women, democratisation, good governance and respect for human rights are integrated into all aspects of the assistance. These objectives have been manifested in the Government's strategy for Danish development policy, Partnership 2000. Denmark has thus designed its development policy to contribute to global sustainable development. As a result, Denmark is awarded top marks in the OECD's periodic review of development assistance.

Denmark contributes with significant support in areas relevant to sustainable development. Specifically support is provided to address the issue of water, helping to secure millions of poor people access to water and working to protect water sources – for example by planting trees and by accumulating capacity for sustainable management. In the area of energy, Denmark supports wind farms and sustainable energy supply in rural districts, where, for example, poor women receive help to plant firewood, providing them with an income while also protecting the environment. In the field of natural resources, Denmark is actively supporting reinforcement of sustainable management to prevent the impoverishment of soil.

Denmark also supports the use of sustainable energy through trust-fund contributions to the World Bank and the Asian Development Bank. Through private sector development programmes involving Danish companies and companies in developing countries, Denmark contributes to promoting environmental improvement in companies. Denmark earmarks significant assistance for building up effective environmental management in a range of countries.

Denmark grants considerable assistance to international organisations, not least the UN system, where all the countries of the world participate on an equal footing. In this context, Denmark has supported rationalisation and streamlining in the UN to improve the distribution of work between the organisations and efforts to prevent overlapping. In the field of the environment, Denmark has worked actively to reinforce the Global Environment Facility financially and organisationally. Similarly, Denmark will continue its high financial and organisational assistance to the UN Environment Programme, UNEP. Denmark is also striving to strengthen the UN Commission on Sustainable Development, CSD.

The Global Environment Facility

The Rio Conference on Environment and Development in 1992 succeeded in establishing the Global Environment Facility (GEF). GEF is the global financing mechanism particularly geared towards helping developing countries and Central and Eastern Europe to promote the global environment. GEF supports:

- capacity building – to provide greater capacity for implementing international environment agreements and contribute to meeting the global objectives in the agreements,
- projects – by financing the extra costs necessary to ensure that national projects also advance global environment objectives by, for instance, considering the preservation of an especially vulnerable ecosystem or by utilising more climate-friendly but more costly technology for power production.

Since its launch, GEF has channelled more than USD 4 billion in financing towards protecting the global environment and attaining global sustainable development in projects totalling more than USD 7 billion. GEF resources must increase in the coming years to help solve the significant environmental problems facing the world.

Objectives and activities 2001-2006

Denmark supports the overall objective of global sustainable development by:

- ensuring decoupling, i.e. severing the link between economic growth and depletion of the natural basis,
- integrating environmental considerations into policies and decisions,
- ensuring continuous progress in the global environmental agenda,
- promoting economic cooperation and partnership for development, including reducing global

poverty and regulating trade and investments,
- contributing to international peace and stability and working to promote democracy and human rights,
- working towards continuous development and democratisation of international cooperation with the emphasis on openness and enhanced participation of the weakest groups.

In the *EU,* Denmark will continue its efforts to foster integration of environmental considerations into all policy areas with a view to achieving sustainable development. Denmark will strive to ensure that the EU heads of state and government assess the outcome of this work regularly.

In connection with the European Council Summit in Gothenburg in June 2001, the heads of state and government adopted a long-term *strategy for sustainable development*, setting up specific objectives for health and the environment. The strategy recommends that the EU spring summits under the Lisbon process address environmental sustainable development on a par with social and economic sustainable development. The strategy primarily deals with policies within the EU. However, it is to be followed by a second phase dealing with the EU's external relations. The strategy will be closely linked with the objectives contained in the EU's Sixth Environment Action Programme, which will be discussed in parallel to the overall strategy for sustainable development. The EU's Sixth Environment Action Programme sets the framework for EU environment policy and for the integration of environmental considerations into all policy areas for the next ten years. Denmark is striving to make environmental teaching about the environment and the development of greater environmental awareness – not least among the young – an aspect of EU work on sustainable development.

The EU will remain a pivot for Denmark's international environmental activities. Denmark seeks to bolster EU environmental control, one reason being that only a unified EU can achieve satisfactory results in negotiations with the other regions of the world. Therefore, EU cooperation will remain an integral part of Denmark's regional and global activities. *The Danish EU presidency* in the autumn of 2002 will offer Denmark special opportunities for setting high-priority goals on the agenda – not only within the EU but also in the broader international context in which the EU plays a part.

An important goal for Denmark is for *applicant countries* to be admitted to the EU without long transition periods. In addition to enabling considerable progress in health and the environment in the applicant countries, speedy and full accession will pave the way for economic progress and political stability in the region. By lifting the applicant countries to the environmental level of the current EU member states, we will also consolidate the EU in international environmental negotiations.

Energy policy in Malaysia

Malaysia's economic development has caused its energy consumption to soar during the last 10-15 years. As an aspect of its new economic five-year plan, Malaysia has therefore adjusted its energy policy to comprise sustainable energy and promote efficient utilisation of energy.

The new energy policy was in part developed through cooperation on environmental matters with Denmark. The cooperation encompasses the development of a strategy for promotion of use of renewable energy, primarily from the large volumes of biomass available in Malaysia, and a strategy for efficient use of energy. Finally, Denmark rendered assisted in implementing the new energy policy by providing information and developing the capacity of public institutions.

Denmark has worked actively for sustainable development and the integration of environmental considerations in OECD work. In May 2001, Denmark chaired an OECD summit on sustainable development, where ministers for the environment, economy and finance all participated. At the meeting, the OECD countries adopted a strategy for sustainable development which establishes a framework for integration of economic, social and environmental objectives and for decoupling economic development from environmental impact. On Denmark's initiative, the outcome of the meeting was that the OECD will develop sustainable development indicators to measure progress, and the indicators will be incorporated in the OECD's review of member countries. Denmark will work actively to ensure that the OECD's work on sustainable development is followed up.

Through its development cooperation and long-term binding partnerships with selected developing countries, Denmark helps reduce poverty in the world. The partnerships are aimed at enhancing the possibilities of the developing countries of creating economically, socially and environmentally sustainable development processes that favour the poor. *Development assistance* of 1 per cent of GNP also aids the environmental dimension by integrating environmental considerations into all aspects of development activities. Denmark supports the efforts of developing countries to consider the environment in their development processes by building up capacity among the authorities, among local associations, in civil society and in the private sector. The activities must take into account the situation of developing countries, their needs and priorities, their abilities and capacity and their economic and social development.

In the *multilateral* context, Denmark will also continue calling on international associations to integrate environmental considerations into their development work. Finally, Denmark will coordinate and ensure efficient utilisation of the possible interaction between bilateral and multilateral activities and between the assistance granted under Denmark's official development assistance and the environmental assistance under the Environment, Peace and Stability Fund. This fund for environmental assistance to developing countries will increase in the coming years, and in 2005 will account for 0.25 per cent of GNP. The assistance is explicitly targeted at ensuring environmentally sustainable exploitation of natural resources and nature preservation, at preventing and limiting air and water pollution and soil contamination and at promoting sustainable energy use. Denmark shares an interest with the recipient countries in limiting global environmental problems and in supporting developing countries in their efforts to achieve greater wealth and welfare while also protecting the environment.

Denmark has formulated a new strategy which will form the basis for implementing environmental assistance to Central and *Eastern Europe* in 2001-2006. The activities are aimed at solving a range of grave environmental problems facing the Central and Eastern European countries – not least regional and global environmental impact and the threat from unsafe nuclear power plants. Harmonisation of the Central and Eastern European applicant countries' environment regulations and implementation of regulations that reach the EU level will constitute the chief task in the years ahead.

Denmark's environmental assistance to the *Arctic region* will allow us to continue monitoring the environmental impact on the area as documentation of developments in regional and global environmental impact. In addition, Denmark will implement a range of concrete solutions to unresolved problems in Greenland.

In connection with both Denmark's official development assistance and the Environment, Peace and Stability Fund, attention will focus on a range of areas that promote sustainable development. One such area is the introduction of *cleaner technology* in power production. Another is agricultural technology that improves the yield of agricultural land and reduces the utilisation of pesticides and inappropriate fertilisers, thus also reducing the need for rural land and protecting the biodiversity of vulnerable ecosystems. The assistance will also go towards bolstering activities aimed at persuading recipient countries to comply with international environmental agreements.

Denmark will continue working actively to ensure that regional and *global environment conventions* call for increasingly effective control of a range of international environmental problems. Denmark will speak in favour of employing effective mechanisms for negotiating, enforcing and financing international environmental agreements, so that developing and Central and Eastern European countries are in a better position to comply with the

agreements. The flexible mechanisms under the Kyoto Protocol form an essential part of the efforts targeted at ensuring that the goals for sustainable development are achieved more efficiently. A major challenge lies ahead in translating the Kyoto Protocol into effective provisions and ensuring its ratification and entry into force internationally. Another Danish key issue calls for steering the international process towards sustainable production and use of chemicals by adopting a new initiative on mercury and other heavy metals.

In the upcoming *WTO negotiations* we should make sure that trade assumes a full and efficient role in fostering sustainable development. The negotiations should make certain that developing countries – especially the least developed countries – will be able to take full advantage of the liberalisation of trade, and that international trade policy and international environment policy mutually support each other. And we must be sure to include the social dimension of sustainable development with a view to avoiding the possibly negative effects of globalisation.

Environmental considerations should be given higher priority by clarifying the interrelations between the *WTO regulations* and trade regulations in international environment agreements that the WTO must subsequently respect. In addition, the WTO should in its regulations incorporate and recognise internationally agreed environmental principles, including the precautionary principle, as the basis of trade-policy measures. Another requirement is for steps benefiting both the environment and developing countries to respect access by individual industrialised countries to establishing efficient environmental policies, including laying down their own environmental standards.

We should improve access to *the markets of the industrialised countries* for products, where the developing countries are especially competitive. We should grant free access to all products from the least developed countries. The EU decision from February 2001 on granting duty- and quota-free access to EU markets for all products, with the exception of weapons and ammunition, from the least developed countries represents a significant step in the right direction.

Special allowance should be made for trade-related problems shared by peoples/populations that depend on the sustainable exploitation of marine or other natural resources.

The World Summit on Sustainable Development in South Africa 2002 offers another opportunity for setting sustainability high on the international political agenda. Denmark will play a central role and hold a major responsibility in relation to the World Summit which is to be held in September 2002 during the Danish EU presidency.

The Government is striving to ensure that the World Summit results in a *global deal* on sustainable development and a global partnership. The agreement should be founded on joint, but differentiated responsibility and must:

- contain a specific acknowledgement by the rich part of the world in the form of *decoupling* economic growth from environmental impact on the one hand and heightened resource consumption on the other – not least in the areas of energy, waste, use of chemicals, and biodiversity,
- accommodate the need of developing countries for *growth and poverty reduction*, uphold objectives on development assistance, increase market access for the products of the poorest countries in particular, include debt relief, and stimulate investments in and the transfer of sustainable technology,
- lead to a strengthening of the *global organisation* of sustainable development and of the population's access to information and participation in environmental matters,
- persuade all countries to implement international *environmental agreements* and ensure that *trade policy* under the WTO involves and respects considerations concerning the environment, labour rights and sustainable development.

Denmark will also work actively to involve *civil society* and business in the preparations for the World Summit, by working closely with NGOs and trade and industry in Denmark, and by supporting NGO involvement in developing countries. The Summit should preferably bring about the launch of initiatives to strengthen public access to environmental information and participation.

SECTORS

Photo: Scanpix

9 Food production

Food safety, agriculture and fisheries

Denmark's objective for food production is to ensure that the food produced and sold to consumers are healthy and of high quality and that the level of information on food is high. We must promote production methods that preserve the resource basis of the agricultural and fisheries sectors and ensure environmental protection, nature, animal welfare and good working conditions. Simultaneously, cost-effective production and marketing should be promoted in the food-producing sectors.

Denmark's food production is characterised by concentration and mass production. These developments have greatly improved efficiency, bringing prices down to levels that have cut food's economic share of total private consumption over the last fifty years from about 35 per cent to about 10 per cent. Simultaneously, Denmark does significant volumes of trade with other nations. Imports are on the rise while Denmark is – per capita – the largest net exporter of food in the world. Food production is central to the Danish economy in relation to jobs and export earnings.

Healthy food and a conscious nutrition policy are essential to the life quality and health of the population. However, healthy food and sustainable production hinge upon the primary producers meeting certain requirements. This is the only viable method for avoiding food that contain salmonella, dioxin or pesticide residue. Such requirements will also help to limit the negative impact of food production on the environment and nature, including the leaching of pesticides and nutrients from agriculture to groundwater and unintended by-products or discards from the fisheries sector.

Finally, international conditions are crucial for food production. There are countless examples of the fact that problems related to the environment and food safety do not recognise national borders. BSE and dioxin are the most recent examples. International commitment is needed if a solution is to be found. The EU controls many aspects of production by harmonising regulation, and environmental-policy goals that are set up within the EU and globally. In the EU, the entry of new Central and Eastern European countries will influence the agricultural and fisheries policies of coming years and necessitate further reforms. At the global level, a number of countries will continue to exert pressure in the WTO for the global liberalisation of trade in foods.

Objectives and activities 2001-2006

Sustainable food production depends on a significant commitment from the central Government. The Government is striving to ensure healthy, high-quality foods. As part of this endeavour, the Government presented its *Food-policy Statement II* in early 2001. The policy stated that primary sectors should promote environment-friendly pro-

duction by continuously updating established targets. The guiding principle must be not to allow impacts to exceed the critical tolerance level of nature and the environment.

In addition, the Government has *reorganised food research* to ensure that it is better coordinated and thus strengthened. Research activities should be more closely guided by the basic assumption that organic farming, sustainability and food safety are central elements of a sustainable society.

9.1. Food safety

Consumers have a right to safe foods. It is unacceptable that food can pose a health hazard. In situations where science finds cause for suspicion, but where a scientific basis for validating or invalidating that suspicion is insufficient, the Government considers it important to base assessments on safety and risks related to foods on the precautionary principle.

The continuing problems of food safety cast a shadow on an entire production method that has achieved incredible production figures and where significant public efforts are devoted to ensuring safe food. Still, we must realise that new problems of varying magnitude are bound to arise in a range of areas. The actual risks aside, these problems diminish trust in the healthiness of food. Finally, nutrition policy is difficult to translate into concrete action. In many cases, children, older people and people with illnesses fail to obtain a sufficiently nutritious diet.

The establishment of a food policy poses a range of dilemmas that the Danish public needs to consider before the Government can establish a policy. The requirement concerning maximum food safety may compromise food quality; for example, milk pasteurisation can degrade the quality of certain speciality cheeses. While heightening food safety, preservatives may impair food quality. Additionally, maximum food safety may jeopardise animal welfare. Free-range animals are more susceptible to being infected, for example with campylobacter, than animals living in isolated and completely controlled environments. A third dilemma lies in the desire for natural foods versus the desire for foods with special characteristics achieved, for instance, through the application of gene technology.

The Government recognises the necessity for a debate on food policy. This is the only way of making politically lasting decisions that benefit the population and the food-producing sectors.

Objectives and activities 2001-2006

A crucial objective is to achieve an *unconditionally high level of food safety* by continuing the fight against food-borne diseases. Denmark needs very efficient controls to guard against chemical pollution and undesirable residues, and food manufacturers must assume unequivocal responsibility for the safety of their food products.

In the EU, Denmark will advocate that the control of pesticide residue in food be based on *the precautionary principle*, so that any doubts about environmental and health risks will yield to the consumers' advantage. The Government is advocating a ban on all pesticide residues, also in imported products, unless the residues have passed a health assessment under the EU pesticide program.

The Government's aim is to reduce the use of *additives* as much as possible. In the EU, the Government is recommending that additives be allowed only if they pose no health hazard, if they do not mislead consumers and if additives constitute a technological need.

Furthermore, Denmark is still working to amend EU regulations on the additives nitrites, nitrates and sulphites. This effort focuses on Denmark's case at the Court of Justice of the European Communities against the EU Commission and on the negotiations on an amendment to the directive on food additives other than colorants and sweeteners.

Denmark must launch a conscious *consumer policy* for the food industry through the implementation of clear regulations, targeted control, and openness and transparency in relation to regulations and control. To achieve this goal, the Government has amended the Food Act to pave the way for a more proactive and consumer-targeted policy of publication. All results from control activities must be made available to consumers in a comprehensive and accessible form.

In addition, the conscious consumer policy for the food industry should comprise improved labeling regulations, protection against deception and better general information.

Efficient activities in the *nutrition area* are the goal for improving health and life-quality. One means is to inform the public about health nutrition and exercise habits with the focus on children and young people – in families, day-care institutions, schools and other institutions – while also giving higher priority to meals for the elderly and the ill. The activities must be tailored to the needs of the individual. In the spring of 2001, the Government launched action plans for "Better food for children", "Better food for the elderly" and "Better food for the ill". Through these initiatives, the Government highlights the importance of children getting healthy and nutritious food in day-care institutions and schools, the elderly enjoying nutricious food and meals and the ill getting the nutrition they need to aid their recovery. To strengthen the nutrition area, a cross-ministerial nutrition-policy coordination group will also be set up, charged with coordinating national activities. This should also ensure the optimal utilisation of national resources.

An effort will be made to procure *food products with special qualities* through continuous development of organic production, activities in Måltidets Hus, and a renewal of the quality-labelling scheme. Activities will be intensified to remove barriers to organic production and marketing, including export, and the Government wishes to make the quality-labelling scheme more consumer-oriented while also enhancing its prestige among the general public. The quality of meals is to play a significant role, and the scheme will be extended to comprise several different product types, including raw materials and processed products.

The animal feed area is to be controlled more efficiently, and openness concerning the content of feed mixtures must be a requirement. The Government will advocate stricter EU regulations on animal feed control and requirements for labelling of animal feed containing transgenetic organisms.

The position of the food sector must be consolidated by further *innovation, research, dissemination of knowledge, product development and the ability of companies to adjust*. Denmark must provide optimal opportunities for applying research results in the area.

In the spring of 2001, the *Danish Innovation Act* for the food sector came into force. The Act prioritises a range of specific areas that have gained greater importance in society in recent years. Safeguarding the environment and the resource base will join food safety, documentation, organic farming and animal welfare as significant key fields of action. One objective of the act is to subsidise and thus promote enterprising projects in the areas mentioned. Thus, the act will constitute a major tool in efforts targeted at ensuring environmental sustainability and competitive food production.

In an international context, Denmark will safeguard its interests by upholding the requirements for a high level of *food safety, environmental protection and animal welfare* in the EU, the WTO and other influential forums. At the same time, Denmark must support the demand for liberalisation of trade in food products; i.e. the removal of trade barriers coupled with the phasing out and removal of subsidies distorting competition.

9.2. Agriculture

Agricultural production must be conducted in a way that ensures sustainability, secure clean water (groundwater, surface water and seawater), clean soil and clean air. At the same time terrestrial and marine biodiversity must be ensured. Livestock density must be balanced in relation to nature and the environment. Finally, agricultural plant- and animal genetic resources must be preserved. Future development should also safeguard viable rural districts.

Since the 1992 Rio conference, the Government has implemented a range of measures to ensure that agricultural production takes nature and the environment into consideration. Some of the benchmarks in these activities were detailed in the 1995 ten-point program for clean water, Action Plans I and II for organic farming from 1995 and 1999, the Aquatic Environment Plan II from 1998 and the Pesticide Action Plan II from 2000. The objectives of the 1986 Pesticide Action Plan I was to halve the total use of pesticides and to lead towards the use of less hazardous substances.

Since 1994, more than 200 pesticides hazardous to health, the environment or groundwater have been prohibited or their use has become subject to severe restrictions. In the future, pesticides threatening groundwater will be completely prohibited. In 1999, the Danish Bichel Committee presented economic analyses showing that the use of pesticides can be lowered by 30-40 per cent without significant costs to the agricultural sector. The cost of reducing pesticide use by 80 per cent and a complete ban were also analysed. Corresponding analyses are currently being conducted for the horticultural industry.

The Aquatic 1998 Environment Plan II aims to ensure the original objectives of the first aquatic environment plan from 1987, i.e. to reduce nitrogen emissions from agriculture and horticulture by 100,000 tons of nitrogen annually until 2003. After the mid-term evaluation, adjustments were made to the plan, to ensure that the objectives could be met. In meeting the objectives, Denmark will also fulfil the EU Nitrate Directive, due to be implemented no later than 2003. The tools include a detailed regulation of agricultural fertiliser handling coupled with increased afforestation, the use of environment-friendly production methods and the reestablishment of wetlands, which serve a dual purpose: to improve nature and limit nitrogen leaching.

About 66 per cent of the Danish territory is used for agriculture, and despite the efforts mentioned, agricultural production still has a negative impact on nature and the environment. Agricultural areas are important to the population because they carry cultural-historical values and are a significant source of enjoyment of landscape and nature.

To some extent, the agricultural efficiency improvements have come about through increasing use of pesticides and nutrients. The scale and intensity of farming leave little room for variation in animal and plant life, also affecting flora and fauna in streams, lakes and small biotopes. Pesticides and nutrients leach to the groundwater, and nitrogen and pesticides seep into the aquatic environment and natural areas. Thus, the scope of environmental, natural and health effects need further study and research.

Structural developments and concentration of production demonstrate how specialisation and scale economies have enhanced efficiency. In 1970 Denmark had about 140,000 farms, while in 1999 the figure was only 55,000. About 90 per cent of agricultural production come from approximately 25,000 full-time farms.

Sustainable agricultural production poses a range of dilemmas such as intensive production. The environment, biodiversity, health and safety, animal welfare, landscape values and local production all require consideration. These concerns may well be conflicting.

Objectives and activities 2001-2006

In the view of the Government, it is imperative for *continued economic growth to occur without a corresponding growth in environmental impact and resource consumption*. Growth in the agricultural sector should not happen at the expense of nature and the environment. Thus, focus on products of high value and quality that are manufactured on a sustainable basis must be heightened in future.

The Government believes that we need to *realign agricultural production with sustainable production* based on food safety, animal welfare and environmental considerations and capable of restoring consumer confidence. This is why the Government is launching a Food-policy Forum in charge of introducing proposals for the changes required ensuring an improved, more holistic and sustainable food policy. The Food-policy Forum will be asked to analyse and chart central development trends, national and international alike. The Forum will evaluate all relevant factors impacting on the long-term development of a sustainable food and agricultural policy reflecting future consumers' needs and social priorities in relation to the environment, the economy and welfare.

Organic thinking must be the springboard for activities in all relevant policy areas and *organic farming* should be promoted. In the spring of 2001, the Government organised the conference on "Organic Food and Farming: Towards Partnership and Action in Europe". At the conference, a large number of European governments, NGOs and representatives from trade and industry voiced their support for the Danish initiative and documented the need for action at the European level in the field of organic production. The conference resulted in the Copenhagen Declaration (see box) in which several European countries and associations give the lead for a European organic action plan. Denmark will strive to promote organic thinking in the EU.

The Copenhagen Declaration

The Declaration sets the following priorities for a European action plan for organic food and farming:

- The action plan must present a consensus-oriented and market-based strategy to promote organic food and farming in Europe.
- The strategy should cover all aspects related to the development of organic food and farming, i.e. environmental protection, animal welfare, food safety, food quality, etc.
- The strategy is to be formulated on the basis of an analysis of barriers to and potential for further growth in production, processing, trade and consumption of organic products in Europe.
- The action plan is to analyse the relationship between organic production in Europe and the EU's Common Agricultural Policy, the WTO and the Codex Alimentarius.

The action plan is to be drawn up in the course of two years and all stakeholders in Europe, including the European Commission, national governments, consumers, farmers, producers, representatives of the retail sector, NGOs and researchers are invited to participate in the work.

The Government will focus on *the polluter-pays principle*. For this purpose, economic methods should be developed so the agricultural sector reduces its environmental impact without distorting the national economy. A long-term objective is that the impact of products on the environment and nature is to be reflected in their price.

The Government will continue its efforts to achieve sustainable production through the following specific objectives and activities:

Agricultural loss of *nitrate, phosphorus and ammonia* must be brought down to a level that represents no nuisance to humans, that safeguards the aquatic environment and vulnerable types of nature and that promotes a rich animal and plant life. Aquatic Environment Plan II and the subsequent follow-up to the plan are expected to reduce agricultural nitrogen leaching by 100,000 tons before the end of 2003. Focus areas are divided into area-related activity areas, improved feed utilisation and fertiliser-related activity areas. The plan underwent a mid-term evaluation in December 2000, and in the spring of 2001 the political parties to the plan agreed on a follow-up to Aquatic Environment Plan II.

In preparation for the forthcoming Aquatic Environment Plan III and on the basis of continued efforts to limit agricultural environmental impact, Denmark will launch comprehensive fact-finding activities which should focus not only on the nitrogen impact but also on phosphorous impacts on nature and the environment. As a starting point, impacts should never exceed the level critical to nature and the environment. The fact-finding project should form the basis for establishing environmental objectives for agriculture after 2003, when Aquatic Environment Plan II expires.

Airborne agricultural emission of ammonia must be reduced. The Government presented an action plan in the spring of 2001 targeted at reducing agricultural ammonia evaporation by 33 per cent over ten years.

The aquatic environment will be the key issue when the EU water policy framework directive is due to be implemented in Danish legislation no later than December 2003. The framework directive is discussed in chapter 6, Environment and Health.

Agricultural discharge of *greenhouse gases* must be reduced. The work is an aspect of the follow-up on the Government's climate strategy, Klima 2012 [Climate 2012].

The use of *pesticides* exceeds the levels necessary to ensure profitable cultivation, and in the coming years the Government wishes to stop their over-use. Pesticide Action Plan II calls for the application frequency on fields to be below 2 before the end of 2002. After 2002, a new objective will be established to reduce the application frequency even further. Denmark's long-term goal is to develop cultivation strategies that reduce the agricultural sector's dependency on pesticides enabling them to be phased out to the widest extent possible. Internationally, the Government also wishes to focus on over-use of pesticides, and pesticides will further undergo restrictive assessments, both nationally and internationally.

Agricultural pressure on the environment and nature varies from area to area as a consequence of the different types of agricultural production and the varying natural basis. In the coming years, *livestock farming* must be evaluated locally and regionally in the context of the sensitivity of nature and the environment.

Agriculture as a manager of nature. Nature must be protected and *biodiversity* ensured. Vulnerable types of nature and nature in agricultural land must be protected through the preservation, reestablishment and strengthening of small biotopes such as water holes and hedgerows. Dispersion corridors in the open country must also be safeguarded, since they improve the life conditions of wild animals and plants. Agricultural impacts on nature play a vital role in this context. The Government will draw up a national action plan for biodiversity and nature protection. Reference is made to chapter 5, Biodiversity.

Agricultural *genetic resources* are in jeopardy. Modern agriculture has rendered a relatively small number of breeds and species dominant in each of the individual livestock groups and plant types. The Government will expand the existing livestock gene bank and draw up a national strategy plan for agricultural plant-genetic resources.

The preconditions for a *varied, social, economic and differentiated life* in rural districts must be ensured. The Government will strive to adapt the EU subsidy schemes to a more holistic approach, so that support comes to depend on agriculture being conducted on a sustainable basis, promoting nature and environment considerations, health and safety, the cultural environment, animal welfare, regional development and rural employment. Subsidies not supporting these objectives must be phased out.

Denmark will work actively to change the *EU Common Agricultural Policy* in the forthcoming evaluations in 2003 and 2006. Direct subsidies must be conditional on efforts targeted at nature and the environment. In addition, the budgets for the Common Agricultural Policy should increasingly reflect the new Danish priorities with a view to creating sustainable development of rural districts while also creating improvements in food safety, animal welfare, nature and the environment.

The continuing development of *green accounts and nature plans* must strengthen *agricultural management*, with a view to focusing on the individual farmer's potential for lowering his total impact on the environment and nature while also increasing attention on preserving and restoring nature in agricultural land.

The use of gene technology involves risks but also opportunities. *Genetically modified organisms* (GMOs) should be assessed on the basis of concrete environmental, health and agricultural facts governed by the precautionary principle in all respects. Further, the assessment must involve ethical aspects. Consumers must be informed when gene technology is used in production, if they are to have a real choice.

The above mentioned focus areas, concerning the requirements for sustainable agricultural production are part of the Government's objective, both nationally and at EU level.

9.3. Fisheries

The fisheries sector depends on fish populations remaining a renewable natural resource. Sustainable fisheries that safeguards marine fish populations and ecosystems will also contribute to the sector's future development. A high level of knowledge about fisheries and other pressures on marine resources is crucial to ensure sustainable management of fisheries and to be able to gain sufficient and healthy food from the ocean.

Fish populations, their access to fishermen, and other environmental impacts on the marine ecosystem are essentially transboundary. Most of the Danish fisheries sector and its access to fish populations depend not only on Danish efforts for sustainable exploitation of living marine resources, but also on those of other countries. Consequently, an efficient policy should be based on targeted international cooperation and agreements.

Based on, inter alia, the 1992 Rio conference, a significant element of the Government's policy has been to maintain and develop the environmental profile of the EU's own fisheries policy as well in relations to other countries and international associations. An improved basis for the annual EU decisions on the total allowable catches (TAC) remains a key aspect of these activities. The advice of marine biologists plays a crucial role, and the precautionary principle governs the guidance which has been extended to comprise all the stocks essential to fisheries.

A range of international agreements, including the conclusion of the North Sea ministers' interministerial meeting on fisheries and the environment (the Bergen Declaration 1997), conclude, that activities must be targeted, nationally and in the EU common fisheries policy, to increase the integration between fisheries and the environment by applying an ecosystem approach including, for instance, the development of a multi-species approach as the first step. Additionally, the regulation of fisheries must to a greater extent be governed by the precautionary principle as defined by the International Council for the Exploration of the Sea in 1998. The EU Council of Ministers first applied the principle in 1999 in establishing the quotas for a number of stocks. The European Commission confirmed the importance of the measures in the Green Paper on the Common Fisheries Policy after 2002, and this was endorsed when the Council of Ministers integrated environmental considerations and sustainable development into the common fisheries policy. Both aspects will enter into the revision of the common fishing policy in 2002.

As part of the national implementation of fisheries policy, several initiatives aimed at fisheries activities have been launched or expanded. To lower the pressure on fisheries, measures have been implemented to limit where and when fisheries can be performed and with which types of tools and engine power. Finally, the total capacity of the Danish fisheries fleet has been reduced significantly, which has made fisheries more profitable for the remaining fishermen in the sector.

Some of the main challenges we face are the very heavy fisheries pressure to which many economically important fish populations are constantly subjected and the over fisheries of several of the populations central to Denmark's fisheries sector. This is why fisheries activities should be limited as soon as possible and adjusted to the volume that the fish populations can sustain. The scope of fish discards must be reduced, and in some types of fisheries, unintentional by-catch – including of harbor porpoise – is far too high.

Understanding of the marine ecological balance is still lacking, also in terms of the many man-made factors compared to the natural factors impacting on the development of fish resources. Such factors comprise pollution, climate changes, activities related to oil exploration, etc. In some instances, pollution has impacted on the food safety of fish.

Finally, the aquaculture sector offers potentials for development that should be exploited on condition that the necessary environmental considerations are taken into account.

Objectives and activities 2001-2006

In the coming years, the Government will continue its work to promote the *integration of environmental considerations and sustainability* in the fisheries sector, nationally, in the EU and internationally. In this connection, weight is attached to following up on concluded regional agreements and action plans in the Baltic Sea and North Sea, aimed at making fisheries more sustainable. The establishment of an efficient partnership charged with restoring the North Sea cod stocks is one specific goal.

In May 2001, the Danish parliament adopted a range of *central objectives* for the development of a national fisheries policy in the years to come. One objective calls for the modernisation, renewal and simultaneous reduction of the fisheries fleet. The objective is to ensure a long-term, stable and sustainable fisheries sector in relation to the fisheries possibilities and a continued local fisheries sector with a wide geographic basis. Within this framework, adjustments to the national management of fisheries quotas will be realised, one aim is to develop coastal fisheries and promote the quality of landings. A ban on the discard of fish that can be landed legally should lower the pressure on fish populations and make the Danish fisheries potential more valuable to our society. In relation to the activities aimed at fisheries, the Government will give high priority to developing selective and gentle fisheries tools, so that unintended by-catch and undesired pressure on the sea bottom and its natural animal and plant life can more easily be avoided.

Research and data collection are to enhance the understanding of marine ecosystems and their interrelations with human impacts. Enhanced knowledge about these matters should help improve the decision basis for advisory services and ensure sustainability in fisheries management. Activities are also targeted at establishing a superior knowledge base that will enable us to better target our relevant nature protection considerations in relation to fish management in marine areas.

The Minister for Food, Agriculture and Fisheries has appointed a committee on environmental impact and fisheries resources. Before October 2002, the committee is to report on man-made and natural factors that compound fisheries' impact on the conditions and development of fish populations or that impact on fish as a food reserve.

To ensure sustainable development in the *aquaculture sector*, the Minister for Food, Agriculture and Fisheries has appointed two committees on inland fish farms and marine farms, respectively. The committees are expected to make proposals for promoting continued exploitation of the production potential in the aquaculture sector, having in mind the minimisation of the environmental impact.

By-catch of harbor porpoise

In 2000, the use of acoustic deterrents – 'pings' – in parts of the commercial Danish net fisheries in the North Sea first became mandatory, to prevent harbor porpoise from being caught in the nets. Pings represent an efficient solution, but research is still needed into the way in which continued use of pings will affect the harbor porpoises and the marine environment.

Activities also focus on development of net types that harbor porpoise can detect and avoid. The activities enter into the Action plan for reduction of unintended by-catch of harbor porpoise, adopted by the Minister for Food and the Minister for Environment and Energy.

The work on reducing by-catch of harbor porpoise must be followed-up in other Danish waters. International research cooperation should procure new knowledge on the size and dispersion of harbor porpoise populations.

SECTORS

Photo: BAM

10 Forestry

Forests and woodland areas should be exploited and managed in such a way as to allow them to play a part in fulfilling Denmark's natural and environmental, financial and social needs, now and in the future. We should bolster the role of forests as one of society's welfare assets. Forests should provide opportunities for outdoor activities, protect biodiversity and contribute to a varying landscape. Forests should produce wood products and help protect the environment – through their groundwater protection and of CO_2 sequestration. Such considerations should figure in the ongoing doubling of forested areas in Denmark. In addition, we should increase the areas of natural forest and the use of particular, traditional management systems.

Previously, forests were primarily meant to produce wood and serve as shelter. Today, they play multiple roles for our welfare – especially in terms of recreative options. The Danish forest-policy statement sets out forest policy with a twelve-point action plan that among others targets includes the doubling of forested area. Focus is on nature considerations and diversification as part of the concept of sustainable forestry which since the Rio conference has become the cornerstone of day-to-day forestry – both internationally and nationally and on the individual property.

Ensuring an increase in forestry based on nature principles, which to a great extent underpins the versatile role of the forests as a national welfare resource, presents a central challenge. One result will be healthier and more resilient forests capable of resisting future disasters like the forests damaged by storm seen during the 1999 hurricane. Future climate change may give rise to more frequent storms, periods of drought and mild winters – conditions that forests must be able to survive.

The long time perspectives of forestry call for persistence and continuity in forest management. They also require frameworks able to finance the diversified forests. These are very difficult goals to live up to as coniferous tree production is dominant in Denmark, and large volumes of coniferous trees from our neighbouring countries put pressure on prices.

Objectives and activities 2001-2006

The policy for new and old forests will be specified in a *new national forest programme* expected to be finalised in 2002. The programme will constitute an overall plan, presenting concrete objectives and means while also laying down a schedule for implementation. The programme will be based on technical analyses and close dialogue with various stakeholders. The work will be carefully coordinat-

S E C T O R S

Sustainable forestry
A new set of guidelines for sustainable forestry at the property level serves as a topical example of how Denmark is operationalising the concept of sustainability. The Forest and Nature Agency and eighteen stakeholder associations have jointly established thirteen voluntary operational principles. The principle aim is a forestry supporting nature's ecosystems, while also making allowances for and combining a range of social, ecological and economic considerations.

ed with the national action plan for biodiversity. The basic elements of the forest policy are outlined below.

The forest area will be doubled, so that forest landscapes cover 20-25 per cent of our area in the course of a tree generation (80-100 years). the new forested areas should meet our needs for diversified forests. Urban forests give more opportunities for outdoor recreation, and forests protect water catchment areas and lend character to the landscape. New forests can create the framework for biodiversity and ensure cohesion between existing nature and forest areas in open country. One special objective calls for the replanting of 15,000 hectares of healthy, resilient forests to replace the fallen trees that occurred in 1999. The forest programme is to ensure that all Denmark's targets are met. The subsidies under the "act on windfall", are coupled with a new insurance scheme against loss incurred in future wind throws represent major strides towards recreating our forests.

The Government will promote *natural and environment-friendly forestry* and increase the areas with natural forest, nature forests and traditional management systems. This entails more deciduous trees and more mixed stands. Clear-cutting – the simultaneous felling of all trees in an area – will only be used to a small extent. For environmental reasons, the use of pesticides will be phased-out in state forests and be limited in private forests through incentives and information. At the same time, the additional potential of forests for protecting the environment should be promoted and exploited. We should primarily focus on the ability of forests in protecting groundwater and the ability of trees to sequent CO_2 as part of fulfilling our commitments under the Kyoto Protocol.

The population should be involved to a greater extent in decisions concerning forests. This could be accomplished through public debate, for instance, or as it is practised in the state forests committees. The importance of forests to outdoor recreation should be underlined. The tools could include providing improved information and guidance to outdoor recreational options and ensuring public access to all forests.

The forestry sector must enhance its earning capacity. High-quality forestry and wood products must constantly be developed, with seed and plant material suited for the locations The Government will support a stable, market-oriented basis for supplying wood chips for power production. Weight should be attached to providing information about the considerations allowed for nature and the environment in Danish forestry production. Increased use of wood and wood products may reduce the consumption of more hazardous raw materials and contribute to financing the forest as a welfare benefit.

Targeted research and an improved data situation are important ancillary tools for forest-related activities. Forest research should improve our knowledge of sustainable forestry methods. The health of forests is already being monitored, but Denmark needs a broader national forest monitoring programme that will also yield data on the natural content, CO_2 sequestration and other environmental and social services offered by forests.

Denmark will continue its efforts aimed at steadily more binding international cooperation in the field of forests and endeavour to influence international agreements and conventions. Denmark must lead the way in following up on international agreements, promote sustainable forestry and make experience gained available to others. Danish environment and development assistance should assist recipient countries in implementing international conventions, agreements and recommendations on nature and forests. Furthermore, we must make sure that in our use of imported wood, we favour the products that are cut legally and come from sustainable managed forests.

Photo: Scanpix

11 Industry, trade and services

To align sustainable development and consumption of goods and services with continued growth, we must lower resource consumption and reduce adverse environmental and health effects appreciably. We can achieve this reduction by incorporating environmental considerations not only into company business procedures, but also into every link of the chain from production to consumption and disposal. Companies are playing a key role in bolstering the development of environment-friendly technologies.

Authorities, trade and industry and consumers alike must cooperate in establishing green markets where environmental considerations are pivotal both to the mutual competition among companies and to our consumption of goods and services. Combined with new market-based instruments, voluntary initiatives and regulation, market forces should motivate the corporate sector and consumers to participate actively in this development.

One of the greatest challenges of the 21st century will be to decouple economic growth from environmental impact. To minimise the adverse environmental effects of production and consumption systematically, we must ensure that companies consider the environment in making their day-to-day decisions. Production, recycling and disposal must develop through advances in green technology, innovation and competence building. We must also consider every aspect of the process from "cradle to grave". We must increase cooperation across industries and sectors and find new solutions that reduce environmental impact and use fewer resources. Another challenge lies in integrating the competitiveness of companies with environmental, social and ethnical considerations.

We must maintain our efforts to persuade companies and consumers to give environmental issues higher priority when making decisions on the production and consumption of goods and services. At the same time, globalisation, growing trade and information technology are setting a new agenda for environmental policy and the global division of labour.

In this respect, agreements on trading conditions and market regulation under EU auspices are keys to producing, marketing and stimulating demand for cleaner products and services in an open Danish market, a single European market and a global marketplace. Since Danish companies form part of international supply chains, both EU and inter-

national regulations must incorporate environmental considerations. Chapter 8 describes Denmark's efforts in integrating environmental considerations into WTO activity.

Households can limit their adverse effects on the environment. Individual consumers can contribute to this process by choosing environmentally sound products and by using and disposing of products in an appropriate manner. Information from authorities and manufacturers must empower consumers to make the right choices on the basis of environmental and other considerations, thus making respect for the environment a natural part of everyday life.

First and foremost, companies can help by boosting initiatives to develop technologies capable of introducing processes and products that are environmentally sounder than today. Utilising resources efficiently, avoiding the use of harmful substances and minimising emissions and discharges into water, air and soil as well as recycling and reducing waste volumes must be attractive to companies. Equally important, companies should make more information available, allowing environmental information to follow products to consumers and to those who recycle or dispose of products. We must take advantage of the growing role information technology plays in today's service society to create and market environment-friendly products. We must renew thinking and innovation through efficient, green and ethical markets that can improve the competitive situation of environmentally conscious front-runners in the light of the new economy.

The period following the Rio conference has seen the launch of many initiatives to reduce the environmental damage caused by companies. Market-oriented instruments have been introduced: green taxes, eco-labels and voluntary agreements aimed at reducing environmental impacts and encouraging the use of cleaner products and environmental competencies.

Danish environmental regulations have put Danish companies at the forefront of environmental management in Europe for some time now. All pollution-intensive companies in the EU are now subject to general regulations based on "best available techniques". Danish companies must already comply with these requirements. This gives Danish companies excellent opportunities to benefit from maintaining a high environmental profile and thus gaining a competitive edge.

From 1995 onwards, a number of industrial companies have been under the obligation to prepare green accounts containing information about environmental impacts and describing environmental aspects. According to a survey, about 40 per cent of all companies have introduced environmental improvements while about 50 per cent have profited financially from saving resources. The advantages of green accounts can still be expanded to include the world outside of companies.

Companies and authorities can receive support to introduce environmental management and green procurement and to strengthen environmental competence building. This will facilitate environmental control and integrate environmental aspects into decision-making processes and day-to-day activities. Today, more than 500 Danish companies have been certified under the international environmental standard, ISO 14001, while about 180 have been registered under the EU's environmental management system, EMAS.

Denmark has succeeded in decoupling economic growth from environmental impact in some areas. During the past ten years, industrial discharge of nutrient salts into aquatic environments has fallen by 60-75 per cent while output has risen by 20 per cent. Industrial consumption of energy has increased by 12 per cent whereas CO_2 emissions have only grown by 2 per cent. Although improvements have been made, pollution and contamination are mounting in step with economic growth and higher consumption. As a result, the past ten years have seen waste volumes increase as the economy grows, just as companies have been unable to reduce the use of environmentally hazardous and health-impairing chemicals to the extent technically feasible and desirable in relation to the environment and health.

The Government's action plan for cleaner technology has contributed to reducing waste volumes and the environmentally adverse effects associated with the production and consumption of goods. Denmark's "Product-Oriented Environmental Initiative" is based on the principle that environmental considerations must be incorporated into every decision involving goods and services from "cradle-to-grave". This applies to any aspect from design and choice of materials to production, transportation, supply, marketing, demand, use and any subsequent handling of waste. Environmental considerations must figure in all links of the value chain, domestic and foreign. Product panels made up of stakeholders have been established as "think tanks" for new, general market initiatives.

During the summer and early autumn of 2001, the Government is working on a green industrial development strategy based on the interplay between industrial development policy and environmental policy aimed at making the environment a competitive parameter for many sectors of Danish trade and industry. This strategy suggests activities that focus on green industrial development until 2006. A key objective is to encourage corporate self-action in the environmental area.

The idea is to enable Danish trade and industry to supply goods and services that satisfy the needs of society while increasing welfare and individual quality of life. The Government's industrial development strategy, ".dk21", outlines this objective. Green markets with environmental considerations as an important competitive parameter will represent a pivotal concept in future. The intention is to stimulate efficient competition built on environmental parameters. Increased use of market forces to the benefit of the environment will be cost-effective for both companies and for society.

The challenge is to create incentives for companies as well as society as a whole, to consider the environment, for example through environmental strategies and green innovation. Environmentally conscious companies must stand to gain strategic as well as competitive advantages.

Green industrial development requires clear market information, achieved with eco-labels, environmental product declarations and consumer information. Denmark has joined the EU eco-label scheme (the Flower) and the Nordic eco-label scheme (the Swan). This environmental information supports consumers in choosing green products. The primary objective is for about 70 per cent of consumers to be able to recognise at least one of these two eco-labels. At the end of 2002, fifty per cent of consumers must have a qualified awareness of the Nordic eco-label while 30 per cent must have qualified knowledge of the EU label. Furthermore, consumer confidence in eco-labels must be maintained at the currently high level.

For several years central, regional and local governments have striven to make procurement greener. This work must be reinforced, enabling the public sector to lead the way in boosting green demand. Sustainable development can only be achieved if companies are willing to take responsibility. Their motivation will be greater if framework conditions make that responsibility attractive.

Green requirements for suppliers

In 1995, 24 Danish companies had introduced certified environmental management systems. In 2001, the number is higher than 600 and exceeds 10,000 on a global scale. Environmental considerations are increasingly being incorporated into industrial development strategies and are becoming a competitive parameter in the market. But companies doing trade with each other are unaccustomed to incorporating environmental issues when developing or demanding environmentally sound products. The requirements that larger companies impose on smaller suppliers are an important impetus for green industrial development.

The auto industry is one example of a sector desiring to create a green image. Some sectors of this industry are beginning to consider the environment a key success criterion. One car manufacturer has been integrating environmental considerations into its product development since 1996 and has also introduced environmental requirements for its suppliers. All its subcontractors must introduce environment management systems by 2002.

SECTORS

Objectives and activities 2001-2006

The Government intends to cooperate with market players to establish an efficient, green market. This requires the introduction of framework conditions ensuring that companies make environmental efforts on a voluntary basis while also boosting their competitiveness. Economic and administrative instruments will, however, remain relevant tools for achieving the objectives. One example is to have prices reflect the actual environmental costs.

The polluter-pays principle is one means of promoting cleaner production and products on reasonable, competitive terms. Another significant instrument is to strengthen public green procurement, which will subsequently generate noticeable demand as well as helping to reduce any additional price of environment-friendly products. In this process, more eco-labelled products on the market and adequate information will motivate consumers to change their habits.

Manufacturing businesses must continue to *reduce their adverse environmental impacts*. Legislation and instruments must be adapted to and possibly developed in line with technological advances and market trends, persuading companies to increase environmental protection voluntarily. The Government believes that it will still be necessary to set minimum requirements for a number of health and environmental issues. The manufacturing industry will be responsible for ensuring that the chemicals used are assessed in relation to their environmental and health impacts. Substances that may be detrimental to the environment or to health must be eliminated from products and production processes. Substances particularly dangerous to the environment or to health must be phased out completely or partially, while threshold values should be raised to reduce adverse discharges into air, water or soil. This applies to substances such as dioxin and solvents. It will also be necessary to map and reduce volumes of soot particles suspended in the air.

Efforts must be targeted at defining a life-cycle-based product liability where companies, separately as well as jointly, assume liability for a product "from cradle to grave". International (EU and global) guidelines for environmental information about products and companies should exist to strengthen these efforts across national borders.

Apart from eco-labels, initiatives may include environmental product declarations, environmental reports, green accounts and information systems about the environmental conditions of the industrial sectors. Consumers must receive better information about environmental and ethical aspects of goods and services.

One important action area is the development and use of operational know-how, product and process data as well as tools to assess the environmental impacts of products and production processes. This will make it easier for companies to integrate environmental considerations into strategies, development activities and day-to-day decisions. Building company and staff competence and incorporating environmental know-how into training and education should fuel this development and lay the groundwork for a market for environmentally sustainable products.

We must develop and advocate the use of cleaner technology and products and provide room for *new solutions, radical innovations and technological advancement*. In addition, products must be made more durable and easier to repair, upgrade or recycle than is currently the case. The Government will work to include environmental considerations in public tenders and for their incorporation into international standardisation work.

Efforts must be made to boost corporate self-action. Use and development of *environmental considerations in corporate decision-making* must be strengthened to increase the number of Danish companies introducing environmental management and implementing recognised environmental management systems. Initiatives should be aimed at ensuring that companies use, develop and spread "best available techniques" to a high degree. Individual companies must integrate environmental management into their strategic considerations and involve staff in a process that also addresses health and safety issues. Companies must also develop methods for consulting staff on environmental and ethical issues more regularly than is presently the case. These methods will apply to companies, their relations with suppliers and the consumption and disposal of products.

As all market players have an important role in sustainable development, it is vital that they become part of this development. The financial services sector must develop programmes designed to give general credit ratings and loans more environmental weight. Efficient green markets as well as adherence to the polluter-pays principle will also boost this development. At the same time, the more widespread use of green and ethical accounts will also facilitate the process. Green industrial development also depends, however, on distributors and other companies in the product chain that do not in themselves affect the environment to any noticeable degree. Retailers play a vital role in that they convey environmental requirements from consumers to suppliers and manufacturers.

We must strengthen green industrial development internationally. We must encourage the EU and international organisations to support recognised guidelines for corporate communication of environmental, ethical, social and economic aspects. *Internationally, environmental regulation should be improved* through EU provisions such as the directive on pollution-intensive companies (IPPC) and through EU requirements pertaining to "best available techniques". The concept of life cycles and products and a market-oriented approach must be disseminated on an international scale. Denmark will expressly work to publish a White Paper on a common EU product-oriented strategy during the Danish EU presidency in 2002. But setting up an EU strategy to promote green industrial development in Europe will also be important. International Danish environmental assistance will help strengthen regulations, enforce legislation and transfer cleaner technologies or provide Danish expertise to reduce environmental stress and build local environmental competence.

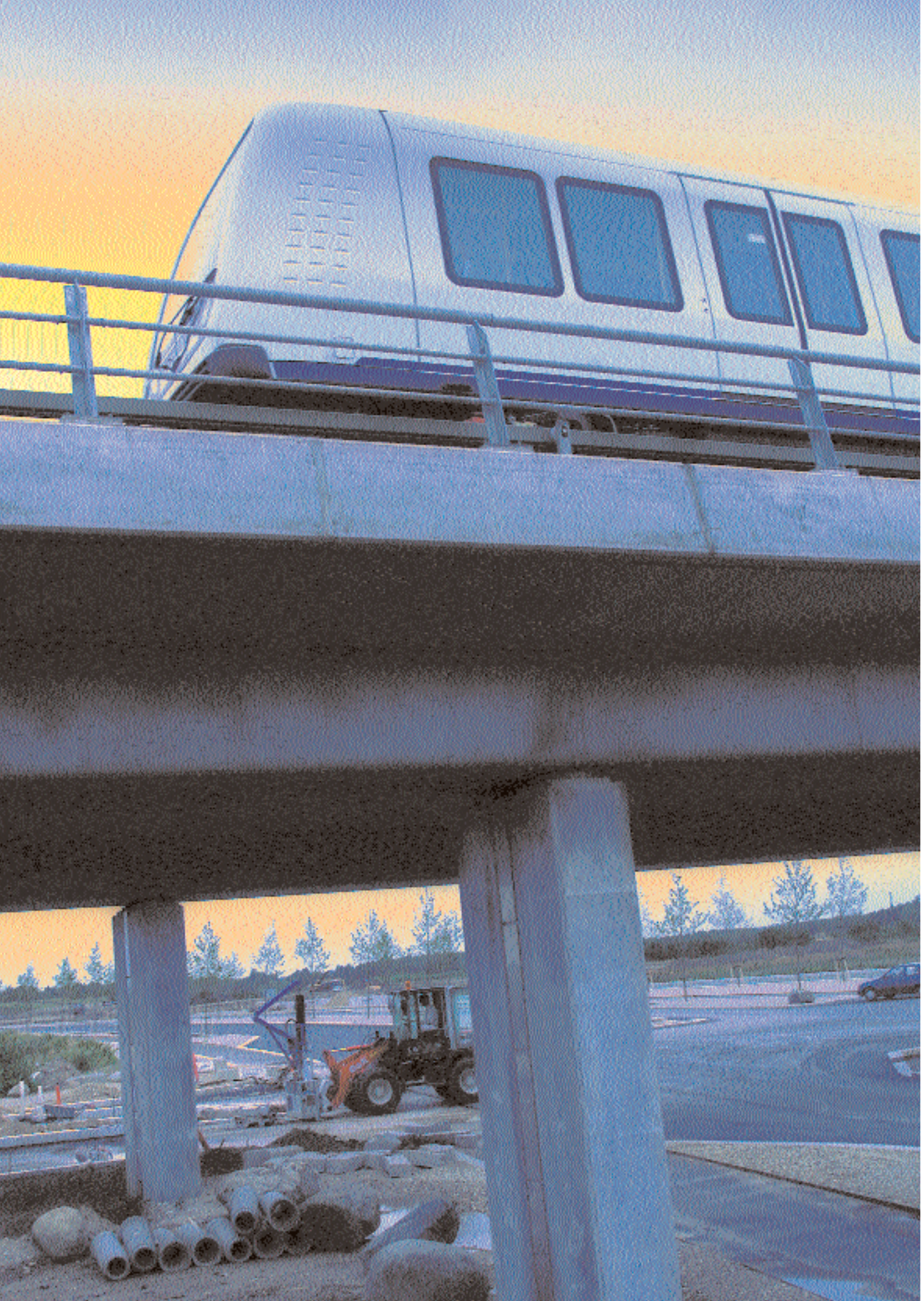

Photo: BAM

12 Transport

To achieve sustainable development in the field of transport, the Government primarily intends to decouple growth in the impact of transport on the environment and health from economic growth. Health, environmental and safety considerations must be integrated into transport policy.

The Government's long-term benchmarks call for the transport sector to make its fair contribution to reducing the national emission of greenhouse gases and to ensure that air pollution from traffic constitutes no health hazard to the population. Traffic noise must be reduced to a level which ensures that nobody is exposed to negative health impacts. It must be safe for everybody to be transported. The negative impact of the transport system on the natural habitats of animals and plants must be curbed.

The transport system must ensure that the population has access to work, shops, public service and leisure-time activities, and all citizens must be ensured efficient mobility through public and private transport solutions. Denmark must offer trade and industry excellent transport links to the surrounding world, and traffic congestion should only occur during peak periods. High traffic flow should be ensured for public and private transport, including cycle and pedestrian traffic.

The public expects to have safe, flexible and swift access to workplaces, shops, recreational activities and holidays. An efficient, modern transport system offering a high traffic flow is necessary to provide the mobility required for meeting these demands. Accessibility and effective mobility are welfare benefits that must also be secured and developed for future generations through Denmark's transport policy.

At the same time, traffic in a modern society has several negative effects on health and the environment that jeopardise the overall welfare of society. Concerns for public health, the environment and the future of successive generations thus determine the framework of a modern transport system. This does not entail restrictions in accessibility and mobility but means that forms of transport must be found that create less traffic, fewer accidents and less pollution.

For the past decade, an integrated transport policy has also embraced environmental considerations – at both EU level and in Denmark – and this must continue. Denmark has already set a range of objectives covering such issues as CO_2 emissions, noise and air pollution from transport, and has initiated targeted activities to reach the goals. These activities will be followed up against the background of new knowledge concerning the interaction of transport with the environment and health. At the same time, a broader perspective is required – towards international cooperation and cooperation with other sectors, regional and local authorities and other central players – to find long-term solutions to the challenges facing the transport sector. Many transport problems and their solutions are closely linked with international developments, which means that Denmark cannot implement the necessary initiatives through national instruments alone. The development of new technologies and international transport taxes are just two examples. Moreover, sustainable transport policies can only be implemented by interconnecting transport issues with other sector policies, notably urban and housing policies, industrial policy, economic policy, and direct and indirect tax policy.

We need to be aware of these prerequisites since most transport ultimately serves purposes other than traffic as such. The various measures should also be used where they will best benefit the environment and the national economy.

Danish and international experience indicates that technological progress is often the least painful way of developing a more environment-friendly transport sector.

In its work to enhance sustainable transport, the Government has therefore accorded high priority to promoting technological development. However, because technological development cannot solve all transport sector problems, it will be integrated into a broad strategy together with physical planning, information and dialogue on transport habits, combined with economic instruments and other elements.

Since the Brundtland Report and the 1992 Rio Conference, a number of analyses, discussion papers and action plans focusing on the challenges to the transport sector have been drawn up. In addition, several concrete initiatives have been launched with the aim of increasing sustainability in the transport sector. At EU level, Denmark contributed to shaping the 1999 EU Transport Council's strategy for integrating environmental concerns and sustainable development into the transport policy of the Community.

Since the Rio Conference, the negative effects of transport on health and the environment in Denmark have declined, chiefly due to targeted efforts to improve engine technology, fuel quality and road safety. In the EU, agreements with the automobile industry and steadily more stringent standards for vehicle emissions have resulted in considerable progress in this area.

The Government's system of taxes to encourage the choice of less polluting vehicles and fuels has been particularly successful. Differential taxes on lead and sulphur-containing fuels have eased the transition to cleaner fuels that took place during the 1980s and 1990s. The system of taxes has also been used to promote the use of more energy-efficient vehicles. One example of this is the conversion of the vehicle excise duty into the 'green owner tax' on passenger cars in 1997. Moreover, electric cars are exempt from vehicle registration tax and, similarly, the most energy-efficient car models are subject to a lower vehicle registration tax.

Differential fuel taxes curb particulate emissions

On 30 June 1999 Denmark introduced differential taxes on vehicle diesel fuel on the basis of the sulphur content. The sulphur content of all fuel used in Denmark is now less than one seventh of the EU threshold, which is 350 ppm (parts per million). This has brought about a sharp drop in the content of health-hazardous fine soot particles in air. Measurements on Jagtvej in Copenhagen have shown that concentrations of ultrafine soot particles were halved from 1999 to 2000.

According to Government and international estimates, the demand for transport will continue to rise for many years to come, with the growing economic welfare in society continuing to be a major contributor. Globalisation, urban growth, increasing car ownership and changed travel habits are other contributory factors. The increase in traffic volumes will result in higher emissions of greenhouse gases, increased consumption of resources and more pressure on natural and residential areas. A broad strategy taking into account the various reasons for traffic growth will make it possible to lower the demand for transport. In that manner, we can prevent traffic growth from undermining the Government's objectives for traffic flow, the environment and health concerns.

In our present state of knowledge, the greatest traffic-related health risk stems from accidents and air pollution, including fine soot particles from vehicles. Excessive noise levels have also been shown to impact negatively on human health.

Objectives and activities 2001-2006

CO_2. In April 2001, as an element of the follow-up to the Government's climate strategy, Climate 2012, the Government presented a CO_2 action plan for the transport sector. The plan proposes the implementation of a wide range of instruments to ensure that the transport sector also contributes fairly and realistically to meeting Denmark's international commitments in the climate area. The Government's objective is to cut CO_2 emissions by 7 per cent from the level of pollution expected without the initiatives of the action plan. This will halt the steady increase in CO_2 emissions from the transport sector. In the long term – i.e. up to 2030 – the Government intends to curb CO_2 emissions from the transport sector by 25 per cent compared to the 1988 level. This ambitious benchmark is made on the assumption that economic growth is decoupled from developments in CO_2 emissions from the transport sector.

Air pollution and the urban environment. By the year 2010, the Government aims to reduce emissions of nitrogen oxides and hydrocarbons by 60% compared to the 1988 level and to halve emissions of soot particles from urban traffic during the same period. Special measures will be initiated to restrict the impact of traffic on the urban environment and related health implications. Air pollution in the form of fine soot particles gives rise to particular problems. The Government will consider ways of promoting the installation of effective particulate filters in trucks and buses. The technology for the installation of filters has yet to be fully developed for diesel-fuelled vans and passenger cars, which account for some 60 per cent of particulate emissions. When that has been achieved, the Government will also consider how to promote the use of particulate filters in this field. Diesel cars are more energy efficient than petrol-powered cars and, therefore, cause lower CO_2 emissions. On the other hand, diesel cars cause higher emissions of nitrogen oxides (NO_x). The Government also intends to work with local authorities and encourage them to support local plans for an improved urban environment, for instance via the possibilities offered by the amended Road Traffic Act of 2000. The new Act paves the way for pilot projects involving environmental zones and other initiatives. Finally, funds have been set aside in the Transport Pool for projects aimed at following up the CO_2 action plan and improving the urban environment and road safety.

Road safety. The goal of the Danish Road Safety Commission's action plan for 2000 is to reduce road casualties (fatal and serious injuries) by 40% by the end of 2012. The Government intends to realise this goal through measures to constrain traffic speeds and encourage the wearing of seat belts, improvements in road design, marking and traffic development as well as more information and better training for road users. An accident commission for road traffic accidents will also provide more knowledge about what causes accidents. Research into traffic-psychology aspects and road-user behaviour, including vulnerable road-users, will be intensified. In addition, the Government will promote corporate strategies for road safety and the environment in all state enterprises.

Noise. The Government's goal is to reduce the number of homes seriously affected by noise to 50,000 by the year 2010. These are homes where noise levels of 65 dB or more have been recorded. The Government intends to prepare a noise strategy for this purpose in 2002. As levels of noise from

railways dropped significantly during the 1990s, the focus of this particular initiative will be road traffic noise. The strategy will be coordinated to reflect the scheduled EU noise directive.

Mobility and traffic flow. The Government has approved a number of long-term investments aimed at a future expansion of the road network and public transport systems. The plan is to boost the quality of public transport by investing in new high-quality trains nationwide and in the Metro and Circle Line in Copenhagen, an extended 'S'-train service to Roskilde and urban railways in Aarhus and Aalborg. The road traffic investments are earmarked for motorways and expressways with a view to creating a viable network of main roads which provide maximum road safety at minimum inconvenience to the population. The safety of cyclists and other initiatives to promote the environment and road safety will be improved through funds set aside in a special pool of available funds under the Ministry of Transport. Spatial planning initiatives will improve the traffic flow for pedestrians, cyclists and public transport while also reducing the actual need to travel. This will be accomplished through, for example, active localisation policies, a wider scope for combining different modes of transport and more concentrated facilities in urban areas. In spring 2000, the Government and the regional authorities in the Copenhagen metropolitan area published "A framework for traffic and environmental planning in Greater Copenhagen" (Grundlag for trafik og miljøplan for Hovedstadsområdet), which assessed the traffic and environmental impacts of various proposals to develop Copenhagen's transport system. To ensure that the wisest decisions are made, the Government will continue to rely on environmental impact assessments when considering relevant Bills and other Government proposals, including proposals for new infrastructures.

Nature and landscape. The impact of transport on biodiversity and natural and cultural environments must be controlled. Public planning initiatives must essentially respect all protected areas and listed buildings and consider natural values. Such initiatives should also preserve the character of large unspoilt landscapes, ensuring that they remain free of noise nuisances and fragmentation. It is important to safeguard wildlife, ensuring that animals can pass traffic systems, especially at stream valleys and dispersion corridors. In accordance with the Government's comments on the revised regional plans for 2001 (Regionplanrevision 2001), counties are expected to identify in their regional plans the relatively few remaining large, unspoilt landscapes and prevent their disappearance.

Waste. According to an EU directive, the recycling percentage for materials from scrap passenger cars and vans must be increased to 85% by the year 2015. To achieve this percentage, the Government will require that end-of-life vehicles be processed so that their parts can be recycled.

Correct pricing. Direct and indirect taxes must ensure that the prices of travel, means of transport and fuels better reflect the total cost to society, including infrastructure, environmental and health costs. This will promote more equal competition between the different modes of transport. A working committee has recently presented a report on the possibilities of a "green" restructuring of the vehicle registration tax. The Government will take the report into account in its further deliberations in this area. The Government will also investigate whether the taxation of passenger cars can be restructured so as to make it cheaper to buy a car but more expensive to use it in areas where the environment is under greatest pressure. Tax restructuring should not alter the overall cost of car ownership and should give special consideration to the needs of rural districts. In the course of the next three years, the Government will propose a decision-making basis for introducing road pricing aimed particularly at reducing car traffic in Denmark's major cities, technically structured so that the transport habits of individual car drivers are not registered.

Better transport choices and habits. The supply of and demand for environment-friendly transport options must be improved. For passenger traffic, this means promoting public transport where an adequate basis exists. Likewise, cycling and walking must be promoted as attractive alternatives to driving. This can be done through park-and-ride facilities, car-pooling databases to encourage more people to travel together, transport strategies for

safety and the environment in state enterprises, and better conditions for cyclists and pedestrians. The Government also plans to hold a Green Transport Week in 2001 to encourage better transport habits. In freight transport, the emphasis will be on eliminating barrier effects and providing facilities for combined transport solutions involving more extensive use of rail and sea transport. Better dialogue between central government authorities and trade associations will also promote better logistics and environmental management. Other measures to promote environment-friendly transport choices and habits include education, information, public debate, agreements, green procurement policies and taxes.

Research. The Government will intensify research into the central aspects of developments in transport and the measures that can steer transport options in the direction of sustainable development. Examples of activity areas are intensified research into means of transport choices, an assessment of extensions to the transport system, transport-economy analyses and integrated analyses of economy, environmental concerns and road safety. Another activity area is research into soot particles and underfocused environmental impacts such as soil and water contamination. The potential for and barriers to more widespread use of more environment-friendly transport technology will be examined with a view to stepping up efforts. The research effort will provide the basis for new initiatives and objectives in the transport area.

International activities. At its meeting in Cardiff in 1998, the European Council decided to integrate environmental issues into all other sector policies. Consequently, at the 1999 Helsinki Council meeting the EU transport ministers presented a strategy for incorporating environmental issues into transport policy. The Government will follow up on the strategy proposed by the EU Transport Council and on the transport-related sections of the EU's future strategy for sustainable development and the OECD's recent environmental strategy. For instance, the Government will take steps to ensure that all modes of transport pay the social costs and to promote public transport as well as freight transport by rail, on waterways and through combined transport solutions. More specifically, Denmark is working for intensified and fair competition in the railway area throughout the EU, for an international or EU tax on aviation fuel and for the promotion of high international environmental standards for vehicles and engine fuel.

Since the development and production of new vehicle technologies largely take place outside Denmark, the Government wishes to conclude agreements through the EU on standards for new vehicles and fuel types. This approach has been successful to date, and the Government intends to continue its efforts to promote EU regulations that, while flexible, are also binding to an extent that provides both incentives and opportunities for manufacturers and buyers to make environment-friendly choices. For one thing, Denmark intends to work for better common EU methods for calculating and documenting the environmental impact of vehicles and transport infrastructures.

Denmark intends to campaign actively in international forums other than the EU. The UN Economic Commission for Europe (ECE) is a relevant forum for road transport issues, while the International Civil Aviation Organisation (ICAO) and the International Maritime Organisation (IMO) are relevant for discussions concerning aviation and maritime issues. The World Health Organization (WHO) focuses on the direct and indirect effects of transport on health, while general issues relating to sustainable development are discussed as part of the UN's follow-up to the 1992 Rio Conference. Believing that agreements reached in these and other international forums dealing with matters of international sustainable development should be more concrete, Denmark is focusing its efforts to secure more binding agreements.

Over the next few years, the Government will take steps to implement this strategy. The OECD's guidelines for environmentally sustainable transport will be taken into account in the implementation process. The emphasis will be on the continued integration of environmental considerations into the transport sector while taking into account new knowledge, on setting goals and assessing measures as well as on the involvement of relevant players.

Photo: BAM

13 Energy

Energy consumption and energy supply are paramount activity areas for achieving sustainable development. First, we must curb man-made climate changes and minimise SO_2 and NO_x emissions, which are responsible for environmental acidification. Second, we must secure efficient and stable energy supplies and ensure that the energy area is regulated in a cost-effective manner.

The Government has set the goal of reducing CO_2 emissions to half the 1990 levels by the year 2030. To achieve this, we must reduce total energy consumption, enhance energy efficiency and phase out the use of coal. In addition, we must increase the share of renewable energy by one percentage point annually so that this source of energy comes to account for at least 35 per cent of total energy consumption and for at least 50 per cent of total electricity consumption by 2030. With a view to minimising environmental acidification, Denmark intends to reduce SO_2 emissions by about 30 per cent and NO_x emissions by about 45 per cent compared to the 1998 levels by the end of 2010.

The past ten years have seen solid progress. While enjoying a substantial economic boom during the 1990s, Denmark managed to keep total energy consumption at a fairly constant level. A major reason for this is that we now utilise surplus heat from electricity production more efficiently than previously. Thus, more than 80 per cent of district heating is today co-produced with electricity. But the use of natural gas and renewable energy, not least wind turbines, has also risen steadily during this period. Electricity produced by wind turbines quadrupled from 1994 to 2000, up from about 500 MW to about 2,000 MW. On balance, CO_2 emissions dropped by about 10 per cent between 1990 and 2000. Combined with better flue-gas cleaning systems, cleaner energy sources have contributed to a considerable reduction in SO_2 and NO_x emissions from the energy sector.

Denmark has thus achieved a "double decoupling" effect in relation to economic growth. While the economy has grown by more than 25 per cent during the past ten years, energy consumption has remained largely constant. Moreover, not only has the energy consumption level been constant, but Denmark has also succeeded in reducing CO_2 emissions by 10 per cent. In 2000 alone, Denmark managed to bring down CO_2 emissions by 1.8 per cent, even though the economy showed a 2.9 per cent growth.

These positive results are due to deliberate political prioritisation and not least to a strong, national commitment, which is a prerequisite for extending the use of renewable energy.

Furthermore, Denmark has been successful in increasing the use of combined heat and power (CHP) and renewable energy on a national scale while establishing a number of strong footholds for Danish trade and industry. The wind turbine industry is one example of this combination of environmental considerations, targeted research and development and a forward-looking business sector. This progress resulted in considerable energy exports during the 1990s. In 2001, the Danish wind turbine industry is expected to achieve export sales exceeding DKK 12bn, and total energy exports will reach DKK 30bn. By boosting its environmental assistance during the 1990s, Denmark has provided know-how and sustainable technology to Central and Eastern European as well as developing countries. Danish expertise and technological innovation have thus played important parts in helping to spread sustainable energy supply systems beyond Denmark's borders.

Improved energy utilisation

The Danish economy grew by approximately 27 per cent from 1988 to 2000. During this period, Denmark's gross consumption of energy (adjusted for climate fluctuations and net electricity exports) rose by a mere 2 per cent.

This means that energy utilisation was almost 20 per cent higher in 2000 than in 1988. Some of the reasons for this improvement are:

- Significantly increased use of combined heat and power: the share of electricity co-produced with district heating almost doubled from about 27 per cent to slightly more than 50 per cent during this period, and more than 80 per cent of district heating is now co-produced with electricity.
- Increased emphasis on energy savings through market-oriented instruments such as green taxes and by means of a large number of other initiatives.
- General technological advances.
- Changes in industrial structure.

Denmark still has some way to go to reach the national targets set for CO_2 emissions in 2005 and to meet the Kyoto commitments in 2008-2012. But the most recent assessment shows that we are on the right track. We can reach the 2005 targets on the basis of the initiatives adopted so far. Fulfilling the Kyoto commitments in 2008-2012 is also feasible if we sustain our current efforts while simultaneously implementing new initiatives in a number of areas. However, we must face the fact that reaching the targets for 2008-2012 represents only a tentative step towards realising the long-term objectives of stabilising the concentration of atmospheric greenhouse gases at a sustainable level.

To some extent, Denmark has already implemented the "easy solutions" to reducing its energy consumption and CO_2 emissions. Consequently, we should ensure a higher degree of economic efficiency when planning new action and introducing new instruments.

Objectives and activities 2001-2006

We must continue the favourable development set in motion in the energy area. The potential for enhancing the efficiency of energy consumption and for extending the utilisation of renewable energy remains large.

Denmark intends to do its part in reducing *global warming*. The Government aims to bring down CO_2 emissions by 20 per cent of 1988 levels in 2005. At the same time, the Government will take the initiatives that are necessary for fulfilling our commitments under the Kyoto Protocol, compelling us to reduce total emissions of greenhouse gases by 21 per cent of 1990 levels in 2008-2012. At a later stage, we will need to set new national and international targets, including much higher reductions after 2012.

The *flexible mechanisms* provided by the Kyoto Protocol should be employed to the extent that they introduce real improvements to the environment. Denmark will do everything it can to ensure that these flexible mechanisms operate in an environmentally and economically sound manner.

Through national efforts and active cooperation within the EU, the Government intends to develop *market-oriented instruments* that can help achieve environmental objectives as efficiently as possible. These could be economic instruments such as taxes and tradable permits or other instruments like energy efficiency standards for specific equipment. As part of the electricity reform introduced in 1999, Denmark is required to have fully opened the Danish market from January 2003, thus allowing all consumers to choose their own supplier.

We must base an increasing proportion of our energy needs on *renewable energy*. Denmark intends to lift the share of renewable energy by one percentage point annually, raising this share to a full 35 per cent of total energy consumption and 50 per cent of total electricity consumption by 2030. The construction of large-scale wind farms and increased utilisation of biomass will help Denmark reach this target. The capacity of offshore wind farms will increase to a total of 4,000 MW. According to plan, offshore wind farms should be capable of producing as much as 750 MW by 2008. Denmark must be utilising at least 1.4m tonnes of biomass by 2005.

At the same time, we must focus on our active research and development in the area of renewable energy, with a view to increasing the use of new alternative energy sources. But we must also develop strategies to regulate the periodical production of surplus electricity generated by rising volumes of heat-bound and wind-dependent electricity production. It has been politically agreed that renewable energy should account for a minimum of 20 per cent of Denmark's electricity consumption as early as 2003. At least 30 per cent of total electricity consumption should be produced from renewable energy sources by 2005.

Nuclear power is not considered a sustainable source of energy.

In this process, the Government has also introduced *direct requirements that apply to electricity producers*. Denmark is the first country in the world to introduce CO_2 quotas that set a ceiling on total emissions by the electricity sector. Quotas issued in 2001 will reduce these emissions to 22m tonnes. Annual threshold values also exist to restrict the volumes of SO_2 and NO_x that primary power stations are allowed to emit. As part of its efforts to boost energy savings, Denmark introduced new energy savings legislation in 2000, intended to pave the way for better planning, coordination and prioritisation of overall efforts to cut energy consumption. Regionally, local energy savings committees will be set up and all interested parties will be invited to participate. The public sector should also set an example when it comes to saving energy.

Efficient efforts in the energy area are best secured through *international cooperation*. Denmark will strive to ensure that sustainable energy is strongly represented in EU energy policy and on the global agenda in 2002 and the years ahead. Continued energy cooperation in the Nordic region is also important, not least in the field of electricity. In recent years, higher priority has been given to the development and transfer of expertise and energy technology for use in Central and Eastern Europe and in developing countries. This will remain a key element of Denmark's initiatives to ensure global sustainable development.

Photo: BAM

14 Urban and housing development

The Government's primary objective is to promote sustainable development of towns, housing and buildings. Residents and users in individual urban and housing areas should participate actively in this development, for instance through a lifestyle that calls for everybody to consider the environment and limit resource consumption as a part of everyday life. With respect to social life, buildings and infrastructure, towns must be organised and managed with a view to significantly reducing resource consumption and environmental impact. Towns should be vibrant and diverse, while town centres should be bolstered in their role as centres of business and culture. The individual town quarters should offer housing, service trades, public institutions and sports facilities, thus revitalising urban areas.

We must limit the expansion of towns and put old business and harbour areas to better use. Urban transport-generating functions should be located with a view to providing the maximum number of people with easy - access to public transport. We must also reduce the negative impacts of mounting urban vehicle traffic along with other environmental impacts.

Towns must offer a variety of types of housing, and authorities should intensify activities targeted at depressed urban neighbourhoods. Urban renewal creates a balance between old and new, emphasising quality, exceptional architecture and urban ecology. Preservation-worthy cultural environments must also be safeguarded. By the same token, we should improve the quality of urban recreational opportunities and preserve allotment gardens.

Greater prosperity and increased division of labour have led to a sharp rise in traffic, which currently constitutes the greatest threat to urban environments and thus urban quality in general. To curb growth in transportation, we must exercise caution in using new rural zone areas for urban purposes. Instead, urban development should take place in areas that already lie within existing town

limits. To strengthen and preserve local communities, we must continue to develop villages in rural districts. Draft regional plans will outline the Government framework for such action.

The intention is to reuse existing depressed urban areas by making optimal use of the social, natural and building resources available in local areas, by intermixing housing and various other urban functions and by ensuring adequate accessibility. Such towns must be based on principles of location and traffic operation, ensuring that public transport, cycling or walking account for an increasing part of traffic volumes. To ensure this development in the Greater Copenhagen region, non-residential buildings and other facilities will be placed close to railway stations. At the same time, the mixture of services, trades and different types of housing will make towns more vibrant, diverse and socially sustainable. Plans for urban revitalisation must be based on dialogue and partnerships between the various players.

Sustainable development places certain demands on user behaviour and lifestyles in towns and housing areas. Drawing on its previous experience in community involvement, individual measurement of household resource consumption and green accounting in the respective housing areas, the Government will strengthen initiatives intended to change behaviour and attitudes towards environmental and resource problems.

The quality of green areas is under pressure and must therefore be boosted. We must also improve urban opportunities for recreational activities, for example by providing facilities for informal sports activities. These areas are pivotal to physical and mental welfare in urban areas, and many people use them. Furthermore, green areas and urban nature are important to the urban life cycles of substances: they can filter rainwater, receive compost and host plant and animal life. Since allotment gardens are often situated in areas attractive to other functions, they are also under pressure, but we must safeguard them as valuable elements of urban recreational options.

Buildings and facilities located in towns constitute important elements of the economic and cultural capital of society and also play a key role in overall resource consumption and environmental impact. Energy consumed to construct and operate buildings accounts for half of Denmark's total energy consumption, while materials used for buildings and facilities comprise the greater part of the consumption of Danish raw materials. Thus recognising and limiting resource consumption and the environmental impacts of the general life cycles of buildings are important challenges. These challenges can be met by increasing the utility value, flexibility and quality of buildings, thus extending their lives and reducing the need for structural changes.

When it comes to aspects like quality, size and location, housing market conditions often make it difficult to move to a new home that fulfils current needs. The individual housing areas must provide variation, recreational opportunities and easy access to nature.

Urban revitalisation – from cement production to a mixture of residential and non-residential housing

The Lindholm Brygge area at Limfjorden, close to Aalborg, is changing. Until 1979, a cement works employing around 500 staff occupied the area, but new businesses are now coming in. An international electronics group is building 15,500 square meters of floorage for more than 400 engineers, who will be developing mobile telephones. Today, the electronics company offers almost as many jobs as the former cement works. Lindholm Brygge will also house an IT company, a technical school and an adult vocational training centre, providing a total of about 100-150 jobs.

About 400 new dwellings will be built along with recreational areas that will allow the public access to the inlet. Fully developed, Lindholm Brygge will cover an area of 102,000 square metres, or approximately twice the size of the area occupied by the former cement works.

Objectives and activities 2001-2006

The recommendations of *the Danish Industrial and Urban Development Committee* as well as the Government's Report on Urban Development from May 2001 contain a number of proposals for new initiatives and legislation that can boost the development of sustainable towns in relation to location and use of areas. Focus should be on developing the proposals to select urban revitalisation areas, to establish specific urban revitalisation companies, and to prioritise the order in which old urban areas should be revitalised.

Through initiatives such as pilot projects, the Government intends to help develop new urban structures that can reduce the *demand for transportation* and promote public transport. This places demands on cooperation between local and regional authorities. To avoid unnecessary traffic impacts and to provide green areas of a high quality, we must develop *strategies for locating* shops, offices, institutions and dwellings in urban areas.

We must continue and develop the existing programmes of general *urban renewal and neighbourhood improvement*. Two specific aims are to involve all citizens and to integrate social, economic and environmental initiatives in local communities. The spotlight will also be on measuring resources consumed by individual households and on establishing green accounting in housing areas. The Government's committee on urban development will designate three to five pilot areas with a high concentration of social problems where private and public stakeholders will implement initiatives through concerted action. Funded by an urban development pool, themes such as "Urban Business", "New Suburbs" and "Towns, Housing and Traffic" will be implemented on the principles of sustainable urban development.

To achieve more socially sustainable urban and housing areas, the Government will introduce a Bill to *increase the right of disposal* and co-ownership in subsidised housing.

Members of the Danish building and construction industry must increase their competencies in sustainable building and construction, and they must also show a greater interest in and commitment to fostering sustainable development. The Government recommends intensified urban-ecological initiatives, including sustainable product development, environmentally acceptable planning and design, complete financial calculations, building materials declarations and green accounting. *Building regulations* will be tightened, thus introducing stricter requirements for energy consumption and healthy buildings. The action plan for *environmentally sustainable building and construction practices* to be published by the Danish product panel for building and construction later in 2001 will provide a suitable basis for sectors in the area to coordinate their actions. The new four-year acceleration pool promoting ecological building and construction work will support a number of development projects.

Efficient efforts in the energy area are best secured through *international cooperation*. Denmark will strive to ensure that sustainable energy is strongly represented in EU energy policy and on the global agenda in 2002 and the years ahead. Continued energy cooperation in the Nordic region is also important, not least in the field of electricity. In recent years, higher priority has been given to the development and transfer of expertise and energy technology for use in Central and Eastern Europe and in developing countries. This will remain a key element of Denmark's initiatives to ensure global sustainable development.

Photo: Scanpix

15 Tourism

Denmark's long-term objective is to create a tourism sector that is in balance with natural resources and is accepted by the local population. Denmark should offer tourists authentic natural and cul-tural experiences while generating employment and income in local communities. Delivering in-formation about nature and culture is one way of achieving this primary objective. We must secure and improve the recreational opportu-nities available to tourists and local inhabitants and give dis-abled people easy access to holiday and leisure-time activities. To achieve these objectives, we must better integrate the functions and needs of local areas and tourism while constantly balancing com-mercial and environmental interests.

Generating sales of DKK 44bn in 1999, tourism is now Denmark's fourth largest industry. During the first years of the 1990s, Denmark saw tourism soar from 25 million registered bed nights in 1988 to 43 million in 1992. Since 1993, however, the level of tourism has remained fairly constant at around 44 million bed nights.

The economic upswing of recent years has spurred a global increase in travel, also for tourist purposes. International tourism decreases the chances of achieving global sustainable development because it increases the volume of air travel and adversely affects nature in tourist destination areas. During the past ten years, the Danish tourist industry has increasingly focused on offering natural and environmentally-oriented attractions and experiences. A number of schemes – such as the Green Key – have been introduced, awarding eco-labels to overnight accommodation facilities. We need to heighten awareness of such establishments.

Another scheme, Destination 21, has also been introduced for tourist destinations pursuing sustainable development. Developed in cooperation with seven pilot destinations, this scheme offers a manual with set criteria and indicators. Destination 21 is based on eight main criteria. Its objectives are to secure local organisation, ensure common strategies and cooperation, build up competence in sustainable tourism, protect and provide access to the natural and cultural values of tourist destinations, enhance and advertise local culture and identity, reduce resource consumption and pollution and create jobs, and stimulate the economy in local communities.

At the same time, the Blue Flag campaign has drawn public attention to clean and safe facilities at beaches and in marinas. Nature rehabilitation and afforestation have increased recreational opportunities, and excursions that combine education with outdoor activities are now becoming popular with tourists. Regional and local authori-

ties are increasingly focusing on planning tourist and leisure-time facilities. Danish coastal zone legislation has introduced stricter requirements for new tourist facilities in coastal zones. In its proposal to counties for the 2001 Regional Plan, the Government is reassessing a number of old areas reserved for holiday and leisure-time facilities. Despite these initiatives, the task of transforming tourism while taking into account environmental, social and economic aspects presents a major challenge.

Objectives and activities 2001-2006

We should boost *the marketing* of green tourism to stimulate green industrial development in the tourist industry. We must also strengthen the interplay between *physical planning* by counties and regional and national *strategies on tourism*, for example through cooperation between the Danish Tourist Board and the Danish Ministry of Environment and Energy.

Local communities and interest groups must become more involved in the planning and development of tourism to help enhance development and services in local communities and communicate information about nature and culture. The environmental standard of *existing tourist areas and tourist facilities* must be improved, and new facilities with high environmental standards should be established.

We must safeguard and improve *recreational opportunities f*or tourists and local inhabitants, for example by improving access between natural areas and housing as well as holiday areas and by providing facilities that disabled people can easily access. Research results on the social and environmental consequences of tourism as well as experience from Destination 21 and other projects should be documented, and relevant information should be published.

Finally, we must find *new ways of transporting tourists* to holiday resorts, so that long-distance transportation can take place through a combination of mass transportation and environmentally acceptable individual transportation within holiday areas.

A number of tourist areas have a high and a low season. We should examine areas where the existing facilities can support an extension of the holiday season. One initiative would be to focus on nature and culture. Active experiences would include hunting, angling, yachting and coastal fisheries and deep-sea fishing.

At EU level, Denmark is working to promote integrated coastal-zone management that will introduce the sustainable administration and development of coastal areas.

The great variety of activities available in society today are noticeably affecting the countryside and urban areas. This has distinct consequences for landscapes and the very different experiences they offer, as well as for cultural environments, which are often tourist attractions.

Destination 21 on the island of Møn

As one of Denmark's first sustainable, green holiday destinations, Møn has entered the Destination 21 qualification phase. Since 1996, the Møn Tourist Association has targeted its efforts at developing sustainable tourism by linking a number of specific "green" and sustainable tourist projects. These cover a wide field, including:

- an eco-labelling scheme for holiday cottages
- "Green food of Møn" – a guide to the island's large supply of organic food
- a green guide as well as a guide to excursions that combine education with outdoor activities
- establishing Geocenter Møns Klint, a large center offering information to visitors, located at Møns Klint, one of Denmark's major nature attractions
- providing detailed information about natural and cultural environments

Furthermore, Møn has many "active", yet environmentally adapted, holiday options and "green attractions" such as visiting a windmill or local craftsmanship such as wickerwork as well as a sustainable beach policy that provides standby staff for monitoring and cleaning beaches.

MEASURES AND IMPLEMENTATION

16 Measures and knowledge base

A forward-looking commitment to the environment and sustainable development may stimulate competitiveness and transition towards the knowledge economy. It should pay to show environmental concern. This is why those who manufacture, supply, consume and finally dispose of products should bear the environmental costs. Technological breakthroughs and innovation are necessary to redirect society towards sustainable development. We need a solid knowledge base for making the right decisions and prioritising activities. Environment policy needs to be knowledge-based and underpinned by the precautionary principle.

Denmark has built up a broad and well-functioning system of legal rules on nature and the environment. The Government wishes to use economic measures such as green taxes, transferable quotas and subsidies because such measures have often proved suitable for making producers and consumers more environment-friendly in their actions.

With the tax reform of 1993, the Energy Package of 1995 and the Government's austerity programme, known as the Whitsun Package of 1998, the Government wished to alleviate environmental pressures from CO_2 and other pollutants, certain chemicals, waste and wastewater. This went hand in hand with a lowering of income tax. An evaluation concludes that taxes reduce pollution while taking into account the international competitiveness of the business community.

The activities and adjustments needed to create a society in balance with the natural resource base call for insight, awareness and skills. To make the right decisions, prioritise activities and select the right measures, a solid knowledge base is required. Research into causal relationships and into how activities in society have a bearing on people and nature is a prerequisite of a targeted and prioritised approach in the environment and energy areas. Forecasts and scenarios for the anticipated trend in emissions/the state of the environment and the interplay with the economy are other essential elements of the knowledge base needed to achieve sustainable development.

Decisions at all levels should be assessed in relation to the environment. The Government finds it important that bills and Government proposals presented to Parliament undergo a strategic environmental impact assessment to ensure that the environmental consequences form part of the decision-making basis in line with economic analyses. Similarly, the environmental impacts of large-scale, central-government engineering works must

Photo: BAM

be assessed. Local and regional authorities should also ensure that decisions at the local level are submitted to environmental impact assessment.

The desire has been – and still is – to ensure that Danes understand that environmental concerns must be taken into account in production and consumption. Wishing to set an example, the public sector has implemented a green procurement policy. Consumers are buying a larger volume of eco- and energy-labelled products, and steps are being taken on a broad front to introduce even more eco-labelled products to the market. Cooperation has been initiated with relevant partners on preparing environmental product declarations for consumers and producers alike. Eco-labels and environmental product declarations offer consumers improved opportunities for making real choices.

Technological breakthroughs are among the keys to enhanced resource efficiency, which may help decouple environmental degradation from economic growth. The cleaner products programme has been instrumental in promoting the development of products, tools and technologies that, combined, have been able to foster the inclusion of environmental considerations into production and to offer Danish companies a competitive edge in other markets.

A growing number of Danish companies are assuming an active role in preventive environmental activities by introducing environmental management, developing cleaner products and drawing up green accounts. This positive trend must be maintained through better information, guidance and exchange of experience.

Local and regional authorities play a great and important role in the concrete implementation of Denmark's nature and environment policy. Local and regional authorities manage substantial parts of specific environmental and physical planning activities. At the same time, local and regional authorities are best at involving citizens in an active debate on the organisation of local conditions. A constructive dialogue between authorities and citizens is of paramount importance and should be strengthened to gain optimal solutions for both citizens and the environment.

Green taxes work

Sulphur emitted into the atmosphere as SO_2 creates acid rain, which destroys plants and contaminates drinking water. A sulphur tax on a range of fuels was introduced in 1995 to curb SO_2 emissions. Companies that undertake sulphur cleaning are recompensed accordingly. The proceeds from the sulphur tax are returned to the industries to offset the effect on the companies' international competitiveness.

The green tax on sulphur benefits the environment in three ways: It becomes more worthwhile: 1) to develop and switch to energy products with a lower sulphur content (for example natural gas or low-sulphur coal, 2) to undertake sulphur cleaning, and 3) to invest in energy-efficient technologies.

Since the tax was introduced, the sulphur content of the energy products used has declined, and environmental indicators show that total SO_2 emissions continue their downward trend.

Objectives and activities 2001-2006

The Government will uphold the *green taxes* and consider the possibility of introducing new ones. The Ministry of Taxation – in collaboration with the Ministry of Environment and Energy – is currently looking into chemicals. In a report, a working committee has outlined the potential for adjusting the tax on pesticides. In the autumn of 2001, on the basis of this report the Government will introduce a bill to increase the differentiation of the ad valorem tax on pesticides. Another working committee recently submitted a report on the possibilities of restructuring the system of vehicle registration tax. The report analyses the possibilities of changing the vehicle registration tax so that new car buyers increasingly take environmental considerations into account and thus contribute to reducing CO_2 emissions. The report also analyses whether there are better ways of designing the system of transport taxes, for instance by introducing differential tax rates depending on the level of environmental stress as seen in connection with the petrol and diesel tax.

The use of *economic instruments should be coordinated internationally.* We can obtain higher environmental gains if, for example, the tax level is more or less identical in the different countries, which eliminates the need to pay special regard to international corporate competitiveness when designing the tax systems. In the international arena, Denmark will work on the development of common instruments to reach the CO_2 target. One possibility is to introduce international taxes on air transport, for example a tax on air fuel. In the EU, Denmark will take steps to harmonise green taxes with minimum rates.

In the OECD countries there are examples of *subsidy schemes,* including tax exemptions in sectors, affecting behaviour in a way that has negative consequences for the environment. This is true of agriculture, industry and transport, for example. It is necessary to examine whether the existing subsidy schemes should be changed or adjusted to prevent them from harming the environment.

Denmark is facing a technological challenge. *Technological breakthroughs and innovation* are required to decouple the negative impacts on nature and the environment from economic growth. A long-term effort to promote pioneering technologies is required. We must both disseminate knowledge of existing, environment-friendly technologies and develop new technology, new materials and new solutions to redirect society towards sustainable development. We must find new ways of organising existing production in a more environmentally favourable fashion to ensure that resources are used as efficiently as possible and that products become more environment-friendly throughout their life cycles. This means that nature and the environment must be affected as little as possible per unit produced or service provided – throughout the production chain from extraction via consumption to disposal.

We need to strengthen the *interplay between the public and private sectors* on research into and the development and spread of green technologies. Public and private-sector prioritisation of research into environmental issues can help strengthen industrial and commercial positions and ensure market breakthroughs for cutting-edge technologies that take into account environmental considerations. For example, fuel cells in future means of transport can lower CO_2 emissions substantially. Information technology and biotechnology may also pave the way for new environment-friendly production methods and products. The use of new types of material can lower resource consumption and open up more recycling possibilities.

Companies must have the chance to cooperate with knowledge institutions, which can support environmental initiatives through, for instance, advice on environment-friendly technologies, strategic environmental management, communication on environmental issues and staff competence development. New knowledge and new tools and methods must be spread to and firmly embedded in companies and their surroundings. We need to establish a framework within which the market itself rewards and stimulates environmental initiatives in companies, thus encouraging them to focus on technological development. At the same time, any barriers to the market access of environment-friendly technologies must be removed.

The development and use of economic and other measures must be *reconciled* with companies' capacity for innovation and self-management. Direct regulation in the form of legislation and rules as the market and technology develop will still be necessary. Environmental regulation will represent the required minimum basis for environmental behaviour and will determine the framework conditions capable of motivating companies to pay greater attention to developing and selling environment-friendly products and to undertake other voluntary green initiatives. The regulatory measures must be chosen with due regard to efficiency.

A heightened *knowledge base* will support sustainable development. That applies to basic, strategic and user-oriented research in all sectors. Basic research into causal relationships and into new environmental and societal problems is crucial for society's ability to take the right and preventive decisions at an early point and thereby achieve sustainable development. Therefore, research and development in support of sustainable development should be strengthened. The vision is to provide Denmark with a strong knowledge base concerning sustainable development.

Decisions on environment policy should build on the optimum knowledge base – *knowledge-based environment policy*. There is a need for research, data collection and monitoring that can contribute to improving the decision-making basis. The link between research and priorities in action plans and strategies must continue to be strengthened. Environmental economy and analyses of how the behaviour of companies and citizens affects the environment rank among the core research areas. That also holds true for research into the link between activities in society and effects on human health and the environment as well as forecasts and scenarios of the anticipated development. The knowledge acquired must be available to everyone. Where the knowledge base is insufficient, the *precautionary principle* is an important instrument.

Knowledge of the link between activities and environmental impact provides an improved decision-making basis, and the methods for *strategic environmental impact assessment* must therefore be upgraded. The integration of the environment and economy into decision-making processes can be promoted by documenting the effect of environmental initiatives through economic analyses of advantages and disadvantages. With a view to these analyses, we need to upgrade the methods for valuing the boons of nature and the environment that are affected by the political initiatives.

In the years ahead, attention will be also be directed to *information, education and teaching*. The key concepts in a forward-looking information and teaching strategy on sustainable development are knowledge and responsibility. Schools and youth education programmes assume a special role as the institutions that help shape the fundamental values of children and young people. Greater awareness of the natural basis of human existence combined with profound knowledge of the interplay between the environment and economic and social issues will be reflected in the attitudes and sense of responsibility of future generations.

One duty of educational institutions is to disseminate knowledge about the environment and sustainable development in such a way that this knowledge can lay the foundations for democratic decisions. Sustainable development should be taught in a context of international cooperation among educational institutions. This would cause children and young people to realise that we have common problems that can best be solved by taking international action. When the ministers for education signed the Haga Declaration in March 2000, we took a step in the right direction, placing ecological, economic, cultural and social development on the agenda in an educational alliance between Denmark and the countries bordering the Baltic Sea.

MEASURES AND IMPLEMENTATIONS

Photo: BAM

17 Public participation and Local Agenda 21

A sustainable society is based on democracy and transparency and relies on the population to participate in decisions and to take responsibility. Sustainable development can only be realised if all parts of Danish society are committed to working for this goal. The work towards sustainable development depends on the population having easy access to information, being able to participate in decision-making processes and having access to justice in environmental matters. These rights were extended with the Aarhus Convention of 1998.

If we are to achieve sustainable development globally, the principles of the Aarhus Convention should also apply in other countries. Denmark will work to ensure that these principles are employed more extensively in international agreements and that initiatives to strengthen public access to information and participation are included in the results of the World Summit on Sustainable Development in 2002. Denmark additionally supports these principles through environmental and development assistance projects. Local Agenda 21 activities also play an important part in the efforts to realise sustainable development.

The Brundtland Report of 1987 and the Rio Declaration of 1992 conveyed the clear message that active public participation is a prerequisite for achieving sustainable development and solving the environmental problems of the world. Denmark has a long-standing tradition of involving the public in environmental work – a tradition that was extended and strengthened with the Aarhus Convention.

The Aarhus Convention of 1998 is an international agreement about the environmental rights of citizens. It implies that citizens and environmental organisations must have access to information and participation in decisions on environmental matters – new rules, action plans or other planning. In addition, citizens are entitled to lodge complaints and initiate proceedings before courts of law. In September 2000 Denmark was the first western country to ratify the Aarhus Convention. This has offered environmental organisations improved access to justice under a range of important environmental statutes and has also extended the general principle of involving citizens in planning decisions. Public participation in decisions on and the implementation of the sustainable development strategy is essential. The public can add knowledge and values and submit proposals for priorities in the further work in Denmark in the field of sustainable development. Moreover, NGOs and pro-

fessional associations can contribute to supplementing the knowledge employed by the authorities.

The sustainable development theme needs to be taught at all levels of the educational sector. The aim is to give everyone an opportunity to increase their knowledge of the many problems and issues encompassed by the debate on sustainable development at global, regional and local level.

Local activities are the starting point for addressing many of the problems that must be solved for society to steer in the direction of sustainable development. Changes capable of taking development in a sustainable direction must come from people's daily lives and choices, from the employees of companies and from the institutions of society.

Changes are stimulated through, for instance, Local Agenda 21 work, which comprises activities under the auspices of municipalities and counties and activities undertaken in local areas by companies, organisations and citizens. These activities relate to issues such as resource consumption, waste management and environment-friendly behaviour in conjunction with municipal services, corporate production and citizens' everyday lives.

Local Agenda 21 activities take place to some extent in most of Denmark's municipalities and counties. In 2000 the Danish parliament amended the Planning Act and imposed an obligation on counties and municipalities to report on their Local Agenda 21 strategies at least every four years.

Local Agenda 21 work must continue to contribute to raising awareness of the necessity to see sustainable development in a global and long-term perspective while taking local action. The more locally active citizens are, the more they will take action for more sustainable development in their day-to-day activities. Citizens and counties and municipalities must continue to support each other and expand the framework and contents of this cooperation.

The popular commitment is also supported by advice and knowledge on sustainable solutions, for example from green guides, nature guides and environment and energy offices around Denmark. Direct cooperation between NGOs and companies can also contribute to the development of sustainable solutions, for instance environmental management or the use of new biotechnology by companies.

At workplaces employees should be invited to contribute ideas and participate in restructuring plans for the promotion of sustainable development. Preliminary experience shows that this is profitable for companies, stimulates worker satisfaction and is beneficial to the community at large.

Experience from general urban renewal programmes, neighbourhood improvement, etc. shows that it is possible to make many people committed to local issues and tasks. Successful public participation depends on the existence of clearly defined cooperative relations, the achievement of visible results and the excitement of participating. In a broader perspective, we must focus on ways of ensuring that everyone participates.

Local Agenda 21 in Albertslund

Hyldespjældet is a non-profit housing association in the Municipality of Albertslund. The area used to be socially deprived, but a broad range of environmental projects have helped promote a strong sense of solidarity, and today the area has developed into an attractive residential area. One of the environmental effects is a sharp decline in waste volumes for disposal, from 60-80 skips in the 1980s to about three today. In 1999 Hyldespjældet was nominated for the Nordic Council's annual Nature and Environment Award.

Local Agenda 21 activities include a local waste-sorting and recycling plant, small lots leased by the residents for organic vegetables, a clothes-exchange stall, an organic café as well as experiments with toilets collecting urine to be used as manure in the fields.

The driving force behind the numerous activities has been strong and dynamic solidarity in the residential area combined with excellent coordination through Agenda Center Albertslund and the Culture-Ecology Association of Albertslund.

A wide array of players already contribute to the Danish Agenda 21 activities, participating in processes aimed at promoting sustainable development in their individual ways and at their own level. The number of players and processes in Danish Agenda 21 activities is likely to increase in the foreseeable future up to the World Summit on Sustainable Development in 2002 in Johannesburg, South Africa. These contributions should be seen as an integral part of overall Danish activities.

Objectives and activities 2001-2006

Denmark will work internationally to ensure that the principles *of the Aarhus Convention* are employed more extensively. Both the other EU member states and the EU at large are working to implement the Convention. Denmark is campaigning in favour of committing EU institutions and procedures to the same degree of openness and transparency and to involving citizens in knowledge and decisions in the environmental field. Denmark will also take active steps to ensure that the principles of the Aarhus Convention are employed more extensively in global and international negotiations and are reflected in global and international conventions and legal instruments. The World Summit on Sustainable Development in 2002 will offer an excellent opportunity to examine whether the Aarhus Convention can serve as a model at the global level for applying Principle 10 of the Rio Declaration on the participation of all concerned citizens in the handling of environmental issues.

Denmark will actively support the countries of *Eastern and Central Europe* in ratifying and implementing the Aarhus Convention and will support NGO activities in these countries. Finally, Denmark applies the principles of the Aarhus Convention to the environmental assistance Denmark grants to developing countries.

The Government will take action to ensure that citizens can participate actively in sustainable development initiatives and have access to *readily comprehensible information and background knowledge*. In keeping with this strategy, a set of *national indicators for sustainable development will be established*.

The Government will support initiatives and methods for improving *citizens' possibilities of participation in decision-making processes* in environmental matters. A specific area could relate to decisions to release GMOs to the environment. Citizens should also be aware of their possibilities for influencing the decision-making processes. During 2001 the Ministry of Environment and Energy will therefore conduct a campaign on the environmental rights of citizens.

Everyone should contribute to informing the general public about the impact of activities on the environment. Therefore, *companies should provide information about their environmental initiatives* so that citizens in the proximity of the company will know how it affects the environment and human health or uses resources. This information could come from green accounts or from companies' environmental management systems.

Local Agenda 21 activities should be further promoted. One way of doing this is to establish *local indicators for sustainable development* in Local Agenda 21 work. Local indicators can help shed light on the results of Local Agenda 21 work in a district or a municipality. In addition, local indicators can facilitate comparison with similar activities in other districts or municipalities or counties, thus making it possible to compare local objectives and results with national ones. The central government will intensify the work to provide guidance and inspiration and pass on experience from Local Agenda 21 strategies and activities.

Photo: Scanpix

18 Implementation, monitoring of progress and follow-up

This is Denmark's strategy for sustainable development. The implementation of the strategy calls for active interplay and dialogue between a wide range of players among government authorities and citizens alike. To achieve the objectives in this strategy, players in the various sectors, as well as organisations and citizens, must take action at the national and local levels. A system of indicators will contribute to following the step-by-step achievement of the strategy objectives.

Implementation – a shared responsibility

The strategy forms the starting point for on-going dialogue on objectives and means for achieving sustainable development, and will also be the signal for launching concrete initiatives. The strategy has a long-term as well as a cross-sectoral perspective: It is a combined framework for Denmark's national initiatives for sustainable development, and provides the framework for the considerations to be met in connection with the formulation and implementation of future strategies and action plans.

The visions and objectives of the strategy will be followed up by action plans, programmes and concrete initiatives within the sectors and areas concerned. These include an action plan for the Aquatic Environment Plan III, an action plan for biodiversity and nature protection, a strategy for the correlation between environmental factors and health as well as a green industrial development strategy.

But formulating action plans and strategies is not enough: the strategies must be implemented. The players in the individual sectors must assume responsibility, promote the strategy objectives and take action within their own areas. The objectives of decoupling growth from environmental impacts, integrating environmental considerations into sectors and promoting sustainable development are important and should be taken into account in further work in the sectors.

Continual dialogue and public participation are crucial to the implementation of the strategy objectives. Dialogue on the framework, objectives, instruments and cross-sectoral themes of the strategy is necessary to enable us to develop relevant solutions and ensure that they are firmly embedded in society. The active participation of players at all levels in society is necessary. The Government will work to continue and expand the dialogue initiated in the formulation stage of the strategy. A key task for the sectors will be to enter into dialogue and cooperation with NGOs and other interested parties on the implementation of the strategy.

Many NGOs are already making a considerable effort to promote sustainable development and may play a larger role when it comes to implementing the strategy, for instance as a sounding board for companies and authorities and as a link to the population at large. This applies to green organisations, trade associations and other interest groups. NGOs are encouraged to participate in implementing the strategy at the local, regional and national levels. It will be necessary to develop concepts for committed cooperation among authorities, the business community and NGOs.

Monitoring and follow-up
– from objectives to results

Sustainable development is a long-term process with long-term objectives, and it is necessary to closely monitor whether the development is moving forward and results are being achieved. Therefore, the Government will continuously monitor and report on the progress made in implementing the strategy and achieving results that point in the direction of sustainable development. This will present an opportunity to take further initiatives, if required, and adjust the course to counteract any negative developments.

Indicators will be a basis for reporting on progress towards sustainable development. In connection with the strategy, the Government has developed a set of indicators that can follow developments in relation to key objectives and activities in the sustainable development strategy.

The set of indicators comprises a small number of overall key indicators and a set of indicators directed at each of the target areas of the strategy. The indicators must be selected to focus on developments and results in relation to the strategy objectives for sustainable development.

The indicators will be constantly developed in the light of the international work on indicators for sustainable development. The indicators will be presented every year on a special website for sustainable development, and the key indicators in an annual brochure.

Adjustment – up-to-date policy

Against the background of the continuous reports on the results achieved in implementing the strategy, the Government will take steps to assess and adjust the sustainable development strategy. The strategy will be adjusted at least every five years to ensure that a new edition is ready for a UN event five years after the World Summit on Sustainable Development. The adjusted strategy will contain proposals for objectives and activities during the next period and will assess whether new target areas are required.