MILJØVERNDEPARTEMENTET

Royal Ministry of the Environment

Summary in English: Report No. 24 to the Storting (2000-2001)

The Government`s Environmental Policy and the State of the Environment

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1.1 Introduction

The Government wishes to use the Report to the Storting (white paper) on the Government's environmental policy and the state of the environment in Norway to emphasise the importance of the ecological perspective as a basis for policy formulation in all sectors of society. The white paper focuses mainly on the cross-sectoral nature of environmental protection. Each of the other ministries also gives an account of its environmental efforts in its own budget proposal.

The first white paper on the Government's environmental policy and the state of the environment in Norway was submitted by the Bondevik Government in autumn 1999 (Report No. 8 (1999–2000) to the Storting). The Stoltenberg Government presented a supplementary report in spring 2000 (Report No. 22 (1999–2000) to the Storting). Both of these were debated by the Storting in October 2000. There was broad agreement that a white paper on trends in environmental conditions and the main elements of the government's environmental policy should be submitted each year. The Storting stressed the importance of developing the white paper further to give more precise descriptions of both the state of the environment and the targets and policy instruments of the Government's environmental policy. The Government will take steps to ensure that the white paper on the Government's environmental policy and the state of the environment in Norway is developed along these lines.

In many areas, this report is concerned with following up the targets and continuing to develop the instruments described in the white papers the Storting considered last autumn. This is because environmental policy must in general be viewed in a long-term perspective, and the effects of policy instruments often require some time to become apparent. In its recommendation, a majority of the Standing Committee on Energy and the Environment indicated a need for further clarification of a number of measures and instruments in different fields. In this white paper, the Government has responded by providing the Storting with information on the current state of affairs and further plans in many of these fields.

1.2 Main approaches to environmental issues at national level

The ecological perspective must form the basis for policy formulation in all sectors of society. Environmental problems do not stop at national boundaries. In a constantly growing and more globalized economy, international cooperation on environmental issues must therefore be developed and strengthened at all levels. It is also essential to ensure that environmental policy becomes an integral part of all policy areas, so that environmental considerations form a fundamental part of decision-making and development processes in society. This must be viewed in a long-term perspective. In addition, a firmer local basis for environmental policy is essential to establish its legitimacy, which is important in strengthening environmental policy. Continuing cooperation and the dialogue with business and industry will also be of central importance if we are to make full use of the potential for environmental efforts in this sector.

The list below describes some of the issues the Government will follow up and continue to deal with. The Government will:

- submit a proposal to the Storting in spring 2001 on climate policy instruments in general, with particular emphasis on a domestic quota-based emissions trading system,
- ensure that VOC emissions are reduced as soon as possible in accordance with the 1991 Geneva Protocol. To this end, the Norwegian Pollution Control Authority has, pursuant to the Pollution Control Act, laid down requirements for the reduction of VOC emissions from loading and storage of crude oil on the continental shelf,
- ensure that NO_x emissions are reduced as soon as possible in accordance with Norway's commitment under the 1988 Sofia Protocol, and evaluate further which measures and instruments should be implemented to achieve this,

- monitor radioactive pollution more closely, both nationally and in the northern areas. In the northern areas, the monitoring programme will be expanded with a special focus on the possible release of radioactivity from the sunken submarine *Kursk*. Nationally, monitoring of coastal waters and sea areas will be further developed, and the monitoring programme will be expanded to include the terrestrial environment and domestic sources of emissions,
- strengthen environmental protection work at municipal level so that the municipalities can assume greater responsibility and authority in environmental policy,
- further develop waste policy, for example by adjusting the agreements between the authorities and industry on the collection and recycling of packaging waste and by considering changes in the tax on final waste treatment to ensure that it reflects the true costs more accurately,
- prohibit the use of lead shot and evaluate a prohibition on the use of certain alkyl phenols, heavy metals in pressure-treated impregnated wooden materials and chlorinated short chained paraffins. The objective is to reduce emissions of hazardous substances at national level. Norway's efforts to influence the development of EU legislation and to encourage the conclusion of ambitious agreements to reduce emissions of dangerous substances both regionally and globally will also be intensified,
- strengthen marine environmental policy by drawing up an integrated policy for the management of marine and coastal areas in cooperation with the authorities involved,
- strengthen and coordinate planning in urban areas. The Government will cooperate with regional and municipal authorities to develop integrated land-use and transport plans for urban areas. Organizational and legal instruments will be strengthened to ensure that land use in towns and urban settlements becomes more efficient, and to improve ways of considering the advantages and disadvantages of developments in built-up areas,
- invite towns and urban areas to take part in trials of new ways of organizing and financing public transport,
- submit a white paper on biological diversity in spring 2001,
- carry out an evaluation of the protection measures already adopted for coniferous forest in the course of 2001,
- establish an administrative area for family groups of wolves and take effective steps to prevent the establishment of wolves outside this area; implement new measures to reduce the number of sheep and domestic reindeer taken by wolverines,
- give higher priority to environmental considerations in the management of watercourses and hydropower resources, for example by means of a new Water Resources Act, supplementing the Protection Plans for Water Resources and by limited further hydropower developments,
- give children and young people opportunities for physical activity in close contact with the natural environment by safeguarding green spaces in the local environment and close to towns and urban settlements,
- implement further measures to ensure public access to the shoreline by continuing to set aside important outdoor recreation areas, clarifying the scope of the right of public access to uncultivated land and giving more advice to municipalities and counties on their efforts to protect the shore zone.

1.3 International cooperation on environmental issues

If the whole world were to adopt current western levels and patterns of production and consumption, this would exceed the tolerance limits of the natural environment. All countries must therefore recognize their share of the responsibility for global environmental problems, and, according to capacity, shoulder some of the necessary costs of resolving them. The industrial countries must take the lead, but the developing countries must also play their part in efforts to solve these problems.

Most EU legislation on pollution also applies to Norway. New environmental legislation is reviewed on a regular basis and integrated into Norwegian legislation. As a non-member of the EU, Norway has to exert an influence by taking part in EU expert groups and by means of cooperation with the Nordic EU members.

Norway will give priority to work on climate policy, long-range transport of pollutants and biological diversity. As a party to the EEA Agreement, Norway is required to harmonize its legislation on chemicals with EU legislation. The Norwegian Government will intensify its efforts to achieve stronger, legally binding international agreements on chemicals. Other priority areas are following up the Action Plan for the Northern Dimension of the EU, work on the Sixth EU Environment Action Pro-

gramme and contact with the Barents and Arctic Councils.

Both Norway and the EU will support the work on various environmental programmes intended to help Central and Eastern European countries improve the state of the environment and thus also reduce transboundary pollution.

At regional level, the Government will work towards better integration of environmental protection into sectoral policies and seek to put the Russian authorities and Russian business and industry in a better position to deal with the country's environmental problems. Cooperation with Russia on environmental impact assessments and monitoring of the marine environment will be further developed.

The Government will intensify its efforts to safeguard clean and productive marine areas. This will be a means of realizing the potential for utilizing marine resources and thus maintaining settlement patterns and providing good conditions for coastal communities. In addition, a better integrated management regime for marine ecosystems must be developed (using the ecosystem approach).

The Government will draw up a coherent policy for the management of marine and coastal areas. A thorough account of this will be included in the next white paper on the Government's environmental policy and the state of the environment in Norway. The Government will continue and intensify regional cooperation on the marine environment, particularly cooperation under the OSPAR Convention. The 5th International Conference on the Protection of the North Sea, which is to be hosted by Norway in March 2002, will also be important here.

The Government is giving high priority to the further development of international environmental agreements. International climate policy is concerned with reaching agreement on a new generation of binding environmental policy agreements. The Kyoto Protocol involves a joint commitment by the industrial countries to reduce their aggregate emissions of greenhouse gases by at least 5 per cent from 1990 levels by the period 2008–2012. According to the Protocol, Norway's emissions may rise by 1 per cent in the same period compared with the base year 1990.

The Sixth Conference of the Parties (COP6) under the Climate Change Convention has not been concluded. The conference started with a meeting in The Hague from 13 to 24 November 2000. Norway considers it important that the Conference of the Parties succeeds in drawing up the necessary rules under the Kyoto Protocol so that the industrial countries can ratify it and it can enter into force. Substantial advances were made in a number of areas during the negotiations in The Hague, although this must be interpreted with great caution, since no final solutions were reached. The aim is to conclude the Conference of the Parties in 2001.

The Government will ensure that Norway continues to play a catalytic role in international efforts to deal with these issues, and that we follow up our international commitments.

Negotiations on the Protocol on Biosafety to the Convention on Biological Diversity (Biosafety Protocol) were completed in Cartagena in Colombia in January 2000. The Protocol deals with trade in and the transport of living modified organisms. The agreement gives countries the right to refuse imports of living modified organisms on the grounds of health and environmental consequences. Global labelling rules for GMOs were also laid down.

Norway is working towards effective international implementation of the two regional protocols restricting the production, use and emissions of certain persistent organic pollutants (POPs) and heavy metals (lead, mercury and cadmium). Norway is also actively involved in efforts to draw up a global convention on persistent organic pollutants under the auspices of UNEP.

A new protocol (the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone) has been adopted under the Convention on Long-range Transboundary Air Pollution. The protocol regulates national emissions of sulphur (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOCs) and ammonia (NH_3). On 18 December 2000, the Storting approved ratification of the protocol by Norway. The Government will consider the implementation of Norway's commitments under the protocol in later white papers.

1.4 Cross-sectoral environmental policy

A good national environmental policy must have a cross-sectoral perspective. In order to integrate environmental considerations satisfactorily into economic and political decisions, reorganization will be needed in both the private and the public sector. There are already various examples of private-sector enterprises that have introduced or are evaluating production processes with less environ-

mental impact or that are developing more environmentally-friendly products in response to new market demands. It is also important to ensure that state sector activities are run in an environmentally sound way. In addition, an integrated environmental policy requires a coherent approach to the environmental efforts of the various sectors, and must ensure that environmental policy targets are achieved at the lowest possible socio-economic cost.

The Ministry of Transport and Communications and the Ministry of Defence presented environmental action plans in connection with the 1999 central government budget. The Ministry of Petroleum and Energy and the Ministry of Fisheries followed suit in connection with the 2000 budget. And in connection with the 2001 budget, action plans were presented by four ministries: the Ministry of Agriculture, the Ministry of Education, Research and Church Affairs, the Ministry of Trade and Industry and the Ministry of Local Government and Regional Development. The remaining ministries will present environmental action plans in connection with the central government budgets for 2002 and 2003. The ministries are required to report on the implementation of these plans and any minor revisions in their annual budget proposals.

The plans so far must be viewed as first-generation plans. Today's system will be thoroughly evaluated before any revision of the existing environmental action plans is started.

Sustainable urban development can only be achieved by giving priority to environmental considerations across sectors and administrative levels. The Government will pave the way for more sustainable urban development by improving the coordination of central government policy and clarifying it. Housing and industrial developments, transport and land-use management are particularly important in urban development. Many actors and administrative levels are being drawn into broad-based cooperation on urban development policy, and one aim is to identify which short- and long-term measures are needed.

Chapter 2 describes the main elements of the sectoral environmental action plans drawn up in connection with the 2001 central government budget, together with the project «Green state» and the Government's policy for sustainable urban development.

1.5 Environmental policy with a local basis. Cooperation between central and local government

The Government will strengthen environmental protection work at municipal level, and give the municipalities greater freedom to choose their level of ambition and the instruments they use in dealing with local environmental problems. The municipalities will also be given the necessary authority to carry out these tasks. This will strengthen overall environmental policy. In addition, the municipalities have an important role to play in helping to achieve national environmental targets relating for example to climate, hazardous chemicals and biological diversity. Another important municipal task is safeguarding nationally important cultural monuments through the Planning and Building Act and other available policy instruments. The Government will initiate a dialogue with the municipal sector on how municipal environmental efforts can be made more effective.

The Ministry of the Environment has invited a number of municipalities to take part in a project in which they can provide advice on ministerial efforts to strengthen and further develop local environmental policy.

The Government will transfer more responsibility for planning and management pursuant to several acts to the local level. About 100 municipalities have applied for administrative responsibility for protected areas pursuant to the Nature Conservation Act. These municipalities will be taking over responsibility for the administration of protected areas within the framework of existing protection plans. The Government will also make arrangements to enable local authorities to assume more responsibility for some aspects of the management of the large carnivores. Since the beginning of 2001, the municipalities have also been authorized pursuant to the Pollution Control Act to issue discharge permits to waste water treatment plants with a capacity of less than 1000 population equivalents. In connection with the revision of the regulations relating to new limit values for local air pollution and noise, the Government will consider whether the municipalities should be given greater responsibility and authority in the efforts to improve air quality. The Local Agenda 21 process encourages municipalities to define targets and instruments for sustainable development at local level together with the general public, local business and industry and voluntary organizations. The Ministry of the Environment has established a network of regional nodes and expertise to help the

municipalities in their efforts with the Local Agenda 21 process. These special incentives will continue until the end of 2001. Experience will be evaluated at Synergi 21, a Local Agenda 21 meeting to be held in Stavanger in October 2001. Experience of Local Agenda 21 efforts will be an important basis for determining which support functions it will be appropriate to provide as the municipalities take over greater responsibility for local environmental protection.

The Government will review special requirements for plans, reporting schemes etc. in the environmental field with a view to removing unnecessary requirements and obstacles that apply to the municipalities. This is part of the general interministerial drive to simplify central government rules and regulations that apply to the municipal sector.

The Government plans to submit a white paper on the distribution of responsibility and authority between administrative levels in spring 2001.

1.6 Integration of environmental considerations into business and industry and society in general

Natural resources and the environment are the foundation for all production and for human welfare. A good environmental policy must therefore encourage economic growth and development that does not undermine the basis for society's existence. The environment has an intrinsic value that must be reflected in costs so that it is integrated into decisions about resource use and production. The Government will draw up a framework for economic activity, not just in the form of environmental requirements and standards, but also in the form of policy instruments that can act as incentives to business and industry to take steps that will put us on the right path. There is a potential for environmental efforts in the market, not least because so many customers are very aware of environmental concerns. Two examples of this are the interest in products based on recycling and in investments in funds that give priority to environmental considerations. The operating framework for business and industry must ensure that environmental measures and investments are in companies' own interests. The Government will intensify cooperation with business and industry in this field.

Economic instruments such as environmental taxes, tradable emission quotas, deposit and return systems and grants or subsidies provide financial incentives to operate in environmentally sound ways. Economic instruments are one of the important types of environmental policy instruments used, and in many cases, administrative and economic instruments complement each other.

Various international and national schemes have been established to ensure that enterprises systematically incorporate environmental considerations into their operations. The international environmental management systems ISO 14000 and EMAS (the EU's voluntary eco-management and audit scheme) help companies to work systematically to improve environmental aspects of their operations. The EMAS scheme is to be expanded to include small and medium-sized enterprises. Another scheme that can encourage small enterprises to introduce environmental measures is the «Environmental Lighthouse Programme». This is a Norwegian programme that tries to promote a dialogue between municipalities and business and industry, in accordance with the ideas behind Local Agenda 21. The Accounting Act now incorporates stricter requirements for companies to report on their environmental impact in their annual reports.

At present, old licences and plans for enterprises that may have wide-ranging negative environmental consequences are still in force. In certain areas, the legislation may not include adequate provisions as regards the updating of environmental assessments or the provision of access to information and opportunities for public participation. This may result in adverse environmental impacts and conflict.

The Government will look more closely at arrangements for re-evaluating and updating older licences and plans. These will to some extent be based on the existing arrangements for environmental auditing used by the public road authorities and other major developers, and on the work of the committees appointed to review the legislation on environmental information and the Planning and Building Act.

The Norwegian Government Environmental Fund was established in 1998 to provide loans for projects to reduce greenhouse gas emissions and other environmentally harmful emissions. In 2000, it is expected that the loans will reach the lending ceiling, which is NOK 250 million. The Norwegian Regional and Industrial Development Fund, which has administrative responsibility for the Environmental Fund, will continue to integrate environmental considerations into its policy, as set out in the budget proposal and environmental action plan presented by the Ministry of Trade and Industry.

The Storting has decided that NOK 1 billion from the Norwegian Government Petroleum Fund is to be allocated to a special environmental fund that will be managed according to environmental criteria. The Government plans to make the environmental fund operative from 2001. The size of the fund will be re-evaluated after three years, and its capital may then be increased. The 2001 national budget includes further details of the fund and the standards required of companies that may be of interest as investment objects.

Access to information on environmental issues is essential if ordinary people are to be able to take part in efforts to improve the environment, whether through their own choices or through their role as participants in decision-making processes. The Government will give priority to efforts to improve information on environmental issues. The Government will also encourage producers and distributors to give more information on the environmental properties of their goods and services.

The duty to collect environmental information and actively provide such information is laid down in the Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental matters. The environmental authorities will provide information on the state of the environment and environmental trends, for instance on the website *Miljøstatus i Norge* (English version: *State of the Environment Norway*, at *http://www.environment.no/*).

In autumn 1997, the Government appointed a committee including representatives from various sectors to review the legislation on duties and rights relating to environmental information. On the basis of the committee's work, the Government will propose amendments to the legislation.

1.7 Environmental measures included in the central government budget for 2001 (environmental profile)

Table 1.1 lists allocations by all the ministries to environmental measures in the central government budget for 2001. Since the mid-1980s, various ways of presenting these figures have been used. According to recent changes to the system, funds are now only to be classified as expenditure on environmental measures if they are used entirely to improve the state of the environment, if environmental considerations were the factor that determined whether the measure or project was implemented, or if the allocations are intended to counteract adverse environmental effects of other measures (preventive measures).

The Government would like to stress that allocations to environmental measures constitute only a small part of its environmental policy. Other instruments such as taxes, licences and legislation are just as important as allocations in the central government budget.

The figures given in Table 1.1 are estimates and must be interpreted with care. In many cases, measures are introduced for various reasons and to achieve several goals, and this can make it difficult to distinguish the environmental element. For example, the reasons for improvements in railway services and other public transport will include environmental considerations and the need for better communications, increases in capacity, improvement of standards and so on. Research is another area where it can be difficult to distinguish clearly between different motives and reasons for particular measures.

The table shows that total expenditure on environmental measures is somewhat below the corresponding figures for 2000. Some of this can be explained by changes in the way some allocations are posted in the budget, see footnotes 1–5 to the table.

There is an overall increase in environmental expenditure in the budget of the Ministry of Transport and Communications. This is partly related to special environmental measures along existing roads in order to comply with the regulations relating to limit values for local air pollution and noise, laid down pursuant to the Pollution Control Act, and to measures to limit emissions of chemicals from airports. Another item that shows an increase this year is toll revenues earmarked for improvements of public transport. This is because a larger proportion of the planned public transport measures that are part of several of the toll road schemes will be carried out in 2001.

The increase in the Ministry of Foreign Affairs' budget is mainly explained by larger allocations to nuclear safety measures in Russian and Eastern Europe and to environmental assistance.

The growth in the budget of the Ministry of Health and Social Affairs is explained by higher allocations to the Norwegian Radiation Protection Authority.

NOK 600 million of the allocations to environmental measures in the Ministry of Agriculture's budget is related to the Agricultural Agreement. The main aims are to reduce pollution and encourage the management, maintenance and restoration of

the cultural landscape, including its biological diversity, to improve the accessibility of cultural monuments, reduce the risk to health and the environment associated with the use of pesticides and to promote ecological farming. Allocations to ecological farming have been increased by NOK 17 million. Conservation measures for cultivated and cultivable land will be strengthened to safeguard the resource base for agricultural production.

One outcome of the debate on Report No. 29 (1998–1999) to the Storting on Norwegian energy policy was that the Storting asked the Government to evaluate various schemes for speeding up the development of «CO_2-free gas-based power production, and to submit proposals to the Storting. Public funding for research into technology to reduce emissions from gas-fired power plants has until now been channelled through the KLI-

Table 1.1 Allocations for environmental measures in the central government budget for 2001 (environmental profile)

(Million NOK)

Ministry:	Budget 2000	Proposal 2001
Ministry of Labour and Government Administration[1)]	7.0	6.5
Ministry of Children and Family Affairs	4.2	4.1
Ministry of Finance	12.5	8.4
Ministry of Fisheries	333.2	342.6
Ministry of Defence	571.4	564.0
Ministry of Justice	54.2	54.5
Ministry of Education, Research and Church Affairs	325.2	335.6
Ministry of Local Government and Regional Development[2)]	157.0	97.0
Ministry of Cultural Affairs	410.7	415.3
Ministry of Agriculture[3)]	1045.2	1020.0
Ministry of the Environment[4)]	2406.2	2244.6
Ministry of Trade and Industry	248.2	235.9
Ministry of Petroleum and Energy[5)]	454.6	414.7
Ministry of Transport and Communications[6)]	3437.6	3562.3
Ministry of Health and Social Affairs	109.7	122.3
Ministry of Foreign Affairs[7)]	1450.0	1495.0
Total all ministries	11026.9	10930.2

1) The figures do not include funds allocated to the Directorate of Public Construction and Property for the rehabilitation of architecturally important buildings, but do include energy efficiency measures run by the Directorate.

2) The Ministry of Local Government and Regional Development used a narrower definition of environmental measures in the 2001 budget than in 2000. In the 2001 budget, regional and district policy measures have not been included. These totalled NOK 68 million in the 2000 budget.

3) Allocations to environmental measures in the Ministry of Agriculture's budget have dropped because the operating budget for the county governors has been transferred to the Ministry of Labour and Government Administration. In 2000, environmental measures accounted for NOK 56.9 million of this. If this is taken into account, the share of the Ministry of Agriculture's budget allocated to environmental measures is NOK 30 million higher than in the 2000 budget.

4) The main reason for the reduction in the Ministry of the Environment's budget is that the operating budget for the county governors has been transferred to the Ministry of Labour and Government Administration. The budgeting routines for the Norwegian Government Environmental Fund have also been altered.

5) There is a proposal to increase funding for measures to bring about a shift in energy production and use by NOK 50 million to NOK 150 million in 2001. If this is included, there is a slight rise from 2000 to 2001 for the Ministry of Petroleum and Energy.

6) Negotiations with Norwegian State Railways on purchases of passenger transport services by the central government sector were not completed at the time of publication. In accordance with a temporary agreement of 19 December 2000, the figure for 2000 has also been used in the 2001 budget (NOK 987 million).

7) Norwegian development assistance policy is based on standards laid down by the OECD/DAC. The definition of environmental protection measures differs somewhat from that used by the Ministry of the Environment.

MATEK programme under the Research Council of Norway. In the budget for 2001, the Government proposes to increase funding for further development of technology for CO_2 removal by at least NOK 20 million, to be allocated to the budgets of the Ministry of the Environment, the Ministry of Trade and Industry and the Ministry of Petroleum and Energy.

2 Cross-sectoral environmental policy and sustainable urban development

2.1 Integration of environmental considerations into the various sectors and result monitoring

An important basis for the Government's environmental policy is that environmental considerations must be integrated into all policy areas and form part of the basis for decision-making processes and developments in Norway, see Chapter 1.4. This chapter gives a brief presentation of the sectoral environmental action plans that were drawn up in connection with the central government budget for 2001, gives an account of the project «Green State» and describes the Government's policy for sustainable urban development. More information about sectoral environmental action plans can be found in Chapter 1.

Result monitoring in the environmental field is dependent on satisfactory systems and tools for data collection and analysis and quality assurance. The most important sources of data will be reports from the various sectors, environmental monitoring systems and environmental statistics. These will be assembled in a system for documentation of results to be administered by the environmental authorities. In addition, new forms of reporting to the public and other users have been developed. For instance, a new version of the website *Miljøstatus i Norge* (*State of the Environment Norway*) was launched on 1 April 2000.

Environmental action plan for the Ministry of Local Government and Regional Development

The Ministry's environmental action plan gives an account of measures intended to help in achieving the national environmental policy targets. The action plan covers the following policy areas: the working environment and safety, the Sami and national minorities, regional policy, and the housing and building sector.

The authorities responsible for the working environment and safety use the regulations relating to systematic health, environmental and safety activities in enterprises (Internal Control Regulations) as the foundation for preventive work and damage limitation efforts in enterprises. In most cases, efforts to improve the working environment will also have a positive effect on the outdoor environment, and vice versa.

The Ministry's plan shows how it is contributing to a coherent environmental policy that safeguards Sami interests and rights through dialogue and cooperation with the Sami parliament, the Ministry of the Environment and other relevant ministries.

Even though regional policy does not include direct environmental policy targets, there are links between these policy areas. Regional policy is to a large extent concerned with influencing settlement patterns and the geographical distribution of business and industry, welfare and economic growth. Factors that influence the state of the environment in Norway include the size of urban areas, the extent of concentration where people live, and land use patterns. An environmental check-list will therefore be drawn up for grants and loans for business activities administered by the Norwegian Industrial and Regional Development Fund. Biological diversity, outdoor recreation and the cultural heritage will be some of the factors that must be taken into account when financial support is granted. Criteria will also be drawn up to ensure that environmental considerations are taken into account in cases relating to regional policy instruments.

The environmental action plan for the housing and building sector evaluates the environmental impact of the construction, design, and use and maintenance of all types of buildings, utilization of existing buildings, demolition, and any associated construction activities. Construction activities can often have an adverse impact on the environment. In particular, energy use, the use of dangerous chemicals in building products and the substantial amounts of construction waste that are landfilled can have marked negative consequences. The main priorities for this sector in the action plan are therefore:

- loans and grants from the Norwegian State Housing Bank are to incorporate environmental considerations more fully,
- improvement of technical regulations pursuant to the Planning and Building Act: this will involve developing standards, methods and tools for evaluating the environmental impact of the use of various materials and technical solutions.

There will be a greater emphasis on information, for example on sound and environmentally-friendly solutions, to enable all those involved in the housing and construction sector to alter routines and take environmental considerations more fully into account in their activities. The plan assumes that the positive dialogue between the industry and the Økobygg programme (a programme to raise eco-efficiency within the industry) will continue.

Environmental action plan for the Ministry of Education, Research and Church Affairs

The Ministry of Education, Research and Church Affairs is responsible for developing and disseminating knowledge, changing people's attitudes and developing their skills, and therefore has an important role to play in the environmental field. This comes into play in connection with creating the insight, understanding, willingness and ability that are necessary to ensure sustainable development. In all areas within the ministry's sphere of responsibility – church affairs, schools, higher education and research, every opportunity will be taken to demonstrate the links between the natural resource base, ways of life, economy and politics, and how effective integration of environmental considerations into all sectors can help to bring about ecologically sustainable development. These links are not clearly enough acknowledged today. Furthermore, the ministry will seek to raise awareness as regards the use of resources both locally and centrally in all its areas of responsibility, introduce environmentally-sound routines in the ministry and encourage its subordinate agencies to do the same. Efforts will also be made to preserve valuable monuments and sites belonging to the church and the education sector.

The Ministry intends to continue the development of the Environmental Education Network (*Nettverk for miljølære*). This is an Internet-based meeting place for schools, the public administration, research and other interested parties. Central and local research institutions and administrative bodies devise specific projects for schools, such as surveying biological diversity or land use, monitoring air or water pollution, etc. When schools carry out such projects with guidance from research institutions, they improve their expertise in these fields. Thus, local environmental measures and environmental education can complement each other. The network also serves as a channel for communication. Schools that carry out projects for the network and that have drawn up environmental action plans can be awarded the Green Flag as part of the Eco-Schools programme run by the Foundation for Environmental Education in Europe.

The Ministry of Education, Research and Church Affairs will promote the development of high-quality institutions in higher education and research as a basis for environmental education and high standard research. Educational and research institutions are encouraged to do more to facilitate inter-disciplinary study and research programmes in the environmental field. Institutions are expected to review the relevance and quality of their courses regularly, to ensure satisfactory recruitment to courses of study and meet society's needs for environmental expertise. Institutions are also expected to offer relevant, high-quality continuing education and training in the environmental field, and to ensure good results.

The Ministry will also take steps to make information on the scientific collections at the universities' natural history museums more readily available by means of information technology and will ensure that a species data bank is developed.

The Ministry will seek to ensure that the environmental priorities set out in the white paper on research are followed up. The development of Svalbard as an international platform for Arctic research will be continued. For example, the University Courses on Svalbard will be further developed as a research and educational institution with an international profile.

The Ministry will manage church properties in such a way as to conserve biological diversity and maintain cultural environments.

The Ministry of Education, Research and Church Affairs intends to revise its environmental action plan on an annual basis.

Environmental action plan for the Ministry of Agriculture

The environmental action plan for this sector includes agriculture, forestry, fish health, reindeer husbandry and other activities that utilize uncultivated land. The plan is structured around the eight priority areas of environmental policy: for each of

them, it describes the main challenges, targets and measures in the agricultural sector up to 2004.

There are plans for a more restrictive soil conservation policy. Further steps will be taken to promote sustainable agriculture and forestry that take into account the conservation of biological diversity, cultural landscapes, individual biotopes and ecosystems. Reindeer husbandry policy will be designed to ensure a better balance between reindeer numbers and the grazing resources available. The promotion of ecological agriculture will be given higher priority, and the aim is for ten per cent of all agricultural areas to be farmed ecologically by 2010.

Outdoor recreation and the cultural heritage will be given greater weight in the development of agricultural and forestry policy. Nutrient discharges are to be reduced to the extent required by Norway's commitments under the North Sea Declarations and the EU's nitrate directive, by further implementation of effective measures. The risk to health and the environment posed by pesticide use is to be reduced by 25 per cent from 1998 to 2002. One of the central policy instruments to be used here is a tax on pesticides graded according to the risk they pose to health and the environment.

A programme for increasing the recycling of organic waste and sewage sludge is to be established and implemented. At the same time efforts are to be made to ensure sound and efficient management of all waste from the agricultural sector. Greenhouse gas emissions from agriculture are to be reduced by providing more information about the use of livestock manure and making its use more efficient, and by making better use of the potential of the forestry industry.

The Ministry of Agriculture is developing baseline monitoring and result monitoring systems in close cooperation with the Ministry of the Environment. There are plans to coordinate all agricultural policy instruments that have an environmental impact within the framework of an environmental programme. There are also plans to introduce a requirement for all farms that receive support from this programme to develop their own environmental plans.

The Ministry's action plan includes a number of measures to promote outdoor recreation. These include measures to raise awareness of the value of agricultural landscapes for recreation and improve opportunities for public access to these areas. There will be more emphasis on varying the application of policy instruments in the forestry sector from one type of forest to another, and outdoor recreation interests will be included as part of the basis for evaluating which policy instruments are appropriate.

The Ministry of Agriculture's action plan also includes measures relating to plant and animal health, genetic resources, preventing the establishment of alien species and genetically- modified organisms in Norway, ways of disseminating information and building up expertise in the agricultural sector, and international cooperation related to the environment.

Environmental action plan for the Ministry of Trade and Industry

One of the main objectives of the Government's industrial policy strategy is to increase wealth creation in onshore business and industry on the Norwegian mainland. Different types of industrial activity exert environmental pressures that affect the eight priority areas of environmental policy. Encouraging business and industry to become more environmentally-friendly is a central element of industrial policy. A focus on environmentally-sound solutions will be of crucial importance for the long-term competitiveness of companies. The responsibility for environmental policy instruments targeted at business and industry is split between several ministries, and the Ministry of Trade and Industry has only a limited set of instruments at its disposal. The Norwegian Industrial and Regional Development Fund, the Norwegian Guarantee Institute for Export Credits, the Norwegian Maritime Directorate and the Research Council of Norway are all important here. All these bodies are required to integrate environmental considerations into their activities.

The industrial sector has increasingly focused on environmental issues as environmental problems have become more apparent. The market is now increasingly demanding goods and services that are adapted to the environment.

Many enterprises have realized that environmental measures can result in cost savings and thus also be of direct commercial benefit. The sector's own efforts are of crucial importance in ensuring that we follow a sustainable path of development. Important tools for raising awareness of environmental issues include environmental certification, environmental management systems and eco-labelling schemes. The Ministry's environmental action plan encourages companies to make use of these. Various industry branches, including the construction industry, are reviewing environmental problems associated with their activities, setting environmental targets, and taking steps and

instituting cooperation to achieve them. The Ministry of Trade and Industry is encouraging other branches of industry to consider similar cooperation projects where relevant.

2.2 Green state

In addition to the environmental action plans, which are intended to clarify sectoral responsibilities for environmental policy, it is important for the state to ensure that environmental considerations are integrated into its own activities. The public sector is a large consumer, with considerable power to influence production and consumption. To ensure that environmental policy instruments have the desired effects, and to build public confidence that the state is pursuing a coherent policy, the state sector must be run in a way that is consistent with what other sectors are expect to achieve, for example as regards environmentally sound procurement, environmental reporting and environmental management systems. Thus, better adaptation of state-sector activities to the needs of the environment is an important element both of environmental policy and of the efforts to renew and reorganize the public administration and improve its efficiency.

Report No. 58 (1996–96) to the Storting on an environmental policy for sustainable development included a proposal for a pilot project called «Green State» to gain experience of how the state can reduce the environmental impact of its own activities and thus act as a beacon for other sectors.

The project «Green State» was launched in 1998. Its objective was to test systematically how environmental considerations best can be integrated into state-sector activities and to document the effects of this.

Ten state-sector agencies have been taking part in the project. The measures implemented are in areas where each agency has decision-making authority, and focus for example on energy use, procurement, buildings, transport, the use of ICT and waste strategies. There have been many positive developments; for example the Government Administration Services has received certification from Ecolabelling Norway, and can now use the Nordic Swan Label on its products. The Norwegian National Rail Administration and the Directorate of Public Construction and Property are cooperating on eco-efficient procurement. The Norwegian Petroleum Directorate has identified ICT as an important means of reducing environmental impact, and has been able to use computer-based solutions to reduce emissions related to travel and travel costs. A website for the Green State project has been launched. This will be used to make the results of the project and the experience that has been gained available both to other state-sector agencies and to Norwegian society in general, and will provide a basis for implementing measures in other sectors and enterprises.

The project has been extended to the end of 2001. This will make it possible to document the results better and to sum up both environmental and economic gains from the project. The Government will review ways of continuing efforts to integrate environmental considerations into state-sector activities.

2.3 Sustainable urban development – a new policy for urban areas

Today's urban development patterns, including expanding urban areas, high consumption of resources and substantial pollution problems, are not sustainable. Both the population and business and industry are dependent on well-functioning towns and a good urban environment. For large groups of people, a better urban environment is essential for a good residential environment. The quality of the urban environment is determined by factors such as traffic conditions, levels of air pollution and noise, access to green spaces and opportunities for outdoor recreation, and the existence of cultural monuments and sites and social meeting places. Good solutions therefore require cooperation and coordination between many different sectors.

- The Government will improve the planning process in urban areas that stretch across several municipalities. Overall regional plans will be needed that lay down patterns of development, transport systems, the green structure and the structure of urban centres. The Ministry of the Environment and the Ministry of Transport and Communications will cooperate with local and regional authorities on the development of strategic land use and transport plans that can be used as a basis for land-use planning in the municipalities, the establishment of major commercial or industrial activities, investments in infrastructure and operational planning, for example for public transport. Ways of linking these plans with planning at national level will be evaluated, for example in connection with revision of the national transport plan. These efforts will be considered in conjunction with the

recommendations of the committee appointed to consider the distribution of responsibility and authority between administrative levels.

- The Government will revise the National Policy Guidelines for coordinated land-use and transport planning. An evaluation shows that the guidelines need to be modified in several ways, for example to distinguish more clearly between rules for urban and rural areas, make the requirements for regional services to be located near regional public transport nodes stricter, ensure a balance between public transport services and available parking capacity in urban areas.
- The national policy decision temporarily prohibiting the establishment of shopping centres outside central parts of towns and urban settlements has helped to strengthen the position of town centres. This will be replaced by approved plans for the structure of town centres (including stronger links to the public transport system), existing centres, settlement patterns and trade catchment areas as these are drawn up.
- Statistics Norway has developed new methods of mapping land use in towns and urban settlements. This work is being continued with a focus on current statistics and on monitoring changes in land use in towns.

Transport policy is particularly important as a means of achieving satisfactory urban development. A number of measures will be implemented

Box 2.1 Monitoring the results of environmental policy

One important task in the time ahead will be the continuous development and improvement of management tools for environmental policy. Once these are fully in place, the sectoral environmental action plans together with the result monitoring system will constitute an integrated system of policy instruments, measures, and monitoring and control systems that will make it possible to manage environmental policy effectively and in a clearly targeted way.

- The white paper on the *Government's environmental policy and the state of the environment in Norway* will provide an annual report on environmental trends and present Government policy in the eight priority areas of environmental policy.
- For each priority area, long-term *strategic objectives* for environmental policy are drawn up. More specific *national targets* are defined under each strategic target. These are verifiable, and time limits are set for their achievement. The national targets will reflect environmental pressures (emissions, land use, etc.) that have an impact on the state of the environment, or indicate the environmental conditions the Government wishes to achieve. The strategic targets provide the basis for *sectoral targets.*
- Trends in the state of the environment, factors that have an impact on the state of the environment and the implementation of environmental measures will be monitored using *national key figures.* A system of key figures is currently being developed. Key figures should give a clear indication of status in relation to the strategic objectives and national targets of environmental policy. As far as possible, key figures have been used as a basis for reporting on environmental status in this white paper, and will also be used in international reports and other contexts where information on the state of the environment in Norway is presented. As our knowledge of the state of the environment and environmental pressures improves, the key figures may have to be further developed.
- Each ministry is responsible for drawing up a *sectoral environmental action plan,* which covers sectors for which the ministry in question has administrative responsibility. The action plans are intended to present the environmental problems facing the sectors, sectoral targets, and instruments and targets within the priority areas for environmental policy. Before revision of the existing action plans is started, the current system will be thoroughly evaluated.
- The sectoral authorities are required to *report* to the environmental authorities each year on environmental trends in their sectors. The reports must include an account of the use of policy instruments. These reports will be an important part of the basis for the white paper on the Government's environmental policy and the state of the environment in Norway.

to make urban transport more environmentally friendly, with the cooperation of regional and local authorities:

- The Government will invite towns and urban areas to test the organization of local transport policy. This will make it possible to set overall priorities for investments and operations for all modes of transport, seen in conjunction with land use and plans for urban development. The Ministry of Transport and Communications will, in consultation with other ministries that are involved, start trials of alternative ways of organizing the administration of the transport system, as set out in Report No. 46 (1999–2000) on a national transport plan for 2002–2011.
- In a bill proposing amendments to the Road Traffic Act (Proposition No. 23 (2000–2001) to the Odelsting), the Government has suggested the introduction of road pricing and that revenues should be earmarked for local transport purposes. This will make it easier for local authorities to regulate traffic where this appears to be an appropriate and effective means of reducing the cost of congestion and improving local environmental conditions.
- The Government will strengthen the role of the bicycle as a means of transport, particularly in larger towns and urban settlements. This will have a positive effect on the urban environment and people's health. The main task is to develop a continuous, safe network of cycle paths that are attractive to users. Special priority will be given to routes where the bicycle can be an alternative for travel between workplaces, town centres, outdoor recreation areas and residential areas, and to links with the public transport network.
- The instruments municipalities can use to regulate parking will be improved, for instance during revision of the Planning and Building Act.

3 Conservation and sustainable use of biological diversity

Biological diversity means the variety of life at all levels, i.e. species of plants, animals and microorganisms, their genetic material and the communities they form in interaction with each other and the abiotic environment. Biological diversity is the most important basis for human existence, but our knowledge of these riches is still highly inadequate. At the same time, we are witnessing extensive and irreversible losses of biological diversity on a global scale.

Biological diversity is of crucial importance for economic development and for the quality of people's lives and their welfare. The rich variety of life on earth is also the foundation for future generations, for their living conditions and the options they have for production. Furthermore, the variety of species, habitats and landscapes is very valuable in aesthetic and historical terms.

In its Global Biodiversity Assessment, the UN concluded that the adverse effects on biological diversity are now increasing so dramatically that they are threatening the very foundation of sustainable development. We are facing a series of major challenges in our efforts to prevent the loss of biological diversity, ensure sustainable use of biological diversity and find fair and equitable ways of sharing the benefits of this use.

3.1 Goals

As regards the conservation of biological diversity, the Government bases its efforts on the following goals (see box):

3.2 Policy instruments and measures

The Government will:

- submit a white paper on biological diversity in spring 2001,
- start an evaluation of protection measures already adopted for coniferous forest in the course of 2001,
- establish an administrative area for family groups of wolves and at the same time prevent the establishment of such groups outside this area,
- evaluate the current wolverine management regime and consider changes for the 2001 season

Box 3.1 Goals for conservation and sustainable use of biological diversity

Strategic objective:

The environment shall be managed in a way that maintains the diversity of habitats and landscape types and ensures that there are viable populations of naturally-occurring species: this will ensure that biological diversity can continue to evolve.

National targets:

1. A representative selection of Norwegian habitats shall be protected for future generations.
2. Major disturbance such as infrastructure development shall be avoided in endangered habitats, and in vulnerable habitats important ecological functions shall be maintained.
3. The cultural landscape shall be managed in such a way that biological diversity, the historical and aesthetic value of the landscape and its accessibility are maintained.
4. Harvesting and other use of living resources shall not cause species or populations to become extinct or endangered.
5. The introduction of alien species through human activity shall not damage or limit ecosystem functions.
6. Populations of endangered species shall be maintained or restored to viable levels.
7. The needs of future generations shall be taken into account when managing soil resources that are suitable for cereal productions.

to reduce the number of sheep and domestic reindeer killed,
- implement an integrated national programme for registration of large carnivores, with a sound local basis,
- intensify public-sector efforts to prevent the escape of fish from fish farms to ensure that by 2005, escaped fish present no threat to wild salmon stocks,
- maintain a high level of activity in liming programmes for watercourses, adapted to the framework of an integrated management regime for salmon stocks,
- submit proposals for intensifying efforts to deal with the salmon parasite *Gyrodactylus salaris* in 2002,
- further develop the Master Plan for Water Resources and supplement the Protection Plan for Water Resources to adapt them more closely to the limited possibilities for further hydropower developments,
- give the municipalities greater authority as regards motor traffic on uncultivated land, and amend the regulations governing motor traffic on snow-covered ground,
- promote higher-density urban development that can reduce the pressure on soil resources and biological diversity.

4 Outdoor recreation

Opportunities for outdoor recreation give benefits that must be maintained and equitably distributed throughout the population to improve the quality of people's lives and their health. People who take part in outdoor recreation activities learn more about the environment, and this increases support for environmental protection. This is why the Government considers national targets for the following areas of outdoor recreation policy to be important: opportunities for outdoor recreation based on the right of access to uncultivated land, steps to safeguard valuable outdoor recreation areas and the green structure, particularly in towns and built-up areas, and measures to stimulate participation in outdoor recreation, especially by children and young people.

4.1 Goals

As regards outdoor recreation, the Government bases its efforts on the following goals (see box):

4.2 Policy instruments and measures

A white paper on outdoor recreation was submitted to the Storting in April 2001. Its objectives are to:

- highlight the importance of environmentally-friendly outdoor recreation for sustainable development,
- strengthen the position of environmentally-friendly outdoor recreation activities based on the right of public access to uncultivated land,
- ensure that children and young people have opportunities to grown up in close contact with nature,
- implement further measures to ensure public access to the shoreline,
- demonstrate the importance of outdoor recreation for people's well-being and public health,
- improve opportunities for hunting and fishing,
- evaluate whether to transfer more tasks and responsibilities relating to outdoor recreation to the municipal level.

Box 4.1 Goals for outdoor recreation

Strategic objective:

Everyone shall have the opportunity to take part in outdoor recreation as a healthy and environmentally sound leisure activity that provides a sense of well-being both near their homes and in the countryside.

National targets:

1. The tradition of outdoor recreation based on the right of access to uncultivated land shall be kept up by all sections of the population.
2. Children and young people shall be given the opportunity to develop skills in outdoor recreation activities.
3. Areas of value for outdoor recreation shall be safeguarded so that environmentally-friendly access and passage and harvesting of natural resources is promoted and the natural resource base is maintained.
4. Near housing, schools and day care centres, there shall be adequate opportunities for safe access and play and other activities in a varied and continuous green structure and ready access to surrounding areas of countryside.

5 The cultural heritage

Our cultural heritage is a source of knowledge about people's lives and activities throughout history, about settlements and production methods, and about artistic and technical skills at different times. It can improve our understanding of the links between past and present, between people and the natural environment and between different cultures. We can use our heritage to rediscover lost knowledge and skills and to find answers to new questions that arise in connection with sustainable development.

5.1 Goals

As regards the cultural heritage, the Government bases its efforts on the following goals (see box):

5.2 Policy instruments and measures

The Government will:

- put forward a plan for increasing funding and speeding up the restoration of monuments and sites,
- ensure that all sectors have a clear responsibility for the cultural heritage,
- evaluate whether to transfer tasks and responsibilities relating to the cultural heritage to the municipal level,
- develop ways of ensuring that expertise in the cultural heritage field is readily accessible to the municipalities,
- review incentives and try out new forms of co-operation between the public sector, private owners and business and industry,
- continue to register and survey archaeological and architectural monuments and sites and cultural environments and make the information available in databases.

Box 5.1 Goals for cultural heritage conservation

Strategic objective:

The diversity of archaeological and architectural monuments and sites, as well as cultural environments, shall be managed and enhanced as resources for continued active use, to provide opportunities for experiencing our cultural heritage, and as a basis for further development of the physical environment. Cultural monuments and sites of national importance are to be managed as a repository of knowledge and a source of emotional and aesthetic experience for current and future generations.

National targets:

1. Annual losses of archaeological and architectural monuments and sites and cultural environments as a result of demolition, damage or decay shall be minimized, and by the year 2008 shall not exceed 0.5 per cent of the total.
2. The representative selection of monuments, sites and cultural environments shall be maintained at a standard corresponding to the 1998 level, and a standard requiring only normal maintenance shall be achieved for protected buildings and installations by 2010.
3. The selection of permanently protected monuments, sites and cultural environments shall include a wider range in terms of geography, social class, ethnicity and time periods, so that any important categories that are poorly represented or missing are better represented by 2004 than in 1998.

6 Eutrophication and oil pollution

Discharges of particulate matter, nutrients and oil can damage ecosystems. Large discharges of particulate matter and nutrients may result in sludge deposition and eutrophication. This leads to deterioration of water quality both in fresh water bodies and in marine areas, and may in turn cause fish mortality and loss of biological diversity, reduce the value of water bodies for bathing and other forms of outdoor recreation, and make the water less suitable for purposes such as drinking, fish farming and irrigating agricultural areas. Discharges of oil and chemicals from shipping and the petroleum industry can damage organisms and ecosystems in the open sea, on the sea floor and in the coastal zone. Discharges of oil from onshore activities can also damage soil organisms and ecosystems.

6.1 Goals

As regards eutrophication and oil pollution, the Government bases its efforts on the following goals (see box):

6.2 Policy instruments and measures

The Government will:

- develop a comprehensive, integrated policy for marine and coastal areas,
- strengthen the oil pollution emergency response system and make it more effective.

Box 6.1 Goals for reduction of eutrophication and oil pollution

Strategic objective:

The water quality in fresh water bodies and marine areas shall be high enough to maintain species and ecosystems and to take account of the requirements of human health and welfare.

National targets:

1. Inputs of the nutrients phosphorus and nitrogen to parts of the North Sea that are adversely affected by eutrophication shall be reduced by about 50 per cent by 2005 using 1985 as the base year.[1]
2. Operational discharges of oil shall not result in unacceptable injury to health or environmental damage. The risk of environmental damage and other adverse effects of acute pollution shall be acceptable.[2]

1. This target is being evaluated in relation to Norway's international obligations.
2. Criteria and a time frame for this target are being drawn up.

7 Hazardous substances

Our use of hazardous chemicals and emissions of these substances are responsible for one of the most serious environmental threats facing the world. All products contain chemicals, and they are used in most industrial processes. Many of these substances can injure people or cause environmental damage. Emissions of chemicals to the environment may occur at any stage of the life cycle of a product. They are generated by mining activities, by the manufacture of raw materials and processed goods, by the use of products in households and at work, by the transport sector, by agriculture and by waste treatment. In addition, Norway receives inputs of chemicals from long-range transport with winds and ocean currents.

A number of chemicals break down very slowly in the environment and can therefore accumulate in food chains. They are a serious threat to biological diversity, food supplies and the health of future generations. The most harmful chemicals, including persistent organic pollutants (POPs) such as PCBs and dioxins, can cause damage even at very low concentrations. Hazardous chemicals may for example cause diseases such as cancer, trigger allergies, have adverse effects on reproduction or damage the genetic material of plants and animals.

See Box 7.2 for more about POPs and heavy metals.

Box 7.1 Goals for reducing the risks associated with hazardous substances

Strategic objective:

Emissions and use of hazardous chemicals must not cause injury to health or damage the productivity of the natural environment and its capacity for self-renewal. Concentrations of the most hazardous chemicals in the environment shall be reduced towards background values for naturally occurring substances and close to zero concentrations for man-made synthetic substances.

National targets:

1. Emissions of certain environmentally hazardous substances shall be eliminated or substantially reduced by 2000, 2005 or 2010.
2. Emissions and use of substances that pose a serious threat to health or the environment shall be continuously reduced with a view to eliminating them within one generation (by the year 2020).
3. The risk that emissions and use of chemicals will cause injury to health or environmental damage shall be reduced substantially.
4. Pollution of soil, water and sediments caused by earlier activities, inappropriate disposal of waste, etc., shall not entail a risk of serious pollution problems.

7.1 Goals

As regards hazardous substances, the Government bases its efforts on the following goals (see box 7.1):

7.2 Policy instruments and measures

The Government will:

- introduce new restrictions on the use of the environmentally hazardous chemicals on the priority list (e.g. heavy metals for impregnation of wooden materials, lead shot, nonylphenol and nonylphenolethoxylates, octylphenol and octylphenolethoxylates (alkyl phenols), tributyltin and triphenyltin compounds (TBT/TPT) as antifouling preparations for ships, and highly chlorinated, short chained paraffins),
- continue to lay down strict conditions as regards emissions of priority environmentally hazardous substances in discharge permits for industry,
- tighten up control of compliance with restrictions on use and licensing conditions for environmentally hazardous substances,

Box 7.2 POPs and heavy metals

Some of the most hazardous chemicals are certain organic substances (persistent organic pollutants, or POPs), for example PCBs, DDT and dioxins, and heavy metals such as lead, cadmium and mercury. The properties that make them so dangerous are toxicity even at low concentrations, low degradability and a high bioaccumulation potential (i.e. they accumulate in food chains). We have not yet reached international agreement on exactly which substances are to be included in these groups, or which levels of toxicity, low degradability and bioaccumulation potential should be used to define chemicals as environmentally hazardous.

Norway has drawn up a priority list of environmentally hazardous substances, and has set national targets for the elimination or substantial reduction of emissions of these substances by 2000, 2005 or 2010, see national target 1 in box 7.1. The countries involved in cooperation under the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic have agreed to the target of eliminating emissions of hazardous substances within one generation (see national target 2 in box 7.1). The Norwegian environmental authorities have also drawn up a set of criteria for undesirable properties of chemicals, see box 7.3. Chemicals that satisfy these criteria are not necessarily POPs or heavy metals: they would for example include substances that are carcinogenic but do not show low degradability or a high bioaccumulation potential. Special caution is required if chemicals with these properties are used. The authorities have published an observation list of about 200 substances that satisfy the criteria.

Box 7.3 Criteria for undesirable properties

The properties listed below are those which are particularly undesirable. Limit values have been laid down for each of them, and these values are the authorities' criteria for undesirable properties. The criteria are being used as a basis for deciding priorities nationally and internationally and in the Norwegian Pollution Control Authority's control activities. The criteria also give a message to anyone who uses or handles chemicals that special caution is required if chemicals have these properties:

- acute toxicity
- chronic toxicity
- very high chronic toxicity
- sensitizing properties
- toxicity to reproduction, or possible effects during lactation
- mutagenic properties
- carcinogenic properties
- high bioaccumulation potential combined with low degradability
- high bioaccumulation potential combined with very high acute toxicity
- high bioaccumulation potential combined with very high chronic toxicity
- low degradability combined with very high acute toxicity
- low degradability combined with very high chronic toxicity
- very high acute toxicity to aquatic organisms
- dangerous for the ozone layer.

- use reporting, research, monitoring and information activities to improve the provision of information on chemicals to the authorities and the public and improve people's knowledge of chemicals,
- seek to influence the development of EU legislation on chemicals so that the environmental standards applicable in the European Economic Area (EEA) are raised: this includes seeking strict restrictions on the use of high-priority environmentally hazardous substances, correct labelling for dangerous chemicals, and satisfactory investigations of the health and environmental hazards associated with all chemicals,
- play a leading role in the adoption of ambitious international agreements that prohibit or restrict the use of environmentally hazardous substances at both regional and global level,
- ensure that the system of administrative responsibilities for chemicals is efficiently organized,
- intensify and focus efforts to deal with contaminated sites, fjords and harbours.

8 Waste and recycling

Waste means any unwanted remains from production and consumption. Final treatment of waste, which means landfilling or incineration, results in emissions to air, soil and water and is a source of local and global environmental problems. Methane emissions from landfills are estimated to account for 7 per cent of Norway's total emissions of greenhouse gases.

In addition, waste treatment results in emissions of hazardous substances, dust, acidifying substances, heavy metals and nutrients, and results in unsightly littering. The extent of the environmental problems depends on the quantity and type of waste generated and delivered for final treatment and on standards at waste treatment facilities. These standards are regulated by licensing conditions.

8.1 Goals

As regards waste and recycling, the Government bases its efforts on the following goals (see box):

8.2 Policy instruments and measures

The Government will:

- follow up the proposals for further development of waste management policy that were presented in Report No. 8 (1999–2000) to the Storting and regularly evaluate the need to adjust waste policy instruments to make their application more efficient,
- consider proposals for amendments to the Pollution Control Act, including changes in the definitions of waste types, repealing the requirement for all municipalities to draw up waste management plans, measures to reduce the risk of littering, and funding for municipal control,
- continue the agreements with branches of industry on packaging waste with some adjustments to ensure that a high proportion of the waste continues to be collected and recycled,
- evaluate the need for changes in the fee for final waste treatment to ensure more correct pricing of emissions and provide a stronger incentive for energy recovery from waste,
- issue regulations laying down stricter requirements for landfills, expand the list of hazardous waste categories, and consider appropriate adaptations to the EU arrangements for producer responsibility for end-of-life vehicles.

Box 8.1 Goals for waste and recycling

Strategic objective:

Damage to people and the environment caused by waste is to be minimized. To achieve this, waste problems are to be solved by means of policy instruments that ensure a good socio-economic balance between the quantity of waste generated and the quantities recycled, incinerated or landfilled.

National targets:

1. The growth in the quantity of waste generated shall be considerably lower than the rate of economic growth.
2. The quantity of waste delivered for final treatment is to be reduced to an appropriate level in economic and environmental terms. Using this as a basis, the target is for 25 per cent of the total quantity of waste generated to be delivered for final treatment in 2010.
3. Practically all hazardous waste is to be dealt with in an appropriate way, so that it is either recycled or sufficient treatment capacity is provided within Norway.

9 Climate change, air pollution and noise

9.1 Climate

Greenhouse gas emissions may result in a rise in global mean temperature at the earth's surface, which in turn may bring about changes in precipitation patterns and wind systems, displacement of climate zones and a rise in sea level. These changes may have far-reaching effects on natural ecosystems and human society.

The Climate Change Convention, which was adopted in 1992 and entered into force in 1994, provided the first important basis for international efforts to combat anthropogenic climate change. Negotiations on the Kyoto Protocol under the Convention were completed in December 1997. The protocol sets out a commitment by the industrial countries to reduce their aggregate greenhouse gas emissions by at least 5 per cent compared with the 1990 level by the period 2008–2012. The Protocol specifies that in calculating their emissions, countries are to include net changes in greenhouse gas removals by sinks resulting from direct human-induced land-use change and forestry activities, limited to afforestation, reforestation and deforestation since 1990. Norway's commitment under the Kyoto Protocol is the same as its national target for greenhouse gas emissions, see box 9.1. The Storting has emphasised the importance of ensuring that Norway fulfils a substantial proportion of its commitment by means of national measures, and of making active use of the Kyoto mechanisms as a supplement to national measures. The Kyoto mechanisms are joint implementation and the clean development mechanism (project-based cooperation between industrial countries and between industrial and developing countries, respectively), and emissions trading.

9.1.1 Goals

As regards climate change, the Government bases its efforts on the following goals (see box 9.1):

9.1.2 Policy instruments and measures

The Sixth Conference of the Parties (COP6) under the Convention on Climate Change has not yet been completed. It was begun at the meeting in The Hague on 13–24 November 2000. Norway considers it important that the Conference draws up the supplementary rules under the Kyoto Protocol that are needed for the industrial countries to ratify it and for the Protocol to enter into force. Considerable progress was made in a number of areas during the negotiations in The Hague, although the results must be interpreted with great care since no final solutions were reached. The aim is to complete COP6 in the course of 2001.

The Government will seek to maintain the leading role that Norway plays in these issues internationally and ensure that we follow up our commitments at national level.

The Government is working actively with various policy instruments and measures to ensure that Norway meets its commitments under the Kyoto Protocol, including the requirement to have shown «demonstrable progress» by 2005. The outcome of the meeting in The Hague does not alter the basis for Norway's future climate policy as it was laid down during the Storting debate on the white papers on implementation of the Kyoto Protocol and on Norway's energy policy. The Government will submit a white paper on its climate policy for the future in spring 2001.

Box 9.1 Goals for the reduction of greenhouse gas emissions

Strategic objective:

Concentrations of greenhouse gases shall be stabilized at a level that will prevent dangerous anthropogenic interference with the climate system.

National target:

In the period 2008–2112, greenhouse gas emissions shall not be more than 1 per cent higher than in 1990.

9.2 Depletion of the ozone layer

The ozone layer protects people, plants and animals against harmful ultra-violet radiation. Depletion of the ozone layer can have serious consequences for life on earth. Excessive UV radiation may result in skin cancer and eye injury, weaken the immune system of people and animals and reduce plant growth on land and the growth of plankton in the sea.

9.2.1 Goals

As regards depletion of the ozone layer, the Government bases its efforts on the following goals (see box 9.2):

9.2.2 Policy instruments and measures

The Government will:

- take an active part in efforts to develop a framework that can help developing countries and Eastern European countries to meet existing commitments under the Montreal Protocol and perhaps take on new commitments,
- continue efforts under the Montreal Protocol to ensure that arrangements to phase out ozone-depleting substances more rapidly do not result in rising consumption of HFCs and other substances that enhance the greenhouse effect,
- seek to introduce national policy instruments that can limit the increase in the use of HFCs.

Box 9.2 Goals for phasing out the use of ozone-depleting substances

Strategic objective:

All production and use of ozone-depleting substances is to be eliminated.

National targets:

1. The consumption of halons, all types of chlorofluorocarbons (CFCs), tetrachloromethane, methyl chloroform and hydrobromofluorocarbons (HBFCs) shall be eliminated.
2. Consumption of methyl bromide shall be stabilized in 1995 and phased out by 2005.
3. Consumption of hydrochlorofluorocarbons (HCFCs) shall be stabilized in 1995 and phased out by 2015.

9.3 Long-range air pollution

Acidification caused by emissions of sulphur oxides (SO_x), nitrogen oxides (NO_x) and ammonia (NH_3) is one of the most serious threats to biological diversity in Norway, particularly in fresh water. The most obvious impact is on fish populations, especially in the southern half of the country. Volatile organic compounds (VOCs) and nitrogen oxides react together to form ground-level ozone, which in high concentrations can be injurious to health, damage vegetation, reduce crop yields and damage materials. Inputs of nitrogen oxides and ammonia can result in eutrophication.

Deposition of sulphur and nitrogen exceeds critical loads for acidification in parts of Norway: this is mainly a result of emissions originating in other countries.

9.3.1 Goals

As regards long-range air pollution, the Government bases its efforts on the following goals (see box 9.3):

9.3.2 Policy instruments and measures

The Government will:

- ensure reductions of VOC emissions in accordance with the 1991 Geneva Protocol at the earliest possible date. To this end, the Norwegian Pollution Control Authority has pursuant to the Pollution Control Act laid down requirements for the reduction of VOC emissions from loading and storage of crude oil on the continental shelf,
- ensure reductions of NO_x emissions in accordance with Norway's commitment for NO_x under the 1991 Sofia Protocol at the earliest possible date, and make a further evaluation of the measures and instruments that should be implemented to achieve this. These may include measures relating to road traffic, shipping and the fisheries, onshore industry and the offshore petroleum industry.

9.4 Local air quality

- Clean air is important for people's health and quality of life. At times, local air pollution caus-

es serious health and welfare problems in the largest towns and built-up areas in Norway. In the largest towns, a substantial proportion of the population is exposed to concentrations of pollutants that increase the risk of premature death and health problems, such as respiratory infections, lung disease and cancer.

9.4.1 Goals

As regards local air quality, the Government bases its efforts on the following goals (see box 9.4):

Box 9.3 Goals for reductions in emissions of long-range air pollutants

Strategic objective:

Emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds and ammonia shall be reduced so that they do not exceed critical loads, thus avoiding environmental damage, and so that injury to health is avoided.

National targets:

1. Emissions of sulphur dioxide (SO_2) shall not exceed 22 000 tonnes from 2010 onwards, which corresponds to a reduction of 58 per cent from the 1990 level.
2. Emissions of nitrogen oxides (NO_x) shall not exceed 156 000 tonnes from 2010 onwards, which corresponds to a reduction of 29 per cent from the 1990 level. In addition, emissions in the period up to 2010 shall not exceed the 1987 level, i.e. 226 000 tonnes.
3. Emissions of non-methane volatile organic compounds (NMVOCs) from the entire mainland and the Economic Zone of Norway south of 62^0 N shall be reduced by 30 per cent from the 1989 level at the earliest possible date, i.e. to 192 000 tonnes. In addition, VOC emissions shall not exceed 195 000 tonnes in 2010, which corresponds to a reduction of 35 per cent from the 1990 level.
4. Emissions of ammonia (NH_3) shall not exceed 23 000 tonnes in 2010, which corresponds to the 1990 emission level.

9.4.2 Policy instruments and measures

The Government will:

- evaluate whether to transfer more responsibility and authority for improvements in air quality to the municipalities,
- introduce effective measures to reduce emissions from fuelwood use,
- reduce the proportion of cars using studded tyres in urban areas,
- make arrangements to facilitate the use of road pricing schemes, provide more opportunities to introduce parking restrictions and continue to give high priority to public transport and bicycles,
- consider the use of policy instruments to increase the use of particulate traps in diesel vehicles,
- draw up new regulations to introduce stricter environmental standards for small and medium-sized incineration plants.

The Government considers that the municipalities should in principle be given as much freedom as possible to devise local policies for the improvement of air quality within the framework laid down

Box 9.4 Goals for improvements in air quality

Strategic objective:

Local air pollution problems shall be prevented and reduced to take account of the requirements of human health and welfare.

National targets:

1. The 24-hour mean concentration of particulate matter (PM_{10}) shall not exceed 50 $\mu g/m^3$ on more than 25 days per year by 2005 and 7 days per year by 2010.
2. By 2010, the hourly mean concentration of nitrogen dioxide (NO_2) shall not exceed 150 $\mu g/m^3$ for more than 8 hours per year.
3. By 2005, the 24-hour mean concentration of sulphur dioxide (SO_2) shall not exceed 90 $\mu g/m^3$.
4. By 2010, the annual mean concentration of benzene shall not exceed 2 $\mu g/m^3$, measured as urban background concentration.

by the state. The policy instruments used should result in permanent improvements in air quality.

The Government will revise the regulations relating to limit values for local air pollution and noise, partly in order to implement new EU legislation. It will be considered whether to give the municipalities greater responsibility and authority for implementing the requirements of the regulations. This may include the responsibility for carrying out the necessary measurements and calculations of air quality and for reviewing which measures should be implemented to ensure compliance with the requirements of the regulations. The municipalities may also be given the authority to order polluters to carry out cost-effective measures to comply with the limit values set out in the regulations.

9.5 Noise

The absence of unwanted noise is very important to many people. Peaceful surroundings do not merely mean an absence of objectionable noise; the experience of silence as a quality in itself is also needed. Noise can result in substantial health and welfare problems, for example disturbance of sleep patterns, physiological effects and stress, concentration problems and difficulties in communicating with others. It is therefore important both to reduce noise levels in our day-to-day surroundings and to ensure that quiet areas are available for outdoor recreation.

9.5.1 Goals

As regards noise, the Government bases its efforts on the following goals (see box 9.5):

9.5.2 Policy instruments and measures

The Government will:

- intensify efforts to reduce noise problems in Norway, particularly in towns and urban settlements and near roads with heavy traffic,
- make arrangements to facilitate the use of road pricing schemes, provide more opportunities to introduce parking restrictions and continue to give high priority to public transport and bicycles,
- evaluate ways of reducing noise from car tyres and engines and road surfaces,
- review measures for reducing industrial noise and noise from construction sites,
- review legislation on noise and evaluate routines for granting exemptions in cases relating to noise with a view to developing satisfactory rules of administrative procedure,
- continue to give high priority to insulation of building facades and sound barriers as a means of complying with the regulations relating to limit values for local air pollution and noise,
- allocate more funding for research into noise problems and raise levels of expertise in this field,
- evaluate whether to transfer more authority for ensuring that noise reduction measures are implemented to the municipalities,
- take an active part in the EU's work in this field.

Box 9.5 Goals for noise reduction

Strategic objective:

Noise problems are to be prevented and reduced to take account of the requirements of human health and welfare.

National target:

By 2010, noise annoyance shall be reduced by 25 per cent from the 1999 level.

10 International cooperation on environmental issues and environmental protection in the polar areas

10.1 International cooperation on environmental issues

International cooperation on environmental issues must be used as a means of gaining more control over environmental problems that are international in nature and of reducing environmental damage in Norway caused by activities and emissions in other countries. A separate target, independent of the direct effects on the state of the environment in Norway, is to contribute to sustainable development and improvements in the state of the environment in areas adjacent to Norway and in developing countries. Environmental problems in neighbouring areas are often of direct and immediate importance for the state of the environment in Norway. At regional and global level, international trends in problems such as climate change, deple-

Box 10.1 Goals for international cooperation on environmental issues

Strategic objective:

International cooperation on environmental issues shall be a means of gaining more control over global environmental problems, reducing environmental damage in Norway caused by activities and emissions in other countries, ensuring sustainable development and improvements in the state of the environment in areas adjacent to Norway and in developing countries, and ensuring that international agreements and legislation provide a framework that does not weaken Norway's national environmental policy.

National targets:

1. Cooperation in the Nordic region, in areas adjacent to Norway and in the Arctic region shall lead to improvements in the state of the environment, protect and enhance the natural heritage and cultural monuments in these areas, and help to reduce and prevent transboundary pollution that may have an impact on the environment or economic activity in Norway.
2. Cooperation and development assistance shall be used to put the authorities and business and industry in Russia and the Baltic states in a better position to control these countries' own environmental problems properly, and to integrate Russia's environmental authorities into regional cooperation.
3. Norway will seek to ensure that EEA legislation does not weaken Norway's environmental legislation or make it more difficult to introduce more stringent rules, and that EEA legislation takes Norwegian levels of protection and natural conditions in Norway into account as necessary.
4. Norway shall work towards a framework of trade and environment rules within the WTO system that contributes to sustainable development.
5. Global and regional cooperation bodies shall be developed into effective tools for sustainable development, the achievement of global and regional environmental targets and effective implementation of international environmental conventions.
6. Environmental considerations shall be integrated into Norwegian development cooperation. Environmentally oriented assistance and other cooperation with developing countries shall be a means of strengthening environmental management, improving the state of the environment in partner countries and preventing global environmental problems.

tion of the ozone layer, acid rain, hazardous chemicals and loss of biological diversity are also of crucial importance to the state of the environment in Norway. Globalization of the world economy and Norway's association with the EU (through the EEA Agreement) and with the World Trade Organization (WTO) also mean that national environmental policy is increasingly influenced by factors such as the competitive climate and economic and political conditions, and by decisions made in other countries and in international organizations. Some aspects of international cooperation on environmental issues are also dealt with in chapters 3–9.

10.1.1 Goals

As regards international cooperation on environmental issues, the Government bases its efforts on the following goals (see box 10.1):

10.1.2 Policy instruments and measures

Norway's association with the EU through the EEA Agreement and WTO rules for international trade are important parameters for Norwegian environmental policy. The Government will give priority to efforts to ensure that the framework provided by these agreements promotes sustainable development and does not weaken Norway's environmental legislation. As one of Russia's neighbours, Norway has a strong self-interest in helping to resolve environmental problems in northwestern Russia. The Government views these efforts in a long-term perspective, and is therefore giving priority to efforts to put the Russian authorities and business and industry in a better position to control the country's own environmental problems properly.

10.1.2.1 Cooperation in the Nordic region and in areas adjacent to Norway

The Government will:

- ensure stable bilateral environmental cooperation with Russia as a means of integrating the country more closely into regional cooperation on environmental protection in northern areas, for example by:
  - continuing cooperation to gain control of transboundary pollution by sulphur, heavy metals, persistent organic pollutants and radioactivity,
  - strengthening cooperation on capacity building and institutional development in

Box 10.2 Environmental conditions in the Russian part of the Barents region

Emissions of sulphur and heavy metals have damaged large areas round the metal refineries on the Kola Peninsula, and have also had an impact on the environment on the Norwegian side of the border. The scale of the environmental damage is immense around the towns of Nikel, Zapolyarnyy and Monchegorsk. Forests have been killed and ground vegetation destroyed and soils eroded for many miles from the towns. Critical loads for acid deposition have been exceeded across 70 per cent of Sør-Varanger municipality in Norway, and high concentrations of a number of heavy metals have been found in lichens and mosses. The lichen cover has been damaged or lost across large areas, and pollution has also caused forest damage in Norway. There are clear indications that northwestern Russia and the rivers that run out into the shallow seas surrounding the Arctic Ocean are important sources of pollutants, including PCBs and other hazardous substances that reach Svalbard and other parts of the European Arctic. Nuclear power plants, units of the Northern Fleet and unsafe storage facilities on the Kola peninsula also represent a serious risk of radioactive pollution in Norway. Another major challenge will be the expected expansion of the petroleum industry in northwestern Russia and the Barents Sea region. This is both because discharges from the Russian petroleum industry can become an important regional source of pollution and because most of the oil may be transported by sea, so that there will be a substantial increase in the volume of oil tanker traffic, and a concomitant increase in the risk of major oil spills along the Norwegian coast. Even though parts of the Kola Peninsula are seriously affected by industrial pollution, large-scale developments and military activities and installations, northwestern Russia also has larger areas of almost untouched natural environment and intact biological diversity than any other part of Europe. It will be a very important task to ensure that the unique qualities of the region are safeguarded as its natural resources are more intensively exploited.

the Russian environmental authorities and industry, and working towards broader international involvement in efforts to strengthen environmental protection in Russia, for instance through cooperation with the EU, in the Barents Council, at Nordic level and in the Arctic Council,
- play its part in implementing the cross-sectoral strategy for a sustainable Nordic region,
- help to implement the action programme for Nordic environmental cooperation for 2001–2004.

10.1.2.2 Multilateral cooperation

The Government will:
- use the EEA Agreement to exert an influence on the development of a new environmental policy in the EU,
- work to ensure that environmental considerations are integrated into the WTO negotiations and trade rules,
- work to ensure that the trade system makes sufficient provision for the use of environmental policy instruments.

10.1.2.3 Global environmental cooperation and cooperation with developing countries

The Government will:
- give greater weight to environmental considerations and ensure that they are integrated into Norwegian foreign and development policy,
- contribute to sound management of the global environment and biological diversity, and take part in efforts to resolve environmental problems that particularly affect poor people,
- actively follow up UN reforms in the fields of environment and human settlement,
- in development cooperation, put special emphasis on capacity-building and institutional cooperation, implementation of international environmental agreements, and protection of the cultural heritage and the cultural assets of the natural environment,
- use the same priorities as the individual countries themselves in continuing bilateral environmental cooperation with developing countries.

10.2 Environmental protection in the polar areas

In Svalbard and the Antarctic, Norway is responsible for the management of some of the last remaining areas of more or less untouched natural environment on earth. The world's wilderness areas are rapidly shrinking. Such areas have a high intrinsic value, are important for the conservation of biological diversity, and are of growing importance for the opportunities they represent to experience the wilderness and as reference areas for environmental monitoring and ecological research. In the Norwegian polar areas, the main challenge is to ensure that local activities such as exploitation of resources, tourism and research are carried out within limits that ensure that biological diversity is maintained and that major infrastructure development and environmental pressures are avoided in areas of undisturbed natural environment and around cultural remains. Emissions of pollutants that originate outside the polar regions, for example greenhouse gases, ozone-depleting substances, environmentally hazardous substances and radioactive substances, are also a threat to the environment and the natural resource base in these areas.

10.2.1 Goals

As regards environmental protection in the polar areas, the Government bases its efforts on the following goals (see box 10.3):

10.2.2 Policy instruments and measures

The Government will:
- submit a proposal for a new environmental protection act for Svalbard,
- submit proposals for new protected areas on Svalbard to ensure that important biologically-productive land areas are protected against development,
- protect Bjørnøya and its territorial waters as a nature reserve,
- strengthen the general legislation on authorization to carry out developments in non-protected areas of Svalbard,
- restrict and manage motor traffic on Svalbard in accordance with the target of preserving Svalbard's wilderness character,
- seek to integrate environmental considerations into all Norwegian activities in the polar areas,

- maintain the value of the polar areas as global reference areas for environmental research and monitoring.

The Government will implement a number of measures to prevent new developments from reducing the size of or splitting up wilderness-like areas that are not protected. The draft environmental protection act for Svalbard contains proposals for restrictive provisions on major infrastructure development outside the protected areas. In the event of a conflict between environmental considerations and other interests, environmental considerations are to prevail.

10.3 Radioactive pollution

Experience of major nuclear accidents has shown that radioactive pollution is not only a threat to health, but can also have an environmental impact. There is a real risk of accidents at the many nuclear reactors, other nuclear installations and waste storage facilities in areas adjacent to Norway, and this could result in serious radioactive pollution in Norway. In areas near Norway, there are also operational discharges from several sources that add to radioactive pollution of Norwegian waters. We do not have a full overview of all releases of radioactive substances from national sources, but it is nevertheless clear that they are of marginal importance compared with inputs from other countries.

Box 10.3 Goals for environmental protection in the polar areas

Strategic objective:

The large continuous wilderness areas on Svalbard and in the Antarctic shall together with the cultural heritage in these areas be protected against major developments and environmental pressures. Svalbard shall become one of the best managed wilderness areas in the world, and the settlements shall be soundly managed in order to protect the environment and promote human welfare. Norway will work to ensure that its neighbouring Arctic seas remain some of the cleanest in the world, and that their resources are used within limits that will ensure the maintenance of biological diversity both in the short term and in the long term.

National targets:

1. Utilization of resources in Norway's neighbouring Arctic seas shall not cause species to become endangered or extinct.
2. Populations of species that are currently believed to be endangered or otherwise adversely affected by land use, harvesting and/or pollution shall be conserved and if possible restored.
3. Efforts shall be made to retain the extent of continuous wilderness areas on Svalbard. By 2002, a representative cross-section of Svalbard's natural environment shall be protected against major developments and environmental pressures by the establishment of specially protected areas. Steps shall be taken to give adequate protection to marine areas of particular conservation value.
4. Steps shall be taken to preserve a representative selection of archaeological and architectural monuments and sites on Svalbard and Jan Mayen as scientific source material and as a source of emotional and aesthetic experience for future generations. Losses of archaeological and architectural monuments and sites as a result of human activity shall not exceed an average of 0.1 per cent of the total per year.
5. Transport and travel on Svalbard shall not cause serious or permanent damage to the vegetation or disturb animal life. Opportunities for experiencing the natural environment undisturbed by motor traffic shall also be ensured in areas that are easily accessible from the settlements.

Pollution by hazardous chemicals, climate change and depletion of the ozone layer are also important problems in Norwegian polar areas. Strategic objectives and national targets for these priority areas are presented in chapters 7 and 9. These objectives and targets also apply to the polar areas.

10.3.1 Goals

As regards radioactive pollution, the Government bases its efforts on the following goals (see box 10.4):

10.3.2 Policy instruments

The Government will:

- give high priority to efforts to prevent radioactive pollution from northwestern Russia,
- play a leading role in efforts to prevent radioactive pollution of the marine environment,
- strengthen the monitoring of radioactive pollution,
- prevent radioactive pollution from national sources.

Box 10.4 Goals for the reduction of radioactive pollution

Strategic objective:

Norway will take part in efforts to reduce emissions of radioactive substances and the risk of such emissions that may result in pollution of the Norwegian environment.

National targets:

1. Cooperation with Russia shall be a means of lowering the risk of radioactive pollution of Norwegian land and sea territory in order to avoid possible adverse effects on health, the environment or economic activity.
2. Norway will endeavour to ensure that emissions of radioactive substances from reprocessing facilities in neighbouring countries are substantially reduced.
3. Emissions of radioactive substances from national sources shall be limited to levels that do not have an adverse effect on the natural environment.

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