

# NETHERLANDS

**CONCLUSIONS AND RECOMMENDATIONS** (see next page)

**OUTLINE OF THE REPORT**

**1. THE CONTEXT** .....

Part I

**MANAGEMENT OF NATURAL RESOURCES AND POLLUTION CONTROL**

**2. WATER MANAGEMENT** .....

**3. AIR MANAGEMENT** .....

**4. WASTE MANAGEMENT** .....

**5. NATURE CONSERVATION** .....

Part II

**INTEGRATION OF POLICIES**

**6. ENVIRONMENT AND ECONOMY** .....

**7. SECTORAL INTEGRATION: TRANSPORT** .....

**8. SECTORAL INTEGRATION: AGRICULTURE** .....

Part III

**CO-OPERATION WITH THE INTERNATIONAL COMMUNITY**

**9. INTERNATIONAL CO-OPERATION** .....

**ANNEXES** .....

## CONCLUSIONS AND RECOMMENDATIONS\*

The very high densities of both population and economic activities in the Netherlands have led to very intense pressures on its environment. Environmental protection came to the forefront of the country's agenda in the late 1980s, and the Government began to promote sustainable development nationally and internationally.

Today, planning and consultation on environmental issues have been developed in line with the country's tradition in planning and consensus building. Environmental policies focus on problems of climate change, acidification, eutrophication, dispersion of toxic substances, disposal of waste, disturbance, water depletion, squandering of resources and nature protection. The challenge of implementation of these policies lies in achieving the ambitious targets which the Netherlands has set for itself, by mobilising various levels of government and societal target groups and using a wide array of policy instruments.

Environmental issues in the Netherlands have a strong international dimension because of regional environmental interdependencies (e.g. transfrontier air and water pollution, North Sea pollution), regional economic interdependencies (due to the Netherlands' open economy and role as a "gateway to Europe") and global environmental issues (vulnerability to climate change and sea level rise, importance of trade and environmental aid).

This OECD report sets out the baseline for assessing future environmental progress and examines the environmental performance of the Netherlands in three major areas:

- i) integrating environmental and economic decisions;
- ii) implementing environmental policies;
- iii) international co-operation.

In each of these areas, the extent to which government policy objectives are being met has been assessed. This assessment includes both domestic objectives and international commitments, and is based on environmental effectiveness and economic efficiency criteria. A number of recommendations are put forward that could contribute to further environmental progress in the Netherlands.

### 1. Integrating Environmental and Economic Decision Making

Despite progress made in decoupling the generation of some pollutants from GDP (e.g. SO<sub>x</sub> emissions in air, BOD discharges in water bodies), the Netherlands is aware that the intense pressure on its environment and the accumulation of pollution on its territory call not only for traditional environmental policies but also for strong integration of its environmental and general economic and sectoral policies.

#### *Integration and sustainable development*

##### *The Dutch approach: environmental planning and consultation*

At the end of the 1980s, the Dutch Government strengthened the Ministry in charge of the environment (VROM), increased the human and financial resources dedicated to environmental activities at central, provincial and local levels, and adopted a series of new environmental plans.

Dutch environmental planning identifies eight priority themes, defines general goals and ambitious quantitative targets with deadlines, describes broad measures to reach these targets and estimates the associated costs. It also identifies nine target groups. The National Institute of Public Health and Environmental Protection annually provides advice to the Government on the state of the environment and on progress with the implementation of environmental plans. Dutch environmental planning is indicative, comprehensive, action-oriented and based on some of the most innovative and sophisticated analytical work in the world. There is much to learn from it for other countries. So far it appears successful, but there are delays in reaching a number of targets, and implementation requires sizable human resources as well as strong political support.

---

\* Conclusions and Recommendations approved by the Group on Environmental Performance at its November 1994 meeting.

The general planning approach in use in the Netherlands necessitates a very high degree of co-ordination among national ministries; environmental plans have to be co-ordinated with a number of other national sectoral plans, the more so because VROM covers only some of the fields relating to environmental policy. Integration of environmental policies with other national policies remains in most cases voluntary. Integration among the actions of central, provincial and local government is also critical.

The Dutch Government considers it important to seek consensus on all aspects of its environment policy. Extensive consultation takes place with various social partners and NGOs. Much information is provided on all aspects of environmental problems and their possible solutions. The general approach of full disclosure is a characteristic element of Dutch environmental policy. The quality and quantity of printed material released to the public are among the highest in Member countries.

### *Towards sustainable development*

Sustainable development is a key issue in the Netherlands, because the Government has resolved to reach sustainability by 2010, i.e. within one generation. At the same time, growing pressure is being exerted on the environment due to, *inter alia*, the growth in the transport sector and a number of largely unsolved problems in the agriculture sector. Moving towards less pollution and less environmental degradation, while also increasing economic activities in a crowded territory, is a challenge which will be difficult to meet and which will entail large expenditures and a shift towards production and consumption patterns that impose a lighter burden on the environment.

The environmental planning effort that is being carried out to define sustainable development in concrete terms, and the rapid growth in environmental expenditure during the 1990s, are signs that problems are being addressed seriously. However, strong political determination and public support will be needed to allow environmental expenditures to grow as projected.

An equally strong determination will be needed to induce the changes of production and consumption patterns that are being advocated. In particular, economic signals will have to incorporate more fully environmental "externalities". New economic instruments designed to induce appropriate behaviour could be introduced without increasing the overall tax burden. While there is wide support for shifting the tax basis from labour to natural resources and pollution, a significant increase in energy tax to induce more energy saving, as already proposed, has not yet been introduced. However, the Government intends to introduce from 1996 onwards a significant energy tax, either following European decision-making or a tax of its own for smaller energy consumers. Subsidies and other Government financial interventions should be scrutinised from an environmental point of view. A number of environmentally harmful subsidies should be eliminated.

The concept of sustainable development could be further specified in terms of land use goals and targets, which so far, have been relatively absent in environmental plans. As part of the ongoing efforts to better integrate environmental concerns in major economic and sectoral decisions, there is a particular need for extending the use of environmental assessment to projects, programmes and policies which have far reaching effects on land use and infrastructure construction.

### *Further progress*

It is therefore recommended that consideration be given to the following proposals:

- implement environmental plans with steadfast determination and along the lines already defined;
- intensify efforts to integrate environmental concerns into policies and budgets formulated in the different administrations and economic sectors; in particular, this integration should be strengthened in the transport and agriculture sectors (see below) and in fiscal policies; specific attention should be given to environmentally harmful subsidies and fiscal deductions;
- integrate environmental assessment earlier in the decision making process to influence choices concerning plans, policies and programmes;
- extend the use of land use planning and regulation to serve pollution abatement, nature conservation and risk prevention.

### *Sectoral integration: transport*

Since the beginning of the 1990s, both environment and transport planning have been linked to the concept of a sustainable society. Quantitative targets are established for levels of transport activities, capacity of facilities and pollution levels. Structural features of the transport sector include a relatively high share of public transport and cycling in passenger transport, and a relatively high share of inland shipping in freight transport. Regulations and incentives are used to promote the use of cleaner cars and cleaner fuels. Traffic management is well developed with focus on technical and physical measures and in association with land use planning in cities. Attention is given to the abatement of traffic noise.

However, the growth of traffic, particularly road traffic, tends to offset some of the environmental benefits of this comprehensive policy. Despite some progress for some pollutants (CO, lead, VOCs), the transport sector is a major contributor to CO<sub>2</sub> emissions (and climate change), NO<sub>x</sub> emissions (and acidification), noise in urbanised areas and fragmentation of natural areas. While formulating growth options and new transport facilities, it is necessary to give full and early consideration to their environmental impact. Today, it is questionable whether the transport sector in the Netherlands is developing in a sustainable way, and this is all the more significant given the importance of this sector within the Netherlands (6.4 per cent of GDP) and within the EC (one-third of international road freight transport, one-half of inland water freight transport).

It is therefore recommended that consideration be given to the following proposals:

- pursue determined efforts to meet the domestic targets adopted in NEPP and the international commitments of the Netherlands (NO<sub>x</sub> protocols, convention on climate change), including necessary structural changes in the Dutch transport sector and review of road traffic and freight transport growth options;
- implement a comprehensive set of measures to discourage road transport and promote the cost-effectiveness of alternative modes, including inland shipping and public transport;
- develop the use of economic instruments (including road pricing in urbanised areas and fuel taxation), when and where economically and environmentally effective, and eliminate fiscal deductions for commuting by car;
- expand public involvement and the application of environmental assessment in the definition of transport policies and infrastructure.
- improve accident prevention and preparedness, in connection with the transport of hazardous goods.

### *Sectoral integration: agriculture*

Against the backdrop of intense pressures on the environment from agriculture, the concept of sustainable agriculture has been adopted by the Dutch Government. Taking into account the goals, opportunities and constraints of the EC Common Agricultural Policy, the Ministry of Agriculture, Nature Management and Fisheries has reformulated its policy for the sector, and backed this up with environmental targets that are ambitious but also necessary to bring agriculture to a sustainable level. Corrective actions have been taken; co-operation is currently good between the agricultural and environmental administrations, the water boards and farmers' and non-governmental environmental organisations; the enforcement of agricultural regulations is being improved; part of the agricultural research and advisory service efforts have been redirected to address environmental concerns; and programmes to better integrate nature protection concerns in agriculture have been set up. Concerning results, Dutch agricultural production was 39 per cent higher in 1991 than in 1980, whereas agricultural annual emissions of nitrogen, phosphate, ammonia and pesticides to the environment had been reduced between 5 and 12 per cent.

These emissions still remain far in excess of sustainable levels. Also, due to past accumulations and continuing mineral (nitrogen and phosphorus) surpluses, eutrophication will continue to affect water and soil. Further, trends in water depletion (and consequent dessication) and contamination of groundwater by some pesticides and nitrates have not been reversed. While several of the 1994 interim targets have been met, the targets for the year 2000 will be much more difficult to achieve: they are more demanding of farmers and regulations will be harder to enforce. In order to make further progress, decision makers should recognise and accept that the domestic targets and international commitments cannot be achieved without structural changes in Dutch agricultural production.

It is therefore recommended that consideration be given to the following proposals:

- pursue determined efforts to meet both the targets adopted in NEPP and the international commitments of the Netherlands (EC directives concerning nitrates and groundwater, North Sea Conferences), and make the necessary structural changes in Dutch agricultural production;
- identify and remove barriers that may exist within the administrative and legal frameworks to deal with social consequences of the move towards sustainable agriculture;
- ensure that the mix of regulatory, economic, voluntary and other instruments (e.g. sophisticated monitoring and accounting systems) being aimed at farm level is transparent to farmers, remains enforceable in practice and is introduced in a timely fashion;
- continue efforts to reduce ammonia emissions and the high share of agriculture in the emission of acidifying substances;
- strengthen efforts to reduce the use of pesticides, with special emphasis on land-bound agriculture (e.g. arable crops and bulbs);
- ensure that research and development funds continue to be reallocated from traditional agricultural practices to sustainable practices, and that advisory services are used to their full potential.

## 2. Implementing Environmental Policies

### *Cost-effectiveness in pollution abatement policies*

Environmental legislation was consolidated and simplified by the passing of the Environmental Management Act in 1993. The central, provincial and local authorities have become more active in the late 1980s and early 1990s in making sure the activities of enterprises conform to the law and in monitoring enforcement of laws and regulations. Positive results of administrative and judicial action to protect the environment are accumulating and are already substantial. The results concern mainly point sources of pollution and large economic entities. As in other OECD countries, diffuse pollution and dispersed target groups, such as motorists and farmers, have not so far contributed their requisite share of environmental progress. Economic instruments are widely used in the Netherlands and include sizable pollution charges, energy taxes and a waste charge as well as subsidies and grants.

Economic instruments have often been used to support the financing of environmental protection. Overall environmental expenditure has been growing, from 1.1 per cent of GDP in 1980 to 1.9 in 1990, and should reach 2.7 per cent of GDP in 1995. This would place it among the largest in the OECD, reflecting the high level of environmental pressure as well as government commitment to move towards a sustainable development oriented strategy. So far, the implementation of environmental policies has created no substantial problems for the Dutch economy at the macro-level. Most of the costs of environmental protection are met by the polluters and users of environmental services.

Authorities are now expanding the use of social instruments: building consensus and encouraging voluntary agreements (covenants). As a result of a positive dialogue between the Government and the private sector, about 100 covenants were concluded in recent years. Progress has been made in the implementation of such agreements; they are stimulating cost-effective actions, and serve as more or less binding substitutes for regulation in a number of areas. However, should the environment cease to be a major public concern, it is not certain that these instruments would lead to substantial results. They must be used in association with other instruments and with mechanisms of accountability.

To further improve the cost-effectiveness of pollution abatement policies, it is recommended that consideration be given to the following proposals:

- pursue the already well developed efforts at all levels of government to enforce environmental laws and regulations;
- further expand the use of economic instruments (e.g. energy taxes, charges on fertilizers, water pricing, tradable emission permits), when and where economically and environmentally effective, as well as related legal instruments (liability, penalties);
- monitor the effectiveness of voluntary agreements, and ensure they are accompanied by proper accountability mechanisms and used, as necessary, in association with other instruments;
- proceed with the full implementation of the already adopted product policy;
- maintain the current strong efforts in public information and education on the environment;
- maintain investments and efforts in environmental research and development.

### *Water*

Almost every water body in the Netherlands is under human control and managed through a sophisticated system. The physical infrastructure is now in place. Apart from the upgrading of sewage reticulation and waste water treatment, there is no need for further large scale works of the type built in recent decades. An appropriate legislative and policy framework for integrated water management is also in place, i.e. for managing water systems in relation to their surroundings and comprising i) the media water, suspended sediments, beds and banks or shores, and ii) their physical, chemical and biological components. Attention has shifted to policy implementation. Remarkable results have been or will likely be achieved: industrial discharges are expected to meet most of the targets set for 1995; municipal discharges already meet targets for oxygen demanding substances and will meet the 1995 target for phosphates; enforcement of the water management laws and regulations has improved.

However, insufficient results must be noted concerning eutrophication, toxic substances and the issue of water depletion (and consequent dessication). Quality standards for receiving water are still exceeded too often in too many places, particularly with respect to nitrogenous compounds, heavy metals and other toxic compounds such as pesticides. This is due partly to accumulated pollution, partly to diffuse domestic loadings, particularly from agriculture, and partly to transfrontier pollution. Water depletion beneath nature areas, caused by agricultural drainage and overextraction of groundwater, affects 10 per cent of the country and seriously compromises nature conservation policy.

It is therefore recommended that consideration be given to the following proposals:

- urgently implement further measures to halt and reverse water depletion under nature areas;
- pursue efforts to implement integrated water management policies in a cost-effective way, taking into account the relative contribution of various sources of pollution;
- ensure that water resources are priced effectively, in line with the user pays principle;
- pursue the renewal of sewerage networks and the installation of dephosphating and denitrification facilities in waste water treatment plants, in as much as need be;
- ensure progress in reducing diffuse emissions (e.g. nitrogen loadings from manure and excessive fertilizer use contributing to eutrophication), in line with international agreements (EC directives, Rhine Action Programme, North Sea Action Programme), through cleaner production techniques and changes in production patterns;
- pursue further cost-effective action concerning contaminated bottom sediments, with due regard to risk to human and ecosystem health.

### *Air*

Since the mid-1980s, the Netherlands has improved its air management framework. Targets have been set for emissions reduction and ambient air quality. Nationwide emission control of SO<sub>2</sub>, NO<sub>x</sub> and a number of hazardous pollutants from stationary sources has been introduced by way of regulations, along with effective permitting and enforcement. More recently, voluntary agreements have been added to the regulatory approach. Although they are still in the initial phase of implementation, some success can be recorded. Significant reductions of emissions and/or concentrations of pollutants have been achieved, particularly for SO<sub>2</sub> but also for black smoke, CO and lead.

Nevertheless, progress is not on track in a number of areas: acidity remains a major concern related to both domestic pollution and pollution from neighbouring countries; NO<sub>x</sub> emissions have not decreased significantly, and concern remains about the feasibility of meeting the Sofia Declaration target; VOC emissions have decreased, but further reduction is required to attain targets; CO<sub>2</sub> emissions have increased, up to 1992, declined in 1993 to the 1990 level, so that the interim target of stabilisation at the 1989/90 level in 1994/95 might still be within reach. Relatively low energy prices (e.g. natural gas, steam coal, electricity), high development of the transport sector and particularly road freight transport, and high emissions from the agricultural sector require further efforts from most target groups, including energy, industry, transport and agriculture.

It is therefore recommended that consideration be given to the following proposals:

- step up efforts to increase the effectiveness of the permitting and enforcement procedures at provincial and municipal levels, building on progress already accomplished;

- ensure the monitoring and effectiveness of existing voluntary agreements; encourage industrial branches and individual facilities to draw up their own programmes of emission reduction;
- review the potential of using economic instruments more widely;
- continue efforts to lower the energy intensity of the Dutch economy, through progress in energy efficiency and energy consumption patterns;
- strengthen measures to reduce the emission of priority substances and VOCs from stationary sources;
- strengthen the contribution of the agricultural sector (e.g. by further reducing ammonia emissions) and the transport sector (e.g. NO<sub>x</sub>, VOCs, CO<sub>2</sub>).

### *Waste*

Waste management policy has been modernised with the adoption of the "waste hierarchy" objectives and related quantitative targets (NEPP) and a new legislative basis (1994). Both prevention of waste generation and recycling rely on voluntary actions, agreements (covenants), regulatory measures, or a combination of them. Thirty priority waste streams have been identified to facilitate action by target groups. Waste disposal is characterised by extended government responsibilities in incineration, controlled landfill sites, enforcement and co-ordination throughout the country. Hazardous waste management has improved through better enforcement and private initiatives; hazardous waste export has decreased. Since clean-up of contaminated sites started early in the 1980s, 1000 sites have already been cleaned; a comprehensive voluntary programme to clean up industrial sites has started.

There is, however, much to be done to bridge the gap between several policy objectives and present realities. Waste trends in the Netherlands are not encouraging so far: volumes of household waste have been increasing and per unit generation of municipal waste is high among OECD countries. Industrial waste also increased in the 1980s; waste prevention needs to be strengthened. In contrast, excellent results have been achieved through recycling: about 55 per cent of all waste is recycled; paper/cardboard and glass recycling rates are among the highest among OECD countries; separation at source of household waste and of biowaste for composting is successful and is expected to improve further. The proposed extensions of incineration and landfill capacities need careful consideration.

It is therefore recommended that consideration be given to the following proposals:

- strengthen efforts, including changes in production and consumption patterns, to reduce amounts of waste produced;
- accelerate the implementation and monitoring of voluntary agreements for priority waste, and complement them with deposit/refund systems and bans on landfilling;
- review planned increases of incineration and landfill capacities; ensure appropriate land use planning and public involvement in the planning of facilities; ensure that there is a market for the compost supply;
- pursue cost-effective recycling efforts, particularly with the improved recycling of commercial waste and a clarification of the roles of municipalities and industry in separate collection;
- monitor voluntary action to clean up contaminated sites and ensure adequate financing of government duties concerning landfill sites and orphan sites, possibly through a landfill charge.

### *Conserving nature*

The situation of nature in the Netherlands is a cause for concern. Since the beginning of the century there has been a dramatic decline in the amount of natural area, and what is left has been severely fragmented. The number of plant species has also decreased.

The 1990 Nature Policy Plan presented a fundamental shift in nature policy and is now being implemented to protect what is left of nature and to create "new" nature. It is accompanied by an array of actions concerning rural areas, agriculture, forestry, landscape protection and land development. Progress is being made with the designation and establishment of new national parks. A start has also been made with the acquisition of new areas for inclusion in the National Ecological Network, but at a rate which is still too low to meet targets. The Netherlands has ratified all main international conventions concerning wildlife.

However, this is not sufficient by itself to safeguard the natural resources heritage of the country. The key to the ultimate success of nature policy in the Netherlands will be the reduction of pressures on nature: fragmentation,

desiccation, acidification, eutrophication and contamination. While there are some positive developments on most of these issues, the legacy of past pollution (e.g. accumulation of nutrients in the soil, contaminated bottom sediments) often means that it will be a long time before improvements will become visible. There has been no substantial progress in terms of the desiccation problems. Moreover, in view of some of the development decisions taken over the last few years, or being considered now (e.g. construction of major transport infrastructure, oil exploration under the Wadden Sea), the question arises whether new pressures are not being added at a faster rate than older ones are being reduced.

It is recommended that consideration be given to the following proposals:

- vigorously pursue the programme for protecting areas as national parks and in the National Ecological Network: ensure that targets are met, management plans are adopted and implemented, and rules applying within protected areas are enforced;
- continue action, with appropriate consultation with other North Sea riparian countries, to protect the coastal and marine environment further and to establish a number of marine reserves;
- better protect landscapes through the formulation of regional landscape plans and their effective implementation;
- integrate nature and landscape protection concerns further in agricultural policies and intensify measures to improve the vitality of forests;
- intensify measures to control the lowering of groundwater levels and consequent desiccation in nature areas;
- extend measures to control and reduce the fragmentation of habitats, particularly with respect to existing and new transport infrastructure.

### 3. International Co-operation

International issues and international co-operation are of paramount importance in Dutch environmental policy. The Netherlands both imports pollution from a number of countries and exports pollution to its neighbours and the North Sea, and is also quite vulnerable to sea level rise. With its open economy, the Netherlands is very conscious of international competition and of the need to harmonise environmental efforts in Europe and address global environmental issues, in its own interest as well as in the interest of the international community.

#### *Achievements*

Because of these ecological and economic interdependencies, the Netherlands, over the last 25 years, has played a leading role in the solution of international environmental issues, initially in the area of transfrontier water pollution and later in the whole area of international environmental law. The Dutch Government has played leading roles in many international forums in the preparation and adoption of a range of international agreements aimed at ensuring better protection of the regional or global environment. Rapid progress was achieved concerning pollution of the Rhine, protection of the North Sea and controlling the release of ozone depleting substances, in particular.

Today, Dutch international environmental activities aim at elaborating further a strong European Community framework for environmental protection, enhancing regional co-operation and bringing together developing and developed states to face the global environmental challenges and promote sustainable development.

The level of development aid provided by the Netherlands is very high in relative terms and its environmental component is quite significant. New funding is provided to protect the global environment.

#### *Future progress*

Through a number of international agreements, the Netherlands is committed to reducing its own pollution in parallel with abatement brought about by other countries. Development options in agriculture and transport are creating very high environmental pressure domestically and internationally. Thus, further efforts will be needed to reduce emissions, especially those from diffuse sources, to match international commitments.

Co-operation with neighbouring countries has been strengthened by recent agreements. However, the shift from general commitments to precise actions presents a major challenge. Implementing international conventions and community directives in frontier regions will require further effort.

Co-operation at global level will require new and innovative procedures to ensure that responsibilities are actually shared and also differentiated. In particular, addressing energy-related problems, such as climate change, will demand expanded and sustained efforts, including further attention to natural gas and electricity prices which are relatively low compared to many EC countries. Similarly, controlling the import of tropical wood, while maintaining good relations with exporting countries, will be a challenging task.

It is recommended that consideration be given to the following proposals:

- ratify and implement recent international environmental agreements, such as those adopted within the framework of UN-ECE and the Council of Europe (Annex III);
- strengthen bilateral co-operation with neighbouring countries, in particular concerning pollution of transboundary rivers and co-operation on local issues (EIA and hazardous facilities);
- work towards solving diffuse source pollution problems, particularly from agriculture and transport, nationally and at EC level;
- strive to reduce energy consumption and emissions of greenhouse gases in the Netherlands by use of an appropriate mix of regulatory, economic and other instruments;
- rigorously pursue measures to implement the Montreal Protocol and related amendments for substances (other than halons and CFCs already banned) such as HCFCs and methylbromide;
- support the preparation of new legal instruments to handle relevant issues described in the Rio Declaration and Agenda 21, such as access to courts and liability;
- contribute to setting up an effective, equitable international system to identify and label wood harvested in a sustainable manner.

