NATURE BALANCE 2005

SUMMARY

The results of the Dutch nature policy are now becoming more visible on the ground and important changes are being made to spatial planning and environmental policy. At the request of the Dutch government, the Netherlands Environmental Assessment Agency (MNP) has taken stock of the current situation and come to the following conclusions.

- *Although the acquisition of land for the creation of the National Ecological Network (NEN) is proceeding according to timetable, the spatial connectivity and environmental conditions within the network are still insufficient to enable full compliance with international agreements on biodiversity conservation. The planned large areas of connected ecosystems have been realised in half the NEN, including the coastal dunes, the Veluwe (the central region of forests and sandy heath) and the areas of floodplain along the main rivers that are subject to flooding (i.e. the land between the main river dikes). But more than 20% of the NEN, including the areas in the Twente and Graafschap regions in the east and Zuid-Limburg in the southern tip of the country, consists of a patchwork of ecosystem fragments and habitats in small nature reserves and conservation areas. It will be necessary to improve the spatial connectivity of these areas in order to maintain their existing ecosystem quality in the future. Additional measures will be necessary to achieve this. The measures to be taken in the short term should consist primarily of a strict land use planning policy, to be followed by measures to improve physical environmental conditions.*
- *The Government's planned change in strategy for habitat management within the NEN from the acquisition of land to the management of private land by landowners and agricultural enterprises will make it harder to ensure a coherent conservation management regime. This is because wildlife and landscape management by private landowners and on-farm conservation schemes put little emphasis on ensuring connectivity of habitat with the large ecosystem units. Moreover, there are indications that without complementary landscape works the current on-farm conservation schemes will not be as effective in meeting the conservation objectives as the conservation management organisations.*
- *Not only is biodiversity in the Netherlands under threat, but so are landscapes. Landscape amenity in a quarter of the Netherlands is negatively affected by expanding urban development. In practice, spatial policy does little to protect landscape quality. Moreover, insufficient funds are available to fulfil the high government expectations for the National Landscapes policy.*

The ambition level for landscape and ecosystem qualities of the rural areas is a political choice. With the publication of the National Spatial Strategy and the Agenda for a Living Countryside policy document, the Dutch government is carrying forward the original goals of nature and landscape policy, but has definitely decided to give more

responsibility for implementing these policies to the regional and local authorities. The following policy lines will be decisive in achieving these objectives.

- *The provincial and municipal councils and the water boards, which in future will be charged with achieving central government objectives for rural areas, must continue to guide future development and land use from a coherent set of unequivocal principles. Given the scale of ecosystem and landscape units, the provincial councils will have to take on the central coordinating role. Without a clear planning regime and active commitment from local and regional authorities, the planned spatial connectivity of ecosystems and habitats will not be achieved and further fragmentation will occur. Fragmentation of ecosystems and habitats is a virtually irreversible process given the high pressures on land in the Netherlands. It would then no longer be possible to realise the present potential quality of green rural areas.*
- *Active commitment by government authorities requires financial resources. While the new Rural Areas Investment Budget provides a clear framework for the financing of integrated area development, it is also becoming clear that the available funds are insufficient for achieving the stated targets. The extra sources of finance that are expected to provide the required funds, such as the 'red for green' arrangements (financing green areas from the returns on real estate development), have not yet come up to expectations.*
- *Wildlife and landscape management by private landowners and on-farm conservation schemes can contribute to achieving the original biodiversity and landscape conservation targets, but have to be applied selectively in specific areas if they are to transform the fragmented patchwork of nature areas within the NEN into a coherent network of ecosystems and landscape units.*
- *The ultimate goal of Dutch nature policy is the conservation of individual species, such as the Otter and Black-tailed Godwit. However, because nature can be shaped by human hand to only a limited degree, the goal of achieving the intended biodiversity and quality of green areas will ultimately be better served by developing, managing and monitoring the spatial and environmental conditions required to sustain the desired ecosystems and habitats than by focusing on individual species.*

Nature

National Ecological Network: spatial connectivity and environmental conditions as critical factors

Development of the National Ecological Network (NEN) began in 1990 and is due to be completed in 2018. The acquisition of land for nature reserves and conservation areas is proceeding according to schedule. The ultimate goal of the NEN policy, however, is not to reach a target number of hectares of land, but to create a natural framework of sufficient quality. In this respect, there is a wide gap between the current and intended situation because the spatial connectivity of ecosystems is limited, environmental quality is inadequate and the budget is restricted.

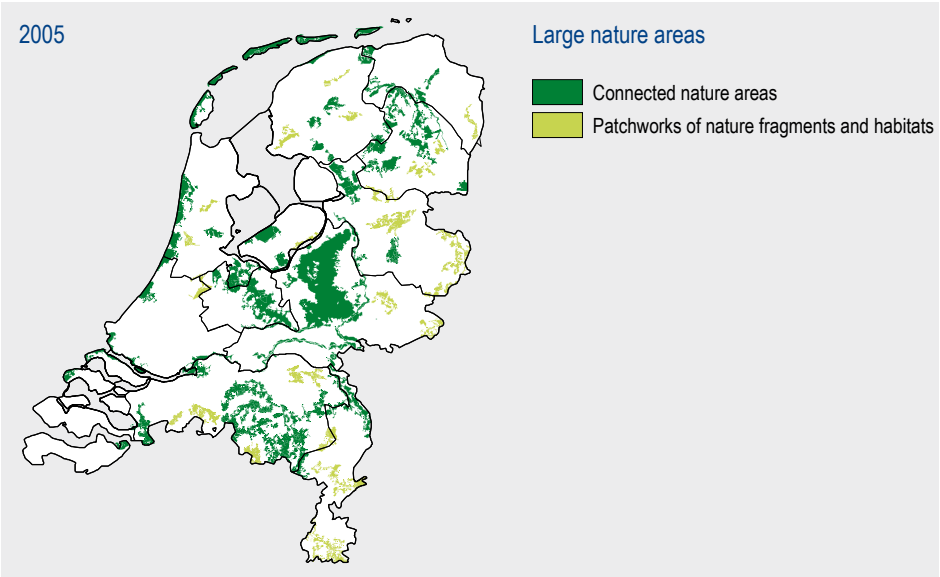

Figure 1 When complete more than half of the NEN will consist of nature areas larger than 2000 hectares in size. When fully completed about 20% of the NEN will consist of patchworks of nature fragments and habitats. For these patchworks to function as large nature areas, the land use, hydrological and environmental conditions will, often have to be improved. In many areas this will present a considerable challenge.

Spatial connectivity

When the NEN was announced in 1990 the existing nature conservation areas greater than 2000 hectares in size together made up about 230,000 hectares in total. This accounts for more than 30% of the total target area for the NEN (excluding the large water bodies). These areas include the coastal dunes, the open water mires or fen mires of the Wieden and Weerribben, and the ice-pushed ridges of the Veluwe and Utrechtse Heuvelrug.

When the NEN is fully completed in 2018, more than half of it will consist of large nature areas (Figure 1). These 'new' landscape units will have been created by extending and linking up existing areas through land acquisition, landscape works and management of adjoining and intervening areas of land. Once the NEN has been completed a number of significant large areas of contiguous ecosystems will have been created: the stream systems in the provinces of Groningen and Drenthe and the floodplains of the main rivers (floodplain between the river dikes). Although the spatial connectivity of the NEN will then be greater than it was when the NEN policy was launched 15 years ago, it will still be limited after the NEN has been fully completed.

Outside these large areas of contiguous ecosystems, some regions contain clusters or patchworks of nature areas smaller than 2000 hectares in size. This is most obvious in the small-scale landscapes around Winterswijk and in the Twente and Graafschap regions in the east of the country, and in Zuid-Limburg in the southernmost tip of the

Netherlands (Figure 1). These patchwork areas also have the potential to function as large units, but in most cases several constraints will first have to be removed.

After the completion of the NEN, and even if habitat connectivity within these patchworks is optimised, about a quarter of all the ecosystems/habitats within the NEN will be less than 2000 hectares in size. Some of these areas are 'hotspots' of great significance for biodiversity. Examples include the dunes near Den Helder, the Wormer- en Jisperveld (an area of brackish marsh, fen and wet grassland in the province of Noord-Holland) and the Engbertsdijksvenen (area of raised bog in the north-eastern province of Overijssel).

By definition, these hotspots can only be protected by measures taken at the local level. They are relatively small, isolated areas of high conservation value. In some cases, the hotspots can form the basis for upgrading the value of larger areas. One method would be to adjust the boundaries of these larger areas to incorporate the hotspots.

Environmental conditions
In the large nature areas with contiguous ecosystems much remains to be done to improve the environmental conditions, for example, by relocating remaining enclaves of farming activity. Such enclaves exert a disproportionate influence over a much wider area (through subsurface and surface drainage, and emissions of ammonia). Given

The importance of land use and environmental conditions is illustrated by the strip of coastal dunes. The Dutch dunes were protected for a long time because of their importance for flood protection along the coast. Later, they were protected under the Nature Conservancy Act and subsequently large areas of the dunes became designated protected areas in the Natura 2000 network. In addition, a strict environmental protection policy has been pursued to preserve the drinking water reserves within the dunes. Problems are now arising due to land use and environmental impacts from the surrounding inland areas. The negative effects of falling water tables and nitrogen deposition are being limited by various restoration measures, such as turf stripping and scrub control (photo: De Jong Luchtfotografie).

Nature in the Netherlands: local successes, but no overall recovery yet

The Netherlands has a proportionally larger area of aquatic and wetland habitats than other countries in the EU and a smaller area of terrestrial habitats. On average, the area of terrestrial ecosystems in other EU countries is three times the size of that in the Netherlands. The pressures on nature in the Netherlands through habitat loss, changes in land use, environmental stress and fragmentation is greater than the EU average. Despite this, the size of habitat areas remained more or less the same between 1990 and 2000.

Ecosystem quality in the Netherlands is still under pressure from the processes mentioned above, and many populations of plant and animal species are in serious decline. The size of most butterfly populations is shrinking; even the grassland butterfly species face problematic times. The same goes for arable birds and meadow birds (Figure 2).

From an international perspective, the Netherlands has a special responsibility for meadow birds and has taken an active role in their conservation for more than thirty years. Despite these efforts, various species of meadow birds, such as the Black-tailed Godwit, Skylark and Meadow Pipit, are doing poorly. It is increasingly clear that in addition to managing meadow bird habitats, it is essential to tackle the water management and land use issues. Progress could be made in improving these conditions through 'new style species protection plans' for meadow bird habitats.

There are some success stories as well. Ecosystem quality along the main rivers is gradually but surely improving as a result of better water quality and habitat development. Characteristic fish species of the main rivers and floodplains are increasing in numbers, although these still fall far short of the numbers found in the past.

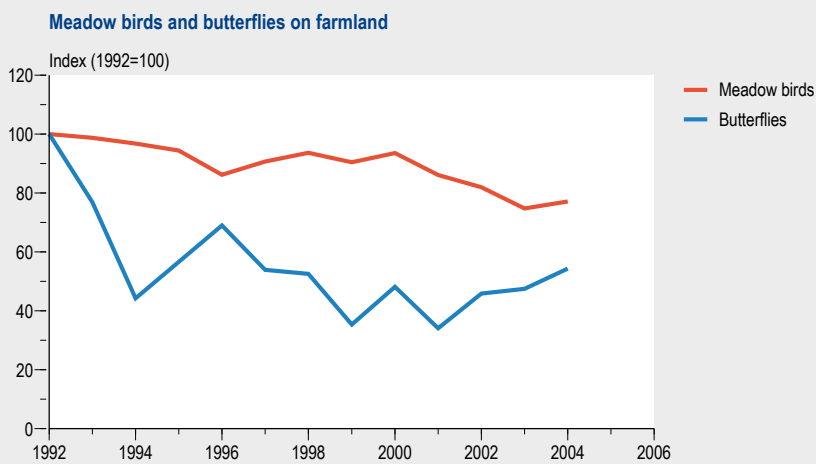

Figure 2 In agricultural areas both meadow birds and butterflies are declining in numbers (sources: SOVON, De Vlinderstichting, provincial councils and Statistics Netherlands, associated in the Ecological Monitoring Network (NEM)).

the importance of these areas for conserving biodiversity , the appropriate approach would be to apply a strict land use planning policy, combined with powers of compulsory purchase, to return these enclaves to nature.

Little progress has been made with restoring lowered water tables since 2000. Conservation managers have indicated that the water management regime presents a major problem to many types of habitat. For example, the boundaries of the NEN in stream valleys take insufficient account of the hydrological regime.

Further action is still required to reduce nitrogen deposition through a combination of generic policies and area-based measures. International agreements are also important because 40% of the deposition on habitats in the Netherlands originates from outside the country.

In the regions with patchworked nature areas considerable efforts are required to adjust the water management regime to accommodate the needs of groundwater-dependent ecosystems. In some cases it will be necessary to adjust the boundaries of the NEN to match the hydrological system. On-farm conservation and landscape management measures may help to strengthen the ecological networks in these areas. The prospects for this approach are particularly good in the patchworked nature areas within the National Landscapes.

Shift from land acquisition to management is not having the desired effect
The central government has shifted the focus of nature conservation strategy from the acquisition of land to incentives for wildlife and landscape management by private landowners and on-farm conservation. The intention is to encourage greater involvement of landowners and farmers in nature conservation, while maintaining the original conservation objectives. Budgetary considerations played a part in this decision.

Current experiences with on-farm conservation, and wildlife and landscape, management by private landowners suggest that this shift in strategy will not have the desired effect. There has been little enthusiasm among private landowners to adopt conservation management practices. While there is sufficient interest for on-farm conservation, the current schemes will seldom be able to deliver the biodiversity that can be achieved by the conservation management organisations. This is because land management measures, such as raising the water table, are essential for achieving many of the biodiversity objectives.

The shift in strategy puts the continuity of habitat management at risk. Not only is the continuation of management agreements at risk, but also the legal protection of the managed land. Land within the NEN that is under on-farm conservation schemes is not subject to the conditional legal protection regime (‘no, unless’) enjoyed by other areas of the NEN.

Landscape

New élan, but many hurdles remain
In its National Spatial Strategy the government takes responsibility for the quality of the landscape in the 20 National Landscapes. These are landscapes of international importance because they are either unique to or characteristic of the Netherlands or seldom found elsewhere. The designated National Landscapes have been well chosen.

Landscape in the Netherlands: rural areas becoming more urban

The Netherlands is a highly urbanised country. Almost 15% of the country is built up or taken up by infrastructure, and this percentage is growing. However, the impact on landscape quality is greater than this figure suggests. Visual intrusion caused by new buildings and roads affects landscape amenity in a quarter of the Netherlands (Figure 3).

From 1993 to 2000 almost 15% of the farmland in the urban fringe was transformed into parks, woodland and sports fields, including golf links. Traditional farming landscapes are therefore disappearing, accompanied by a loss of characteristic landscape features such as the open spaces in the peat grassland and fen meadow areas. However, easily accessible public green spaces have been provided in their place.

The rural areas are becoming increasingly urban in character as the closure of many farms allows new, non-agricultural uses to become established in the countryside. Rural areas are also changing under the influence of changes in agriculture such as the increasing scale of production, the establishment of new greenhouse complexes, and the growing numbers of riding stables and expansion of 'horsiculture' (keeping horses for leisure).

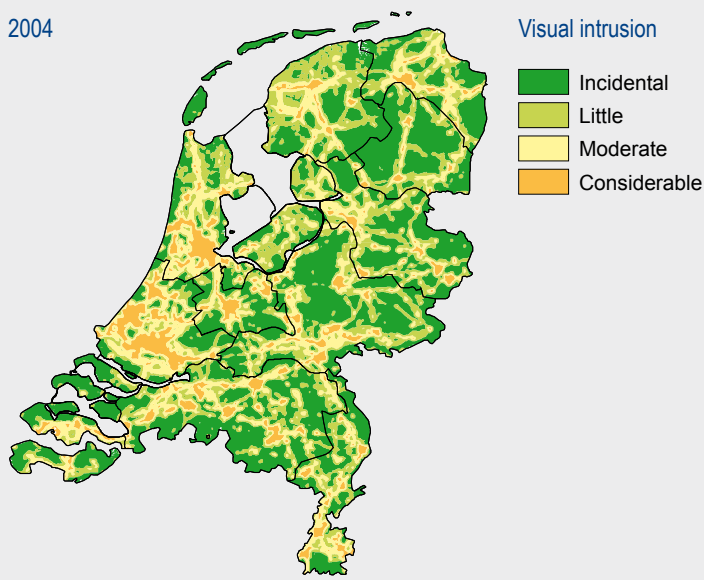

Figure 3 The ratio of 'red' to 'green' varies from region to region. The northern provinces are relatively greener. The western half of the country and the southern provinces of Noord-Brabant and Limburg contain relatively few continuous green areas unaffected by urban development and infrastructure.

Many of the key qualities of the National Landscapes are under pressure from expanding urban development, the construction of infrastructure and the increasing scale of agricultural production. Conserving these key landscape qualities, therefore, presents a considerable challenge. The provincial councils have a key role to play in implementing the policy for the National Landscapes, but they appear to have no plans to adapt the policy instruments presently available to them. In their view, current policy is adequate for protecting these key qualities. In practice, however, legal planning policies provide little protection for landscape quality.

A major challenge for the National Landscapes is preserving their key qualities. Landscapes include 250,000 hectares of wide open spaces, such as here in the Beemster region, part of the Laag Holland National Landscape (photo: De Jong Luchtfotografie).

The boundaries of the National Landscapes are still under discussion. Uncertainties about the interpretation of 'autonomous population growth' could lead to boundaries being redrawn to exclude towns and villages from the National Landscapes. This would reduce the chances of financing green areas from the returns on real estate development ('red for green' financing mechanisms).

Besides protection, investment is also needed for the restoration and enhancement of the key landscape qualities. An estimated 200 million euros will be needed for this each year, about ten times as much as the proposed investments.

New sources of funding have to be found to bridge the gap between the available and required financial resources. One of the stumbling blocks to doing this are the European competition rules, which prohibit any direct or indirect government funding of private businesses that distorts competitive relations. In practice, this restricts the possibilities for making public money available to market parties, even if they 'produce' nature and landscape. For these reasons it is also not easy to combine public and private funding in public-private partnerships.

Governance of nature and landscape policy

Greater decision-making by the provincial councils

Under the new Rural Areas Investment Budget the provincial and municipal councils and the water boards will be responsible for meeting central government policy

Funding: mainly a public sector task

The Netherlands spends more than 60 euros per head of the population on nature and the landscape. Total funding amounts to about one billion euros per year, of which 80% comes from the public sector (Figure 4, left-hand column). Most of this, almost 615 million euros, is provided by the national government.

The Netherlands also receives about 50 million euros each year for nature and landscape conservation via the European Union's Rural Development Programme (RDP). So far, though, this European funding has provided little substantive focus to the implementation of policy.

Most of the money, about 285 million euros, is spent on habitat and landscape management (Figure 4, right-hand column). Apart from the cost of equipment and public information, the rest of the money is spent mainly on the acquisition of land and landscape works in nature reserves and conservation areas (almost 280 million euros). Two-thirds of national government funding is spent on the National Ecological Network (NEN).

Besides directly subsidising land acquisition, landscape works and habitat management, the government also assists through the provision of tax inducements. This 'invisible' flow of funds amounts to about 70 million euros, and acts to increase the flow of private funding, including gifts, legacies and lottery funding.

Fiscal instruments are currently considered to be the most promising new forms of funding. In recent years various initiatives have also been taken to lever in private sector finance, either on its own or in combination with public sector funding. However, the actual effectiveness of this approach has so far been limited.

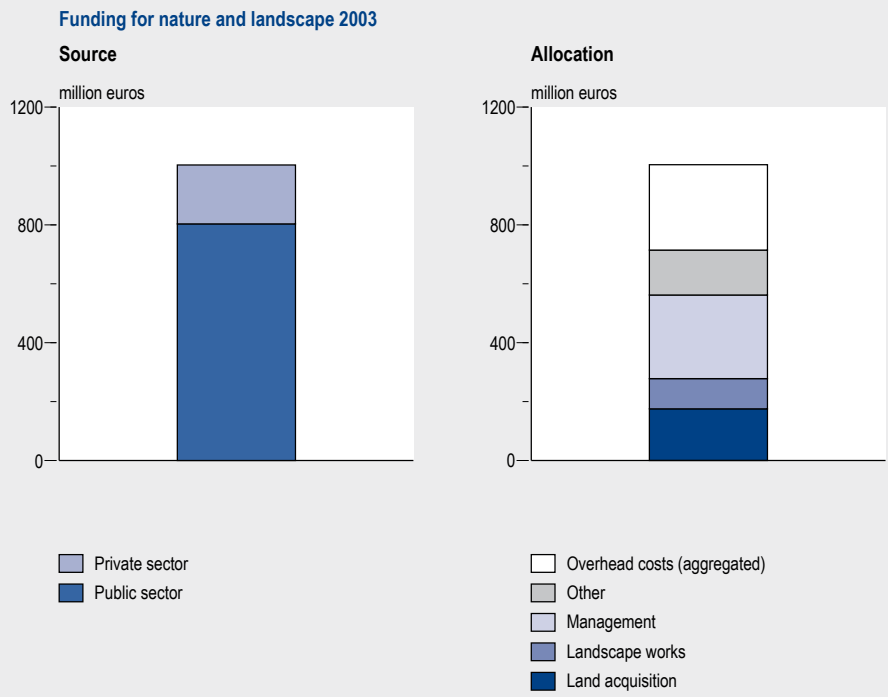

Figure 4 Total government spending on nature and landscape is 800 million euros (left). Most of this money is spent on management (right). (source: Statistics Netherlands, adapted by Environmental Assessment Agency.)

objectives for the rural areas via integrated regional development programmes. The positive aspect of this is that it permits a variety of regional approaches to achieving the biodiversity objectives. One drawback is that while central government has relinquished its opportunities for intervening in the implementation of policy, it has itself set the objectives to be achieved and is accountable for meeting relevant international obligations.

If the Rural Areas Investment Budget is introduced in 2007, a considerable proportion of the budget for nature policy will be decentralised, giving the provincial councils a much more important role. Discussions about the Rural Areas Investment Budget are dominated by the conflict of interest between the need for flexibility and the accountability of the national government in achieving the stated objectives.

'Red for green' requires integrated area development

High hopes have been pinned on the 'red for green' financing arrangement (funding green areas from the returns on real estate development). However, a lot needs to be done before this arrangement can be used to fund landscape improvements and the creation of green recreational areas in and around the cities. In the 1990s favourable returns on new residential developments provided opportunities for investing in green areas. About 3500 euros were invested in green space for each new home built. However, these new green spaces were usually realised within the new housing developments themselves. Regional balancing of cost and profit for green areas, for example, to help finance nature and landscape quality improvement, are still rare.

Land development is sensitive to the changing economic situation, which introduces uncertainty into the calculation of profit margins available for funding green spaces. Moreover, a balancing of costs and profits for green areas is not expected to be legally enforceable. Much will depend on the ability of the government authorities and organisations in civil society to enter into integrated area development schemes with property developers.

Spatial policy needed

Field monitoring and discussions with various actors lead to the conclusion that achieving sustainable ecosystem and landscape quality in the Netherlands, where pressures on land are high, will require an active land use planning policy.

The large areas of contiguous ecosystems provide the main structure for the NEN. In addition, the large patchwork areas comprising ecosystem fragments and habitats have considerable potential, as long as the land uses in these patchwork areas meet the quality standards required to support the habitats.

A worthwhile approach would be for government authorities to direct their efforts towards securing the right land use and environmental conditions for supporting ecosystems and communities rather than management agreements tailored to detailed biodiversity objectives and individual species.

In the National Landscapes the main focus should be on managing and steering urban (built) development to the right places. This is needed to deliver the financing required for maintaining the key landscape features and ensuring that these key qualities are not overshadowed by urban functions.