



National Ecological Network



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Summary

The Netherlands Court of Audit conducted an investigation into government policy introduced in 1990 to create a national ecological network of high-quality, protected nature areas (*National ecological network*, or Ecologische Hoofdstructuur (EHS)). The aim of this policy is to protect biodiversity in the Netherlands by expanding and linking up nature areas. Enlarging the habitat of plant and animal species should reduce the rate of local extinction. When the national ecological network is completed in 2018, it should comprise 728,500 hectares of nature area on land and 6.3 million hectares of water. This will require 275,000 hectares of new nature development. This can be done in three ways: the government can buy land and develop it as nature, private landowners can develop new nature areas (private management), and farmers can participate in agri-environment schemes in which they are paid to manage farmland in an environmentally friendly manner.

This investigation focused principally on national ecological network policy itself: is the EHS a suitable instrument for protecting biodiversity, is the policy clear and coherent, can it be monitored? Second, we investigated policy implementation: how much nature has been developed, do these areas have a high natural value, do the areas form a coherent network, is the network well protected? We also looked into the underlying causes of policy implementation problems.

Main conclusions

National ecological network policy

Both terrestrial and aquatic biodiversity are under pressure in the Netherlands. In our opinion, national ecological network policy is a good means of protecting biodiversity and will help the Netherlands fulfil its commitments under international agreements and European directives on nature and biodiversity.



There are some ambiguities, however, regarding the objectives of EHS policy. The first concerns the ultimate *size* of the network (728,500 hectares on land). Targets have changed several times since EHS policy was introduced, often for no apparent reason. Second, the meaning of *coherence* is not entirely clear, as the policy does not prescribe a minimum size for the individual areas that make up the EHS. Third, the nature *quality* objectives for the different nature types that should occur in the EHS are not consistently formulated, with different typologies being used side by side. As for the environmental quality of individual areas in the network, no specific measurable targets have been formulated.

The information available for monitoring realisation of the network is incomplete, unreliable and inconsistent, and monitoring itself is not centrally coordinated. Not only does this make it difficult to measure progress, it also severely limits the value of EHS progress reports provided by the Ministry of Agriculture, Nature and Food Quality in its annual reports. All in all, these shortcomings make it difficult for government and parliament to assess whether EHS objectives are being met or whether they need to take corrective measures.

Realising objectives

We have observed that a lot of work remains to be done if a coherent national ecological network is to be in place in 2018. By early 2005, 38% (106,000 hectares) of the 275,000 hectare target for new nature areas on land had been realised. In particular, the development of new EHS areas and nature management by private landowners are falling behind schedule. A quarter of the new nature development areas fall outside the EHS as delineated in the *National Spatial Strategy* (the 'net' or final EHS). Agri-environment schemes do not guarantee conservation-friendly management for the long term, as grants are only awarded for six years and farmland in these schemes is not protected by zoning plans.

It is almost impossible to draw any conclusions about the quality of the nature areas development, since it is not assessed with quantitative criteria and no baseline measurements were made anyway. Nature quality has not been a principal consideration in developing the national ecological network. Although pollution in the areas has been reduced, the problems of nitrogen deposition, acidification of the soil, the quality of surface water and groundwater depletion remain. Environmental conditions must improve more before the desired nature types can be realised, but there is no practical plan to achieve this.



There are successful examples of measures linking up nature areas, such as fauna-friendly riverbanks and fish ladders. Fragmentation by national infrastructure is being tackled and the number of large nature areas and distinct landscapes is on the rise. Yet the linking up of EHS areas has only just begun and many small nature areas remain isolated.

Zoning problems also affect the development of the national ecological network. In many cases, zoning plans do not adequately protect nature areas in the ecological network. At provincial level, there are differences in how the network has been incorporated in regional plans. These problems stem largely from the absence of a precise demarcation of the EHS, making it difficult for local authorities, individuals and businesses to include the EHS in local plans. Although there is no general idea of how the EHS is protected in local zoning plans, it appears that many municipalities use out-of-date zoning plans which do not adequately protect EHS areas. Since zoning plans are the only legally binding instrument in spatial planning, the continuity of nature areas and investments in nature are insufficiently guaranteed.

Obstacles

There are several obstacles to the realisation of the EHS. The first is *inadequate steering* by the Ministry of Agriculture, Nature and Food Quality and provincial authorities. The Ministry has failed to give provincial authorities and site managers an explicit framework for the national ecological network, including a precise demarcation of the EHS, the necessary level of protection, criteria for assessing environmental quality and suggestions on linking up EHS areas. Provincial authorities do not always make well-considered decisions about where and how nature areas are to be developed, or the nature types to be developed or preserved. This may delay completion of the network and compromise its ultimate quality and coherence.

In our opinion, inadequate steering by the Minister of Agriculture, Nature and Food Quality puts EHS policy objectives at risk and creates implementation problems: targets may not be met on time, so that in 2018, the quality, coherence and size of the national ecological network may not be in line with policy. We observed the following obstacles to implementation.



Realisation of the EHS depends largely on *voluntary participation* by private landowners. Through this voluntary approach, much of the national ecological network is now in place. The principle of voluntariness has its limits, however: landowners cannot be forced to take measures that they oppose or disagree with, even if they are necessary to realise EHS targets. Landowners are free to manage their land as they see fit, which could mean that an area is not optimally managed for the development of the desired nature type.

Another problem is that the interests of nature must sometimes bow to *other interests*, such as agriculture, construction or infrastructure. The resulting compromise might negatively affect the natural quality of the ecological network.

Last, the focus of EHS policy has shifted from buying and developing land to *paying private landowners and farmers to manage EHS areas*. Landowners are now more involved in the national ecological network. While this approach can broaden support for the EHS and save the government money, it might also form an obstacle to realising the EHS as planned. Landowners and farmers are not as keen to manage EHS areas as government had supposed them to be. In addition, private site managers often have less ambitious nature quality aims than those in EHS policy. And there is a limit to the types of nature that can be realised through agri-environment schemes.

Recommendations

In order to ensure that the national ecological network is realised as planned, the Minister of Agriculture, Nature and Food Quality must steer the policy process better and remove obstacles to implementation. The Rural Areas Development Act, which will give more responsibility to provincial authorities, makes central direction even more important. We advise the Minister to formulate clear objectives for the national ecological network and to monitor progress closely, so that government and parliament have a good idea of what is being done.

In connection with the new Act, we also advise the Minister to draw up an explicit policy framework for provincial nature policy and implementation plans. The Minister of Agriculture, Nature and Food Quality and the Minister of Transport, Public Works and Water Management must also reach agreement on a strategy for realising the aquatic reserves in the national ecological network.



In order to remove other obstacles, we recommend that the responsible Ministers – the Minister of Agriculture, Nature and Food Quality, the Minister of Transport, Public Works and Water Management, and the Minister of Housing, Spatial Planning and the Environment:

- provide a precise demarcation of the national ecological network;
- improve and support the protection of the EHS in spatial plans;
- review and if necessary revise the voluntary basis of EHS policy;
- select the appropriate realisation methods with care;
- consider promoting the continuity of agri-environment schemes;
- draw up an integrated plan of nature quality objectives and environmental targets.

The Ministers' response

The Minister of Agriculture, Nature and Food Quality responded to the investigation on 11 September 2006, with the support of the Minister of Housing, Spatial Planning and the Environment and the Minister of Transport, Public Works and Water Management. He largely agreed with our conclusions and advice and wrote that he would use the report to clarify EHS policy and improve its implementation. He expects the new instruments provided by the *National Spatial Strategy* and the Rural Investment Budget or 'Investeringsbudget Landelijk Gebied' (ILG) to strengthen steering and implementation.

The Minister disagreed with a number of the Court's conclusions. He wrote that he had always kept the House of Representatives well informed of policy changes, and felt that the Court was too negative about whether the target for nature areas on land would be realised. He admitted, however, that additional efforts would be necessary for nature development and private management to be in line with policy. Finally, he pointed out that a clear agreement already exists between himself and the Minister of Transport, Public Works and Water Management as regards aquatic nature projects and marine reserves.



The Minister underscored the Court's conclusions about the lack of quality, coherence and spatial protection of the network, but also wrote that action had been taken to improve these shortcomings. For example, the Minister is in discussion with provincial authorities and private site managers about replacing the nature type system with a simpler, effective and reliable steering system. Before the end of the year, a working group with delegates from central and provincial government and the water boards will report on the expected cost of achieving the environmental quality necessary for a national ecological network of outstanding natural value. This report and a report on ILG activities will form the basis for a decision on improving water quality and environmental conditions. The ILG administrative agreements will stipulate that national government, provincial authorities and private site managers will make specific agreements on nature quality in the national ecological network as soon as possible, and no later than the mid-term review of the ILG in 2010. The Minister wrote that he would be informing parliament shortly of the recommendations of the task force on groundwater depletion, established in 2005.

In order to improve the network's coherence, the Minister wishes to use ILG administrative agreements with provincial authorities to create robust nature corridors and remove national infrastructure obstacles. A new working group made up of government and provincial officials will draw up rules for the national ecological network, laying down do's and don'ts and the responsibilities of each of the parties involved. This should improve the protection of the national ecological network. Should the administrative agreements provide insufficient clarity about the role of central government, the Minister will draw up a more specific description, taking account of the new *Spatial Planning Act*, in consultation with the Minister of Housing, Spatial Planning and the Environment. The different demarcations of the national ecological network will have to be harmonised at parcel level. The Minister felt that the maps in the *Multi-Year Programme for a Living Countryside 2007-2013* already improved on the former situation. A map is also being drawn that will show the demarcation of the national ecological network when it is completed.



The Minister acknowledged that more information about policy progress is necessary, but he also pointed out that it is difficult to give clear information about such a long-term, large-scale project. Not only are numerous stakeholders involved in the project, policy must also be updated regularly to include the latest scientific insights. The Minister emphasised that the provision of information had improved in recent years. He gave an undertaking to include monitoring and evaluation of progress on EHS policy in ILG agreements with provincial authorities.

In his letter, the Minister also addressed the obstacles to implementation mentioned in the report. He believes that the Ministry of Agriculture, Nature and Food Quality has been adequately steering the policy process. He expects steering will improve when the Rural Investment Budget comes into effect.

The Minister wrote that the network would continue to be realised on a voluntary basis, although as 2018 comes closer, compulsory land acquisition will be resorted to more frequently as a cost-effective way to complete the EHS on time.

As regards conflicting interests, the Minister noted that the interests of nature and the national ecological network are firmly entrenched in policy, citing the 'no, unless' principle in the *National Spatial Strategy* as a good example of this. The Minister expects that the rules of play mentioned above will lead to clear agreements on protecting the EHS. He will consult with the Association of Provincial Authorities and the Association of Netherlands Municipalities about implementing and monitoring the rules.

The policy shift from land acquisition to private management will be evaluated, and possible risks identified. The Minister is also developing a method to support provincial authorities in deciding the most cost-effective way of realising the desired nature types.

Afterword by the Court of Audit

We are pleased that the Minister of Agriculture, Nature and Food Quality, backed by the Minister of Housing, Spatial Planning and the Environment and the Minister of Transport, Public Works and Water Management, agreed to clarify national ecological network policy and improve its implementation. We are also glad that various actions have already been initiated and will follow these and other developments with interest.



The Minister plans to make agreements with the provincial authorities, within the context of the ILG, concerning some of our recommendations. We are pleased with these undertakings, but we emphasise that clear goals are necessary for measuring policy outputs. We therefore feel that the Minister should set explicit targets for both the size and quality of the national ecological network, as well as for its coherence and its degree of spatial protection. Agreements about monitoring, accountability and control are also important, in our opinion, and should be made before the Rural Investment Budget enters into force.

In calculating the number of hectares added to the EHS, we used a different interpretation of the word 'completed' than the Minister. As regards our concerns about progress, we agree with the Minister that targets for the development of nature areas and private nature management are still a long way from being achieved. The Minister did not react to our advice to review the efficiency and continuity of agri-environment schemes.

The Court of Audit notes with approval that the Minister recognises the importance of protecting the national ecological network in zoning plans, of ensuring its spatial coherence and improving environmental conditions. He was not clear, however, about what measures he will take to remedy shortcomings, nor did he provide a time schedule for this. In our opinion, the Minister should give priority to formulating nature quality goals.

We stand by our opinion that it would be desirable for the Minister of Agriculture, Nature and Food Quality and the Minister of Transport, Public Works and Water Management to make clearer agreements about developing aquatic nature.



1 Introduction

1.1 Biodiversity under threat

Biodiversity is under threat all over the world: rare animals, plants and microorganisms are becoming even rarer and biological diversity is decreasing. The decline has accelerated over the past hundred years. This is an alarming development because biodiversity regulates the fundamental processes that make life on earth possible: the production of clean air and biomass, the continuity of food, nitrogen and water cycles and the climate system. Biodiversity also has an economic function in agriculture, forestry, fishing and biotechnology and, indirectly, in pharmacy, the chemical industry and tourism. Our enjoyment of flora and fauna also enhances the quality of life.¹

In the Netherlands, too, biodiversity is under threat. This is illustrated by the Red Lists drawn up by the Ministry of Agriculture, Nature and Food Quality (LNV) of animal and plant species that are rare and in decline. More than 10% of the species listed have become extinct in the Netherlands since 1950. Just under half of the species still present are endangered or vulnerable.² Not all species are under threat. The number of freshwater fish species in the large rivers has increased again since 1995 thanks largely to an improvement in water quality (Netherlands Environmental Assessment Agency, 2005).

The biodiversity of the North Sea is also under threat. Cod, plaice and sole stocks are being depleted by over-fishing and the number of ray has fallen sharply because they are being brought to the surface as a by-catch. Trawling, moreover, is wiping out long-living species such as lobsters and shellfish that live on the seabed. On the other hand, there are now more seals in the Waddenzee than there were ten years ago.³ One of the main causes of the decline in biodiversity in the Netherlands is the reduction in nature areas (see figure 1).

¹ See also the Fourth National Environmental Policy Plan (Ministry of Housing, Spatial Planning and the Environment, 2001).

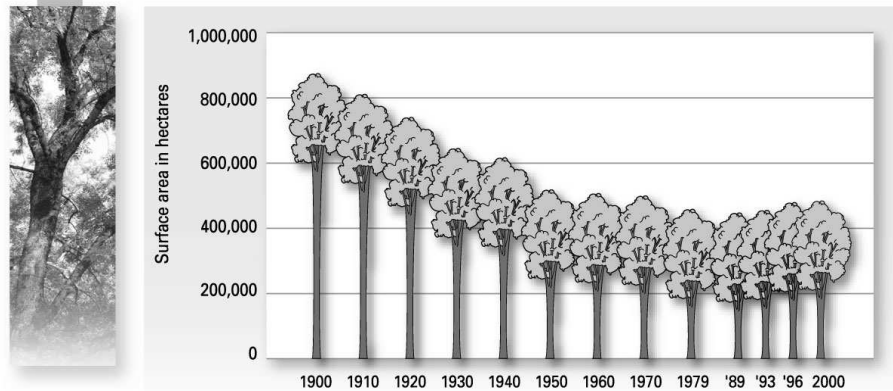
² www.mnp.nl/mnc, situation in October 2005.

³ www.mnp.nl/mnc, situation in October 2005.



Development of woodland and nature 1900-2000

Figure 1



Source: Statistics Netherlands (www.cbs.nl, consulted in March 2006)

Since 1990, the Dutch government has implemented a specific policy to protect biodiversity. The main objective of this policy is to create a national ecological network (EHS) (Ministry of LNV, 1990, 2000, 2004a).⁴

1.2 The concept of a national ecological network

The policy for a national ecological network was first presented in the *Nature Policy Plan* (Ministry of LNV, 1990). It was followed up, elaborated upon and revised in certain areas in the policy papers *Nature for People, People for Nature* (Ministry of LNV, 2000) and *Agenda for a Living Countryside* (Ministry of LNV, 2004a). The government has set itself the target of completing a national ecological network of high-quality, protected nature areas by 2018. By linking the individual areas with each other, the animals and organisms that live in one area will be able to spread over a larger area and enlarge the gene pool. This will reduce the risk of local extinction (see section 2.1.3).

The main policy objectives are not only to protect existing nature areas but also to develop new areas in order to create larger habitats. A third objective is to create ecological corridors between the areas.

⁴ Other policies to protect biodiversity are the species policy and the landscape policy. The Flora and Fauna Act of 2002 provides legal protection for certain species. The government (together with provincial authorities and nature protection organisations) also intervenes if a species is in danger of dying out. The species policy and the landscape policy are not considered in this report.



When complete, the EHS should cover 728,500 hectares, equal to about 20% of the surface area of the Netherlands. By way of comparison, built-up areas, industry and infrastructure together accounted for nearly 15% of the surface area in 2005.⁵ As well as these nature areas on land, the network will include the North Sea, the Waddenzee, the IJsselmeer, the South Holland and Zeeland delta, the inlets in South Holland and Zeeland and the main rivers. The total area of aquatic nature will be 6.3 million hectares. The main policy objectives for aquatic nature are to improve water quality and to develop environmentally-friendly riverbanks.

⁵ www.cbs.nl, situation in March 2006.



1.3 Actors and costs

The Minister of Agriculture, Nature and Food Quality (LNV) is responsible for coordinating EHS policy and the ultimate realisation of the EHS. The Minister of Transport, Public Works and Water Management (V&W) is responsible for achieving the water quality objectives. The Ministers of LNV and V&W are together responsible for achieving the aquatic nature objectives. The Minister of Housing, Spatial Planning and the Environment (VROM) is involved in the implementation of EHS policy on account of his responsibility for spatial planning and the environment. Other parties involved in policy implementation include the provinces, municipalities and water boards, site management organisations such as the State Forest Service, the Society for the Preservation of Nature, the Provincial Nature Conservation Societies and the drinking water companies. Some of the military training grounds managed by the Ministry of Defence form part of the EHS on account of their high ecological values. Farmers and private individuals that manage nature areas are also involved in policy implementation.

Implementation of EHS policy (change in function, development and management of nature areas) is supervised by the Nature Department, the National Regulations Agency and the Government Service For Sustainable Rural Development (DLG) of the Ministry of LNV. The Nature Department supervises the State Forest Service. The National Regulations Agency and DLG check that managers that receive a grant for their work comply with the grant conditions.

Over the entire policy period from 1990 to 2018, the EHS will cost about €8.9 billion, financed from the Ministry of LNV's budget.⁶ In addition, the Ministry of V&W will provide €3.5 billion to finance projects with an EHS component (Ministry of V&W, 2003 and 2004). Provinces, the European Union and site management organisations will also contribute funds. We have not calculated the exact cost of the EHS. The data are so complex that such a calculation would require a separate investigation.

1.4 Organisation of this report

Our investigation first looked at EHS policy itself. We determined whether the government had selected an appropriate instrument to protect

⁶ 1990 to 2003 €2.5 billion (Ministry of LNV, 2004b), 2004 €221 million (Ministry of LNV, 2006a and 2005b), 2005 €233 million (Ministry of LNV, 2006a and 2005b), 2006 to 2018, including non-EHS management expenditure €5,685 million (Ministry of LNV, 2006b).



biodiversity in the Netherlands and considered whether it was conducive to the Netherlands's international obligations. We also took a critical look at the objectives of EHS policy: are they clear and coherent so that they can steer policy implementation? We also determined whether there was a clear system in place to measure policy progress. These matters are considered in section 2.

We then turned our attention to the implementation of EHS policy. Where the objectives and intended policy outputs were uncertain, we consulted the Ministry of LNV to seek indicators we could use to measure performance and describe the progress made with policy implementation. We investigated how much nature had already been developed, whether it was of high quality, whether the areas were connected to each other and whether their spatial protection was properly regulated. We also looked into the underlying causes of problems in policy implementation. Policy implementation, related problems and their causes are considered in section 3.

In section 4 we set out our conclusions and recommendations. The Minister of LNV responded to the investigation on 11 September 2006, with the support of the Ministers of VROM and V&W. Section 5 summarises his response and the Court of Audit's afterword.⁷

The report has six appendices. Appendix 1 summarises the Court of Audit's main conclusions and recommendations and the Minister's undertakings. Appendix 2 describes the case studies we used in our investigation. The audit standards are presented in appendix 3. Appendix 4 lists the organisations that were involved in the investigation and appendix 5 the terms and definitions used in the report. Appendix 6 presents the targets and actual achievements regarding the size of the EHS.

1.5 Audit method

To carry out this investigation, we studied academic publications, analysed policy documents and held interviews with many of the actors involved: ministries, provinces, the Association of Netherlands Municipalities, large site management organisations, organisations of private managers and farmers and a water board. External specialists were also consulted.

⁷ The full text of the Minister's response can be read on our website at www.rekenkamer.nl.



For the policy outputs, we used information provided by the Ministries of LNV and V&W. The Department of Knowledge and the National Regulations Agency of the Ministry of LNV and the Netherlands Environmental Assessment Agency (MNP) also analysed a number of maps at our request.

We analysed the causes of policy implementation problems by means of case studies at several provinces and EHS site managers. The findings of the case studies were presented to all provinces and managers concerned for verification. Only those findings that were widely recognised were used for this report. We also presented the audit findings and possible recommendations to a wide range of actors involved in the EHS. We are extremely grateful to the Netherlands Environmental Assessment Agency for its help and cooperation in our audit.



2 The policy

This chapter looks at the most important policy instrument the Dutch government has introduced to protect biodiversity in the Netherlands since 1990: the creation of a national ecological network (EHS). To begin, we describe how the EHS is being created (section 2.1): who does what? We also determine whether the EHS, as a policy instrument, is conducive to the Netherlands' international obligations to protect nature and the environment. We then consider whether the government has chosen an appropriate instrument to protect biodiversity in the form of the EHS policy. In section 2.2 we look at the four main objectives of EHS policy: (1) the intended *size* of the EHS, (2) the *quality standards* applicable to nature in the EHS, (3) the *spatial coherence* that must be created among the areas within the EHS and (4) the *spatial protection* of the EHS. We investigated whether these objectives were defined clearly and consistently enough to determine whether they had been achieved or not. Finally, section 2.3 asks whether the information available to the Minister on the progress of EHS policy is of sufficient quality to monitor and steer policy implementation and to report to the House of Representatives.

2.1 The instrument: the EHS

2.1.1 Tasks and approach

The aim of EHS policy is to create a coherent network of high-quality nature areas. When this national ecological network is completed in 2018, it should comprise 728,500 hectares of nature areas on land and 6.3 million hectares of water (Ministry of LNV, 2000 and 2004a). This will require the creation of new nature areas and the conservation of existing areas. Several actors are involved, including the Ministries of LNV, V&W and VROM, the provinces and municipalities.

Defining boundaries and spatial protection

All three administrative tiers must gradually define the boundaries of the EHS and provide for its spatial protection by means of zoning measures. To begin with, the government outlined the 'gross' EHS in the form of broad, sweeping strips of land located throughout the Netherlands. It



then determined how many nature areas each province needed to create. The provinces subsequently agreed upon a 'net' EHS within the gross EHS. By doing so, they effectively defined the areas that will be protected by EHS policy. The government then recognised the net EHS as a key planning decision (Planologische Kern Beslissing, PKB) in the *National Spatial Strategy* (Ministries of VROM, LNV, V&W & Economic Affairs (EZ), 2006) (see figure 2).

Under the *National Spatial Strategy*, the provinces must include the relevant EHS areas in their regional plans by 2008 at the latest and explain under what conditions they will permit departures from the protection (the 'no, unless' principle). The municipalities must also include these areas in their zoning plans by 2008. Inclusion in the municipal zoning plans is an important step in providing spatial protection because they are the only plans that are binding on all administrative bodies, the public and business.



Net EHS 2005 (National Spatial Strategy)

Figure 2



Decision on type of nature and environmental standards

Adopting quality standards for the EHS is chiefly a task for the provinces. The provinces must indicate on their provincial maps what type of nature will be present in each of the EHS areas. To decide upon the type of nature, most provinces have used the national classification of nature types (Bal et al., 2002). The Ministry of LNV combined the provincial maps with the government's targets for water and the Ministry of Defence's training grounds to create a national map of more general nature objectives.



The provinces must also set standards regarding the quality of air, water and soil in the EHS areas. Problems that are encountered include: deposition of atmospheric pollutants (such as nitrogen and acids), water pollution, groundwater depletion and soil pollution (for example by phosphates). Environmental measures in the EHS areas can be taken by provinces, water boards and site managers. Generic environmental policies implemented by the Ministries of VROM, LNV, and V&W (such as fertiliser policy) also have a significant impact on environmental conditions in the EHS areas.

Enlargement of the EHS

The EHS is being enlarged in a variety of ways. Some nature areas must first be acquired and developed. Others will remain in the hands of private individuals or farmers.

- *Acquisition and development.* New nature areas are acquired by the Government Service For Sustainable Rural Development (DLG) of the Ministry of LNV, usually on behalf of the provinces. An area's function and designated land use for planning purposes then become 'nature'. DLG also develops new areas, for example by planting trees and other plants or by creating differences in height. The nature areas are then handed over to the main site management organisations: the State Forest Service, the Society for the Preservation of Nature and the Provincial Nature Conservation Societies. The Ministry of V&W acquires and develops a small proportion of the EHS areas on land, in some cases in cooperation with the Ministry of LNV and the provinces.⁸ The funds necessary to acquire and develop nature areas are provided chiefly by the Ministry of LNV and, to a lesser degree, by the provinces and the Ministry of V&W (aquatic nature), and are managed by the National Green Fund.⁹ The large site managers (for example, the Society for the Preservation of Nature) sometimes contribute towards new EHS areas.¹⁰
- *Private nature management.* Since 2000 private individuals have also been able to contribute to the enlargement of the EHS. In such cases, a private landowner has his land designated as nature in the

⁸ One example is the Maaswerken project, in which the Ministry of V&W, the Ministry of LNV and the province of Limburg are together creating new nature areas.

⁹ In the *Report on the Annual Report 2005 of the Ministry of Agriculture, Nature and Food Quality* (Court of Audit, 2006) the Court of Audit notes that the financing agreements are not transparent.

¹⁰ In practice there are many variations on the process itself. Sometimes an area is acquired and developed not by DLG but by the ultimate manager with financial support from the nature management scheme of the Management Programme or from other sources. Land is also acquired that does not require development or it is acquired by DLG but not developed until after it has been handed over to the ultimate manager.



municipal zoning plan and is responsible for the development and management of the new nature area (Ministry of LNV, 1999a, 2002). Under the nature management scheme (2000), part of the Management Programme, the owner receives a grant to compensate for the decline in the land's value and to offset development costs.

- *Agri-environment schemes*. A third way to enlarge the EHS is by means of agri-environment schemes. Such schemes were already in existence when EHS policy was introduced in 1990. They involve no change in land use and often no new development. The areas retain their agricultural function but they are managed in an environmentally-friendly way in order to increase their ecological value, for example by not cutting grass until after the bird breeding season. Management is financed from the agricultural nature management scheme of the *Management Programme* (Ministry of LNV, 1999b).

The budget to enlarge the EHS has been amended over the years. In 2000-2002 acquisition was temporarily encouraged through the Nature Offensive (Kok II government). In autumn 2002 it was announced that no further land would be acquired (Balkenende I government); this decision was reversed a year later (Balkenende II government). A policy shift was also announced in 2002 whereby less land would be acquired and more would be managed by private individuals and under agri-environment schemes. The Balkenende II government also earmarked additional funds for the EHS for the period 2004-2007.

Management of the EHS

Both the new and the existing nature areas have to be managed. Apart from public bodies,¹¹ private organisations such as the Society for the Preservation of Nature, the Provincial Nature Conservation Societies, private individuals and farmers have an important role to play. About half the EHS is managed by organisations and private individuals, for which they receive financial support from the government. Nature management grants are awarded to organisations, private individuals and farmers under nature management scheme or the agricultural nature management scheme of the Management Programme. The Management Programme is implemented by the National Regulations Agency of the Ministry of LNV. Grants are awarded for a period of up to six years, after which a new application must be made. The State Forest Service receives a direct grant from the Ministry of LNV. Other public bodies that manage EHS areas, such as the Ministry of Defence, are not awarded grants.

¹¹ Such as the State Forest Service, the Directorate-General for Public Works and Water Management, the Ministry of Defence, water boards and municipalities.



2.1.2 EHS policy and international obligations

The ambition of creating a national ecological network is not only a question of national priorities. The Netherlands is also obliged by various international agreements to protect biodiversity, promote sustainability and conserve wild plants and animals in their natural habitats.

The main international agreements are the Ramsar Convention on Wetlands of 1971 (signed by the Netherlands in 1980), the Bonn Convention (1983) and the Rio de Janeiro Convention on Biological Diversity (1992). These conventions require the signatories to establish and protect defined nature areas. At European level, international agreements are laid down in the Bern Convention (1979), the Birds Directive (1979) and the Habitats Directive (1992). The Birds Directive provides for the protection of areas in which birds can live, breed and overwinter without their being disturbed. Pursuant to the Habitats Directive, a coherent European ecological network of protected nature areas must be created (known as *Natura 2000*), consisting of special protection areas designated by the member states. The Birds Directive areas also form part of *Natura 2000*.

About 40% of the EHS on land forms part of *Natura 2000*.¹² These areas are protected by the Nature Conservancy Act 1998 and the European directives. They enjoy greater protection than other EHS areas, which are subject to the Spatial Planning Act. Compensation for the encroachment of *Natura 2000* areas is also subject to stricter requirements (Ministries of VROM, LNV, V&W and EZ, 2006). The status of *Natura 2000* areas differs in other respects from that of the other EHS areas. The groundwater level in and around the *Natura 2000* areas, for example, must be based on conservation goals set for those areas by central government (Ministry of V&W, 2005b). Other EHS areas are not subject to this requirement. The environmental conditions in the *Natura 2000* areas must be satisfied by 2015 but those in other EHS areas need not be satisfied until 2027. The *European Water Framework Directive* (2000) is also applicable to EHS policy. One of its objectives is to protect and improve the quality of aquatic ecosystems.

¹² This shows that the Netherlands is doing considerably more than just complying with its international obligations.



2.1.3 Suitability of the EHS as a policy instrument

In scientific circles, the EHS is seen as the only feasible, potentially successful and correct strategy to preserve biodiversity. There is a general consensus that nature areas should be as large as possible and ecologically linked to each other as efficiently as possible. Scientists stress the importance to biodiversity of large areas with good migration routes between them. This can be achieved, for example, by minimising the distance between nature areas and by creating effective ecological corridors between them (Opdam, 2002; Foppen, 2001; Council for the Rural Area, 2003; Bal, 2004). Their reasons are:

- the risk of a species dying out is smaller if the areas are larger and less isolated. Furthermore, the likelihood of a species returning and of new species establishing themselves is higher;
- large areas are necessary for such natural processes as shifting sands, flooding and pasturing;
- it is easier to combat local negative impacts (e.g. hazardous substances) by means of generic environmental policy in large areas because large areas have smaller borders relative to their surface area than small areas.

We conclude that the government has selected a suitable instrument to protect biodiversity in the form of the EHS policy. It is also conducive to the Netherlands' obligations under international agreements and European directives. Given the data and methods currently available, however, it cannot be said how great the EHS's impact is on biodiversity. Apart from the EHS, many other factors have an impact on biodiversity, such as climate change and residential development. We were unable to determine the impact of EHS policy on biodiversity because empirical data were not available. Various studies have convincingly argued, though, that the EHS has had a positive impact on biodiversity (see, for example, Lammers et al., 2005).

2.2 Objectives of EHS policy

For a well-chosen policy instrument to be effective, the policy objectives must be clearly and coherently formulated so that they can steer policy implementation. We investigated whether this was the case with EHS policy. We considered the four main objectives of EHS policy: (1) the proposed *size* of the area, (2) the *quality standards* that nature within the EHS must satisfy and (3) the *coherence* of the areas within the EHS. We



also looked at (4) the *spatial protection* of the EHS, which is important to protect nature and to secure the investments.

2.2.1 Size

By 2018, the national ecological network on land should cover 728,500 hectares. This will require the creation of 275,000 hectares of new EHS areas in addition to the 453,500 hectares already in existence in 1990 (Ministry of LNV, 2004a). The EHS should also include 6.3 million hectares of water. The policy objective for the EHS on land has frequently been changed since 1990. The total has varied from 685,000 hectares (Ministry of LNV, 1990) to 749,500 hectares (Ministry of LNV, 2000). The overall objective of 728,500 hectares of EHS on land will be realised by means of different area types and different realisation methods. The five area types recognised by the Ministry of LNV are:

- existing nature areas: nature that was already present in 1990;
- new nature areas: new EHS areas whose main function will be nature;
- management areas within the EHS: new EHS areas that will continue to have agriculture as their main function;
- robust corridors: new EHS areas that will connect the larger nature areas within the EHS;
- aquatic nature areas: new aquatic EHS areas.

The Ministry of LNV also recognises three realisation methods: acquisition and development, private nature management and agri-environment schemes (see section 2.1.1).

The Ministry of LNV has set different targets for each combination of realisation method and area type. The current targets for the realisation of the EHS on land are shown in table 1. A more detailed overview of the targets is provided in appendix 6.



Table 1. Targets for the size of the EHS on land (Ministry of LNV, 2006c)

			Realisation method				Total area
Area type	New EHS		Acquisition and development	Agri-environment	Private nature management	Subtotal new EHS	
		New nature	111,741	5,050	34,709	151,500	
		Agricultural management areas within the EHS	0	90,000	0	90,000	
		Robust corridors	16,303	2,635	8,062	27,000	
		Aquatic nature	2,860 + 3,640 development only	0	0	6,500	
		Total new EHS per realisation method	130,904 + 3,640 development only	97,685	42,771		275,000
	Existing EHS	Existing nature areas					453,500
Existing and new EHS							728,500

Successive governments have repeatedly changed the preferred method to enlarge the EHS and achieve the related targets, sometimes more than once a year. The initial intention was to create the EHS only by means of acquisition and development and agri-environment schemes. Private nature management was introduced in 2000. Between 2000 and 2002, EHS policy was revised and the focus was shifted more towards agri-environment schemes and private nature management. In part, the changes were made in response to evolving social, political, budgetary and scientific insights. Many of the changes, however, were made for no apparent reason and they were not always reported to parliament. Owing to the many changes, it is not always clear what the exact targets are. It is uncertain, for example, whether areas that were previously included in the 6.3 million hectares of existing aquatic EHS are now included in the 275,000 hectares of new EHS that must be created on land. If they are, fewer new nature areas will have to be created.

Another uncertainty has been caused by changes in the target for new nature following the decision to give farmers a greater role in the creation of the EHS. Not all nature objectives can be realised by agri-environment schemes. Nevertheless, the Ministry of LNV has not mapped out the consequences of increasing the number of agri-environment schemes in order to achieve the desired nature objectives. The Ministries of LNV and V&W are working together on the creation of new aquatic EHS areas. Our investigation found that the two Ministries had been unable to reach



agreement on the enlargement targets for the aquatic EHS for quite some time. This is illustrated by the uncertainty regarding the Maaswerken project (see box).

Maaswerken project

The *Agenda for a Living Countryside* (Ministry of LNV, 2004a) and the Ministry of LNV's budget for 2006 set a target of locating 3,000 hectares of the EHS along the River Maas. On 2 February 2006 the Ministries of LNV, V&W and VROM informed us that this target was no longer applicable and that the total for the Maaswerken project was 1,289 hectares. In the eighth progress report on Zandmaas and Grensmaas (House of Representatives, 18 106, no. 166, pp. 9 and 14 and appendices 2 and 3) the target set for the Zandmaas I subproject was 570 hectares of nature and 60 hectares of nature compensation and that for the Grensmaas subproject was 'at least 1,000 hectares of nature'. In total, the target is therefore at least 1,570 hectares (plus 60 hectares of nature compensation). In the Broad Co-Financing Programme 2, the target for Grensmaas is 750 hectares and the target for Zandmaas I is 570 hectares. The target for the third subproject, which was part of the Maaswerken project until the beginning of 2006, Zandmaas II, - 460 hectares - is changed in the Multi-Year Programme to 6,500 hectares of aquatic nature. Information from LNV and V&W (May 2006) indicates that the target for Grensmaas is at least 1,000 hectares after all, so that the total target for the Maaswerken project is now at least 1,570 hectares (plus 60 hectares of nature compensation).

This uncertainty makes it difficult for the Minister to steer policy and for the House of Representatives to exercise its duty of scrutiny adequately.

2.2.2 Quality

As part of the EHS policy, targets have been set for the *quality of the nature types* that must make up the EHS ('nature objectives') and for the required *environmental quality*. Both of these targets are considered below.

Nature objectives

Thirty-two different types of nature have been targeted for the nature areas in the EHS. These nature objectives are an aggregation of the 92 types described in the *Manual for the National Classification of Nature Types (Handboek Natuurdoeltypen, Bal et al., 2002)*. One nature objective is 'dry herbaceous vegetation', which consists of the nature types 'dry upland herbaceous vegetation', 'dry decalcified dune grasslands' and 'dry chalk-rich dune grasslands'. The nature objectives are shown on the provisional *National Nature Objectives Map* (Ministry of LNV, 2003), which shows the desired nature objectives in the EHS. The *National Nature Objectives Map* should have been completed at the end of



2005 (Ministry of LNV, 2004a) but it has still not been rounded off because the government and provinces have not yet reached agreement on it.

The system of nature objectives and nature types can in theory be used as a general system to formulate objectives and to monitor their achievement. One problem, however, is that no binding agreements have been made on the use of the system and the system has not been universally applied. Some provinces and site managers have developed their own nature objectives and types to steer their activities. The Ministry of LNV itself has also developed different typologies and measuring systems to manage the EHS.¹³ For Natura 2000 areas, furthermore, yet another classification of nature targets is used, one that is consistent with the European directives. This creates communication problems between the managers, provinces and central government and causes unnecessary red tape for both the government and the managers. It also makes it difficult to steer policy by means of nature objectives (see section 3.5).

Environmental quality

Two firm completion dates have been set to achieve the desired environmental quality of the EHS areas: the areas that form part of Natura 2000 must meet the quality standards by 2015 and the other EHS areas by 2027 (Ministry of LNV, 2006c). This creates the impression that the quality objectives are known, but this is not so. The standards that must be satisfied on the set dates have not yet been formulated. The concrete ambitions regarding environmental quality must still be agreed by the provinces on the basis of (a) the nature types that have to be created in the areas concerned, and (b) the obligations arising under the *Birds and Habitats Directives* and the *Water Framework Directive* (Ministry of LNV, 2006b). We would note that the formulation of the environmental quality targets for the EHS is not specific enough.

The objectives regarding groundwater depletion, which, incidentally, do not apply solely to the EHS, have been agreed. Of the area suffering from groundwater depletion (in comparison with 1985), 25% must have been restored by 2000 and 40% by 2010 (Ministry of V&W, 1998; Ministry of LNV, 2000 and 2006c). In 2018, good water conditions must have been created in all EHS areas (Ministry of LNV, 2004a). Here, too, however, there is an uncertainty. The size and location of areas suffering from groundwater depletion is open to interpretation.

¹³ The management packages used in the Management Programme and the nature objectives set for the State Forest Service.



2.2.3 Coherence

The ambition to create a coherent network of large interconnected nature areas is presented in the policy in the form of three concrete objectives: enlargement, linking and defragmentation.

Enlargement of the EHS areas

No quantified goal has been formulated for the size of individual nature areas in the EHS. There are indicators (MNP, 2005; Lammers et al., 2005) but, according to the Ministry of LNV, the minimum size of a nature area proposed in Nature Policy Plan 1990 should be looked upon as a guideline rather than as a concrete policy goal. One goal concerning the enlargement of nature areas, however, is clear: 18 national parks must have been created by 2004 (Ministry of LNV, 2000).

Linking up EHS areas

The current goal is to create 12 'robust' corridors between EHS areas, with a combined area of 27,000 hectares (Ministry of LNV, 2004a). Robust corridors will let animals move easily from one nature area to another. The connections sought between EHS areas have been changed several times over the years. In 1995, the objective was to create many small linking zones. In 2000 the policy was revised in response to the latest scientific insights (Pelk et al., 2000) and the goal became robust corridors as well as small-scale linking zones: 12,500 hectares of ecological linking zones and 10,000 hectares of landscape features forming a network of 'green and blue arteries'. Most of the small-scale links were dropped in 2004.

Defragmentation of EHS areas

Large parts of the EHS are currently highly fragmented by the infrastructure that cuts through them. The objective for defragmentation is worked out in the *Multi-Year Programme on Defragmentation*. The main obstacles to the EHS in the form of roads, railways and waterways must have been eliminated by 2018 (Ministries of V&W, LNV and VROM, 2004). In concrete terms, this can be achieved through the construction of fauna passages and the like ('eco ducts' and wildlife tunnels). Infrastructure built for water management and water security purposes sometimes forms a barrier, too. The spatial coherence of the aquatic EHS must be increased through the construction of 500 kilometres of fauna-friendly riverbanks and seven fish ladders in the Rhine and the Maas. Another goal is to restore an effective and natural transition between freshwater and saltwater in every river system.



2.2.4 Spatial protection

The provinces and municipalities are responsible for drawing up spatial plans to protect the EHS. By 2008 at the latest, the provinces must have incorporated EHS nature areas in their regional plans and have explained when departures from the spatial protection they offer will be permitted (the 'no, unless' principle). The EHS areas must also be included in municipal zoning plans by 2008. Originally, they should have been included by 2005 (Ministries of VROM, LNV, V&W and EZ, 2006). When many of the regional plans were prepared, however, the Ministry of LNV had not made clear agreements with the provinces on (1) which areas would be protected in the regional plans as EHS nature areas, and (2) the application of the 'no, unless' principle. The consequences of this are considered in section 3.5.

2.3 Insight into progress

The information available on the progress of EHS policy is so poor that it is difficult to monitor policy implementation. Poor information is not appropriate to a form of accountability that, in keeping with the From Policy Budgets to Policy Accountability operation,¹⁴ considers the measures implemented, the expenditure incurred and the outputs achieved in the light of the costs, objectives and outputs originally planned. This is explained briefly below.

Incomplete picture

A great deal of information is available on the progress being made with the EHS but it is not coordinated and analysed centrally. There is no overview. The Ministry of LNV itself has information chiefly on the size of the EHS and far less on the protection offered by zoning plans and the quality and coherence of the EHS. Information on the achievement of nature objectives is not systematically collected even though this could be done by a nature objectives system (see section 3.5). For some of the targets, such as that for groundwater depletion, several measuring and monitoring systems are available but no decision has been taken to use just one of them.¹⁵ For other targets, such as that for environmental conditions in the EHS, no systems are available. The Minister therefore cannot monitor progress in these areas effectively and cannot steer policy

¹⁴ Principles of the From Policy Budgets to Policy Accountability programme launched in 1999.

¹⁵ National groundwater depletion map and the measuring systems of the Netherlands Environmental Assessment Agency and the State Forest Service.



implementation where necessary and report appropriately to the House of Representatives.

Unreliable and inconsistent data

Another problem is that not all the available data are accurate and reliable. The Netherlands Environmental Assessment Agency (MNP) and the Alterra research centre, for example, perform such complex analyses of environmental quality (e.g. map analyses of nitrogen deposition and groundwater depletion) that they acknowledge that their data are uncertain.

More serious is the fact that the Ministry of LNV's data on the number of hectares realised are uncertain. We were repeatedly provided with different data on some policy achievements. The data sometimes also varied from the budget because different definitions and calculation methods had been used, which was not disclosed.¹⁶ On the progress of specific projects to create aquatic nature, in which both the Ministry of LNV and the Ministry of V&W are involved, we repeatedly received conflicting data from the two Ministries. Moreover, no clear agreements have been made on which Ministry would be responsible for monitoring and reporting. The Ministries' publications do not provide information on the quality of the figures.

Incomprehensible data

Finally, the data are not always comprehensible. The Ministry of LNV's budget and annual report, for example, do not make a distinction between land acquired inside the EHS and land acquired outside the EHS for subsequent exchange. The Ministry of LNV did not make a clear distinction between management inside the EHS and management outside the EHS until it published its budget for 2006.

2.4 Conclusions

EHS policy is a suitable instrument for the government to protect biodiversity. It is also conducive to the Netherlands' obligations under international agreements and European directives.

¹⁶ The LNV budget for 2006 (Ministry of LNV, 2005b) states that on 1 January 2005 14,975 hectares were managed as agri-environment areas in accordance with the agricultural nature management scheme yet according to information we received from LNV 21,591 hectares were in the EHS (and 48,332 hectares inside and outside the EHS together). The number of hectares managed under agri-environment schemes via the Management Agreements and Nature Development scheme (RBON) are not stated in the output data in the budget.



The objectives of EHS policy, however, are unclear in certain areas. Some objectives and targets (for example on the size of the EHS) have been changed many times over the years, sometimes on account of new social, political, budgetary or scientific insights but sometimes for no apparent reason. The quality targets for the nature types in the EHS use many different typologies alongside each other. Specific and measurable objectives have not yet been formulated for the environmental quality required in each EHS area. There is also uncertainty about the objective to create coherence within the EHS because there is no standard on the minimum size of EHS areas. There are no clear definitions or agreements about which areas should be protected as EHS areas in regional plans or on the form of protection that should be provided (the 'no, unless' principle).

The policy information that is available is not appropriate to monitor the realisation of the EHS. Data on the realised hectares are not sufficiently reliable or consistent, and the Ministry of LNV has virtually no performance indicators to measure nature quality, environmental conditions and spatial coherence.

The uncertainty regarding the objectives makes it difficult for the Minister to steer EHS policy effectively. Poor policy information makes it difficult to measure progress and also raises doubts about the usefulness of the figures on the realisation of the EHS presented in the Ministry of LNV's annual report. This is not in keeping with the principles of the From Policy Budgets to Policy Accountability operation.



3 Achievement of objectives

The ultimate objective of EHS policy is to create a coherent network of high-quality nature areas comprising 728,500 hectares on land and 6.3 million hectares of water. We investigated the progress made with the implementation of EHS policy, the problems that had arisen during implementation and the causes of those problems. Our investigation of policy implementation concentrated on the four main objectives: size (section 3.1), quality (section 3.2), coherence (section 3.3) and spatial protection (section 3.4). Where the objectives were not concrete enough to assess policy performance, we sought our own concrete performance indicators in consultation with the Ministry of LNV.¹⁷ Our descriptions of policy performance use information from the Minister of LNV, the MNP and Alterra. The figures presented in this section should be treated as estimates. Finally, we investigated the causes of problems that arose during the implementation of EHS policy. The main problems are considered in section 3.5.

3.1 Size

The target for the enlargement of the EHS is 275,000 hectares.¹⁸ These new EHS areas must be created by 2018. On 1 January 2005, nearly 106,000 hectares had been completed (38%).¹⁹ A great deal must therefore still be done to achieve the ultimate goal by 2018. The pace at which the EHS is being completed will have to pick up in the years ahead. Figure 3 shows how much of the EHS had been completed by 1 January 2005.

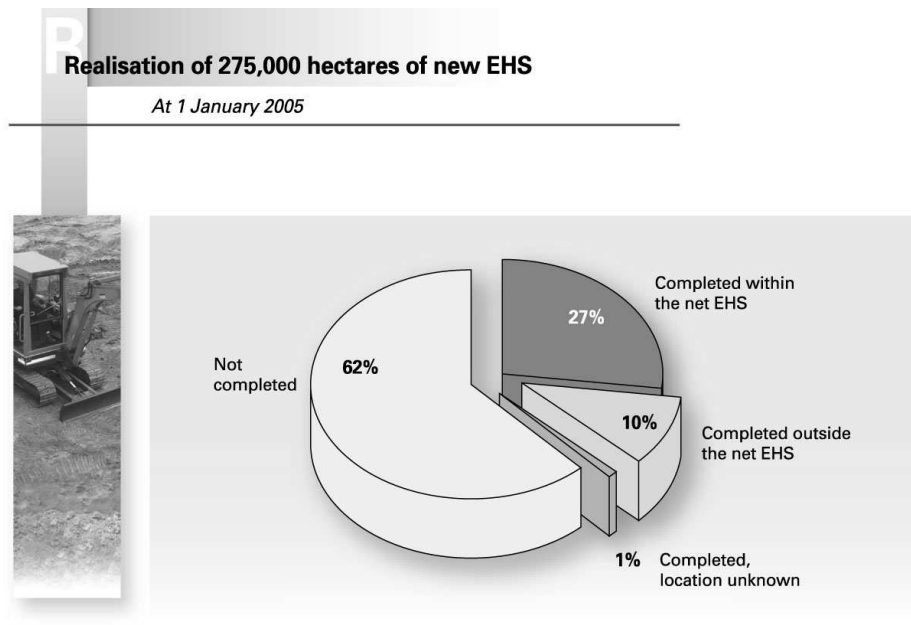
¹⁷ These performance indicators related to environmental conditions, the size of areas and the protection offered by zoning plans.

¹⁸ 275,000 hectares of the ultimate EHS will be new in comparison with 1990.

¹⁹ Information from the Ministry of LNV, the National Regulations Agency and the Government Service For Sustainable Rural Development. 'Completed' means the land has been acquired and developed or that a private management contract has been signed and the land's function will be changed and development is considered complete, or that a grant has been awarded for an agri-environment scheme. 'Completed' does not mean that the required nature is fully developed.



Figure 3



The figure shows that a proportion of the realised nature areas lies outside the EHS, i.e. outside the net EHS as indicated on the key planning decision map in the *National Spatial Strategy* (Ministries of VROM, LNV, V&W and EZ, 2006). With regard to a small proportion (1%) of the completed hectares, we do not know whether it lies inside or outside the net EHS.²⁰ Apart from the areas shown in figure 3, some areas have been acquired but not yet developed and private management contracts have been signed for some areas.²¹ The following sections take a closer look at the progress made with each realisation method: acquisition and development, private management and agri-environment schemes. Aquatic nature areas are considered separately.²²

3.1.1 Acquisition and development

To create parts of the new EHS, central government acquires land and then develops it as a nature area under the responsibility of the Government Service For Sustainable Rural Development (DLG). The government subsequently transfers ownership and management to one of the site management organisations (State Forest Service, Society for the Preservation of Nature, Provincial Nature Conservation Societies).

²⁰ This relates to 3,553 hectares managed under agri-environment schemes.

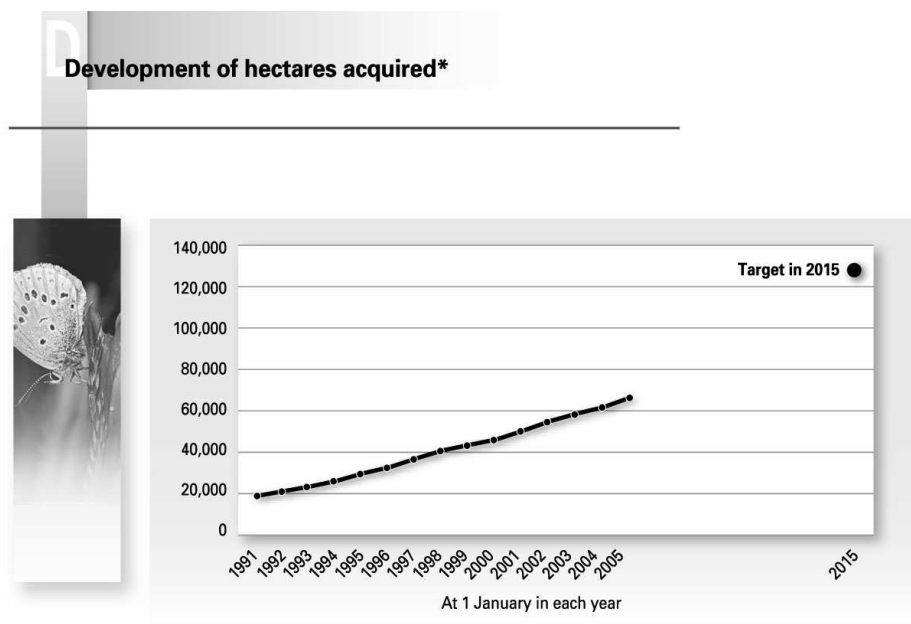
²¹ This relates to 19,524 hectares of land acquired in the EHS and 2,701 hectares contracted for private management. A further 18,772 hectares has been acquired outside the EHS for subsequent exchange for land inside the EHS.

²² A complete overview of the targets' current status in each part of the EHS is given in appendix 6.



The overall target for the acquisition of new EHS areas is 128,044 hectares (excluding aquatic nature areas).²³ At the beginning of 2005 66,697 hectares (52%) had been acquired and 47,173 hectares (37%) had been developed.²⁴ To complete the EHS by 2018, the *acquisition* of land must be completed by 2015 and its *development* by 2018. If the acquisition of EHS areas is continued at the same pace, it will be possible to achieve the overall acquisition goal by 2018. A lot still has to be done regarding the development of nature areas, however, if the development target is to be achieved by 2018.

Figure 4



* The figure does not show the number of hectares completed because consistent data are not available for each year.
Source: Ministry of LNV, Government Service for Sustainable Rural Development.

3.1.2 Private nature management with change in function

In private nature management, new nature areas are created but the land remains the property of the private owner. There is a change in the land's function because its main function for planning purposes becomes 'nature'. The nature management scheme was introduced for these areas in 2000.

The target for private management inside the EHS is 42,771 hectares in 2018. At the beginning of 2005, contracts had been signed in respect of

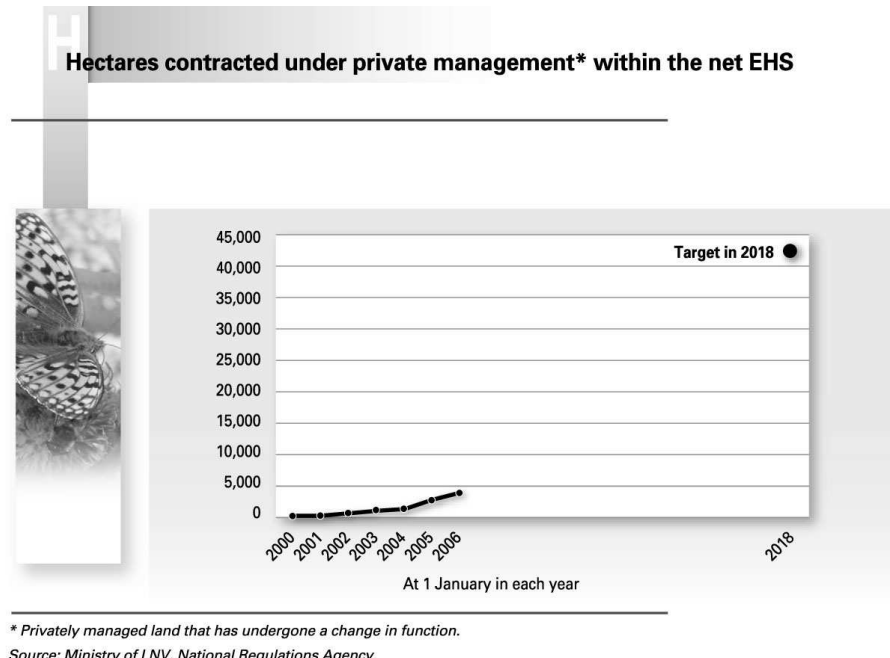
²³ See table 1: total 130,904 hectares less 2,860 hectares of aquatic nature.

²⁴ Source of the realisation data: Ministry of LNV, Government Service For Sustainable Rural Development. A further 18,385 hectares had been acquired outside the EHS for subsequent exchange for land inside the EHS.



2,701 hectares (6%) of privately managed land located inside the net EHS that would undergo a change in function (see figure 5).²⁵

Figure 5



Once the management contract has been signed, development can take several years. The Ministry of LNV does not keep a record of when development is actually completed but assumes that it takes six years. This means that none of the hectares contracted by the beginning of 2005 has been developed or can be considered as completed.

Given the ambitious targets, private management is making slow progress. Even if the fast pace of 2004 and 2005 were continued, only about half the target would be achieved (see figure 5). It is uncertain, however, whether private individuals are sufficiently interested in achieving the target. A survey by the National Green Fund (2004) found that farmers and landowners were potentially interested in a maximum of 20,500 hectares.

3.1.3 Agricultural management

In an agri-environment scheme, farmland is managed in a way that is beneficial for flora and fauna. The area's main function remains 'agriculture' and the land continues to be owned by the farmer.

²⁵ This comprises 2,140 hectares of privately managed land that has undergone a change in function and 561 hectares of new woodland on agricultural land that was coincidentally located inside the EHS. Source of the realisation data: Ministry of LNV, National Regulations Agency.



The target for agri-environment schemes is 97,685 hectares inside the EHS and 20,000 hectares outside the EHS. At the beginning of 2005, 56,688 hectares had been contracted (48% of the overall target inside and outside the EHS). It is not clear what proportion of the 56,688 hectares can be classified as part of the EHS. Just under half (26,394 hectares) is located inside the net EHS, and just under half is outside.²⁶ The *National Spatial Strategy* (Ministries of VROM, LNV, V&W and EZ, 2006) states, however, that land that has been contracted outside the net EHS also forms part of the EHS. This would mean that all the realised 56,688 hectares should be considered to be part of the EHS.²⁷

3.1.4 Aquatic nature

Although aquatic nature is realised chiefly in and along the main lakes and rivers, it is classified as land in the enlargement targets for the EHS. The targets for aquatic nature relate to five projects: the South Holland delta, the North Netherlands, the IJsselmeer, Zandmaas II and the national waters. The EHS target for aquatic nature is 6,500 hectares by 2010, to be achieved by acquiring 2,860 hectares and developing 6,500 hectares. Since the realisation figures are inconsistent or incorrect (see box), neither the Ministers nor the House of Representatives has a good insight into the current status.

²⁶ Source of the realisation data: Ministry of LNV, National Regulations Agency (SAN) and Government Service For Sustainable Rural Development (Management Agreements and Nature Development scheme, RBON). 26,741 hectares are located outside the EHS; we do not know whether a small proportion (3,553 hectares) is located inside or outside the EHS.

²⁷ To calculate the number of hectares that had been completed, all hectares managed under agri-environment schemes both inside and outside the EHS were counted as EHS areas.



Poor coordination between the Ministries of LNV and V&W

Owing to a lack of coordination between the Ministries of LNV and V&W, it took a long time before these Ministries could provide unambiguous figures on the realisation of the aquatic EHS. According to the Ministries of LNV and V&W, by the beginning of 2005 a total of 136 hectares (5%) had been acquired inside the EHS, 387 hectares outside the EHS (for subsequent exchange) and 1,886 hectares (29%) had been developed. The Ministry of V&W had earlier reported in public documents that 536 hectares (19%) had been acquired and 733 hectares (11%) had been developed (Ministry of V&W, 2005a and RIZA, 2005). Interestingly, the Ministries reported that 724 hectares had been developed in the North Netherlands yet the target had been 500 hectares. According to the Ministry of LNV this was because boundaries had not been defined for aquatic nature and a larger area had been developed using the available resources. The Ministry of V&W had previously reported that 46 hectares had been acquired in the North Netherlands (Ministry of V&W, 2005a) yet there had been no acquisition target there. The Ministries of LNV and V&W reported in June 2006 that there had been no acquisitions.

3.2 Quality

The Ministry of LNV has not adopted any performance indicators for the quality of the EHS. The indicators we present in this section have been chosen by us in consultation with the Ministry of LNV. We used the performance indicators with the aid of the MNP and the Alterra research centre. Below, we consider the achievement of the nature objectives and of the intended environmental quality.

3.2.1 Nature objectives

Owing to the lack of a monitoring system, it is not known how many hectares have actually been realised for each nature objective. To gain some insight, we looked at the type of management conducted. Alterra investigated whether areas for which certain nature objectives had been planned were already being managed as nature areas. It found that for certain nature types, such as sand drifts, virtually all areas (more than 85%) were being managed as nature areas. For other types, such as grassland, a relatively large proportion (30-50%) was not yet being managed. If an area is being managed, it does not necessarily mean that the intended nature type is also present. Furthermore, the management need not necessarily be conducive to the required nature type.



Alterra investigated whether the management conducted in eligible nature areas²⁸ was conducive to the nature objective shown on the *National Nature Objectives Map* for those areas. It found that this was not the case in nearly half of the eligible areas. The greatest differences were found in respect of large-scale nature objectives, such as 'sandy woodland' (more than 90% is not conducive) and 'dune landscape' (more than 70% is not conducive).

3.2.2 Environmental quality

The right environmental conditions are essential to ensure the high quality of nature in the EHS and thus its success. The precise environmental conditions intended for the EHS areas are not recorded. It is known what conditions are necessary for the plant and animal species that are characteristic of certain nature objectives. The National Nature Objectives Map, however, does not show where the current environmental conditions are inadequate in the EHS areas or what measures and financing are necessary to restore them. Although the quality of the environment in the Netherlands has improved significantly in recent years, the environmental conditions in many EHS areas are still not yet high enough to realise the required nature quality. Significant problems include groundwater depletion, the quality of surface waters, nitrogen deposition and acidification. These problems are considered below.

Groundwater depletion

A nature area suffers from groundwater depletion if the groundwater level is too low or if there is too little seepage to guarantee the area's characteristic ecological values. It also suffers from groundwater depletion if water of insufficient quality is provided by way of compensation. Groundwater depletion means not only that there is a shortage of water but also that the soil might be becoming more acidic and richer in nutrients. Plants and animals that cannot adapt to these changing circumstances may disappear.

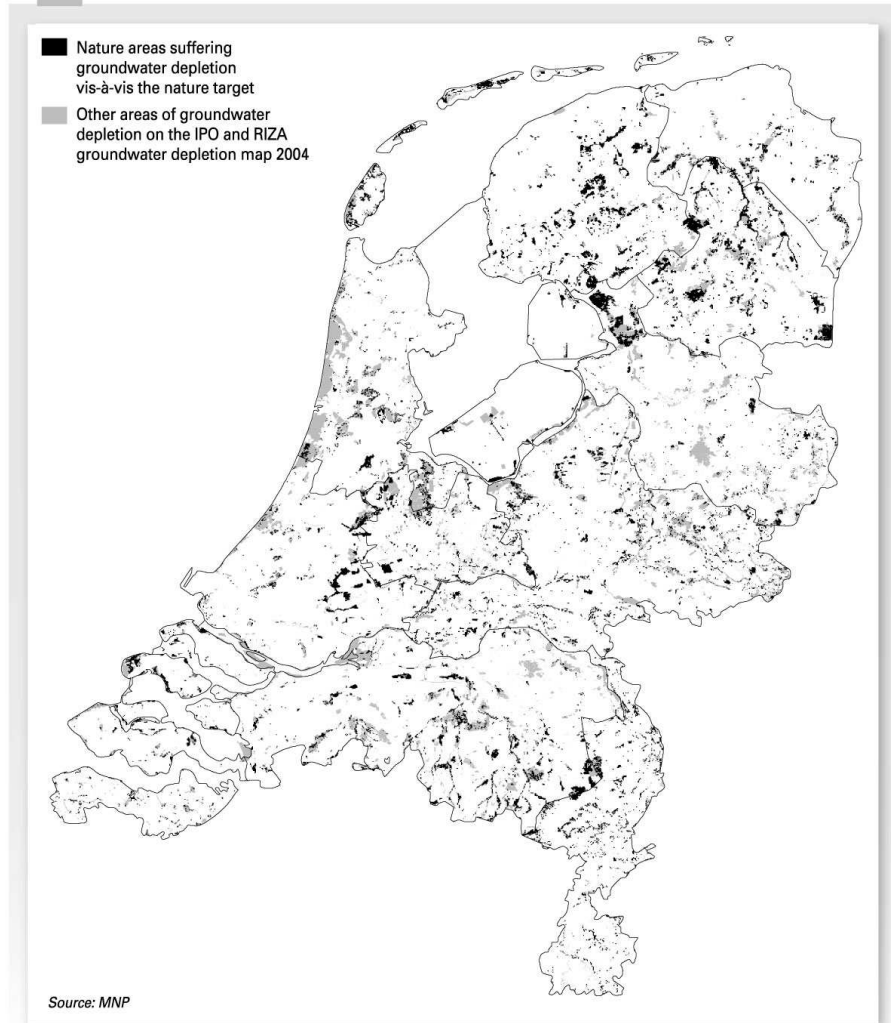
One problem is that there is no insight into the extent of groundwater depletion. According to information from the Association of Provincial Authorities (IPO) and the Institute for Inland Water Management and Wastewater Treatment (RIZA), groundwater depletion was prevalent in 400,000 hectares of land before the policy was introduced (IPO and RIZA, 2005). The MNP estimates the area suffering from groundwater depletion differently, namely 180,000 hectares in 2005. The map in figure 6 shows the different estimates.

²⁸ This is about half the area for nature on the National Nature Objectives Map.



Groundwater depletion in the EHS in 2005

Figure 6



The national groundwater depletion policy sets targets for depletion: in comparison with the situation in 1985, 25% of the depleted areas must have been restored by 2000 and 40% by 2010. Some 4% (nearly 15,000 hectares) has now been fully hydrologically restored and 11% for more than half (IPO and RIZA, 2005). According to this information, the results are therefore far behind the targets.²⁹ Although no base-line measurement was carried out and there is no agreement on the method

²⁹ Realising 100% hydrological recovery in all areas is not realistic because some areas have been irreversibly damaged.



to measure depletion, all parties involved (central government, provinces, water boards and managers) agree that groundwater depletion is a serious and stubborn problem.³⁰

Quality of surface water

No specific targets have been set for the quality of surface water in the EHS areas, nor is it monitored. The government's water quality policy includes general standards on water quality known as the maximum permissible risks (Ministry of V&W, 1998). They include standards on nitrogen and phosphate concentrations in the surface waters of the four main rivers systems (Rhine, Maas, Scheldt and Eems). The government introduced this policy in anticipation of the European Water Framework Directive (2000). The Framework Directive's main objective is to realise a good chemical and ecological balance. There has been a clear improvement in the quality of surface water in the river systems since 1985; nitrogen and phosphate concentrations have fallen. The standard – the maximum permissible risk – however, has not been achieved.

Nitrogen deposition and acidification

Nitrogen deposition and acidification are closely related problems that are caused largely by the same substances: nitrogen compounds such as ammonia and nitrate in both cases and sulphur dioxide and sulphate in the case of acidification. The main sources of these compounds are agriculture, traffic and industry. A substantial proportion of the deposition comes from sources outside the Netherlands. High concentrations of nitrogen and acid in the atmosphere and on land can cause changes in the flora and, indirectly, in the fauna and thus reduce biodiversity.

The general environmental policy has significantly reduced the annual average deposition of atmospheric nitrogen. The deposition of acids has also fallen sharply.³¹ Despite this improvement, nitrogen deposition in

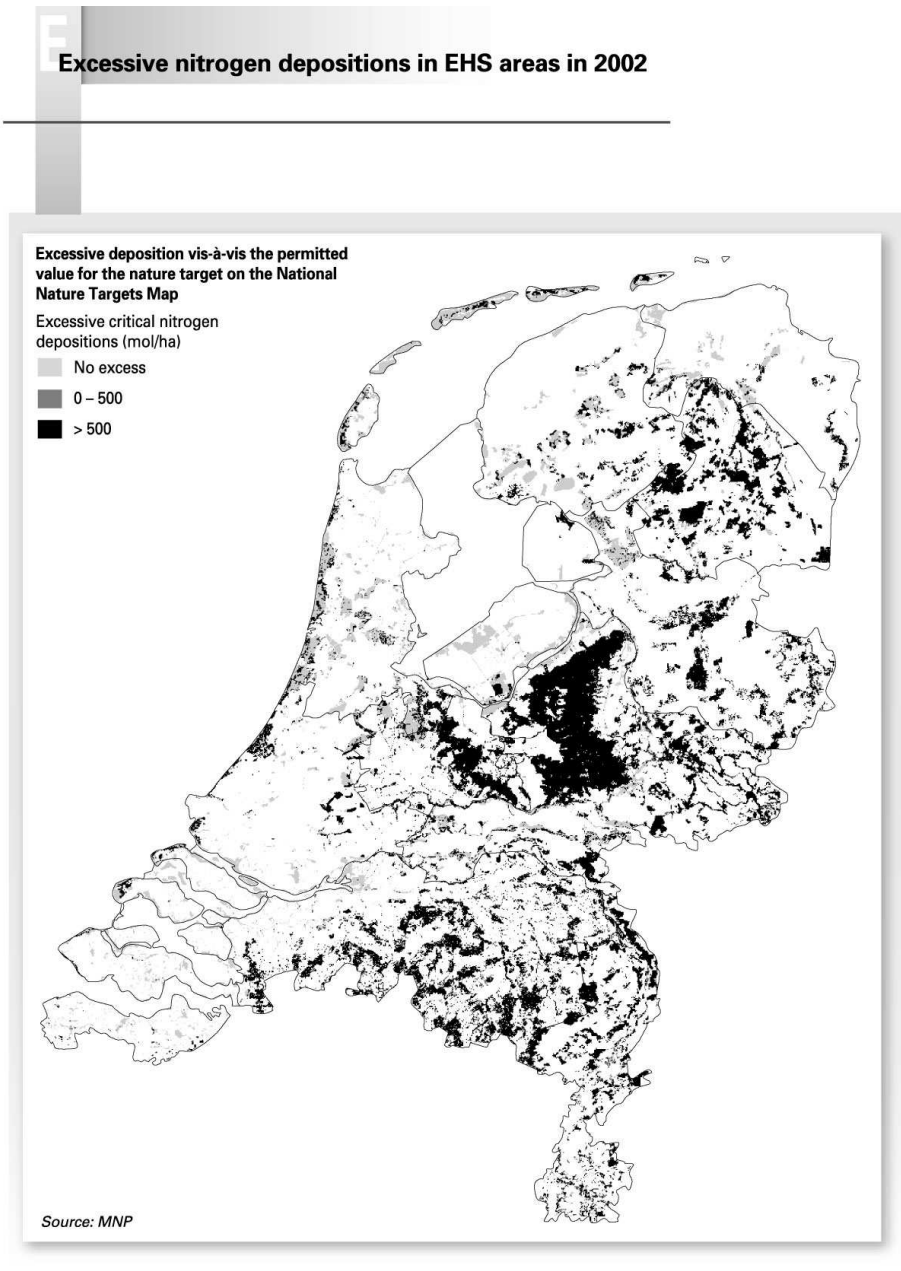
³⁰ The task force on groundwater depletion set up by the Ministry of LNV issued an advisory report on 31 May 2006 to solve this problem (see the website www.verdroging.nl, consulted on 8 June 2006). The report's findings are consistent with the problems we identified (see section 3.5).

³¹ The targets for nitrogen deposition and acidification are set out in the National Environmental Policy Plan (Ministry of VROM, 2001) and are expressed in moles per hectare per annum. The targets are: 1,550 moles for nitrogen deposition and 2,150 moles for acidification by 2010. Depositions of atmospheric nitrogen had been reduced by 27% to 2,200 in the nine years moles to 2003. Acidification had been reduced by 51% to 2,940 moles in the 23 years to 2003 (Sources: Environmental Data Compendium: <http://www.mnp.nl/mnc/i-nl-0184.html>, consulted on 22 December 2005, MNP/Alterra; Atmospheric Nitrogen Deposition Fact Sheet and Acidification Fact Sheet, January 2006: <http://milieucondities.wur.nl/>, consulted on 10 January 2006; MNP information of 2 February 2006).



two-thirds of the EHS areas is still too high to achieve the nature objectives (see figure 7).

Figure 7



Acidification, too, is still too high in many areas. There are large regional differences but the problem is particularly serious in the southeast of the Netherlands, where there is a lot of intensive livestock farming. In the west of the Netherlands, acidification has fallen so sharply that the critical limits are rarely exceeded in most areas.



3.2.3 Target species

The achievement of the nature quality objectives can be measured by the occurrence of target species: plant and animal species that are characteristic of a particular nature type. However, there is no national monitoring system in place to measure the target species for each nature type. The data that have been collected lack detail. For 17 specific nature objectives, the MNP has studied the general performance of the related target species in the Netherlands. Since 1990 there has been an improvement in all the target species in only one specific nature objective (wet woodland). In the other special nature types, the decline in the target species has still not been brought to a halt.

3.3 Coherence

Scientists believe large, continuous areas that are linked together are a precondition for the protection of biodiversity. To gain an insight into the spatial coherence of the EHS, we looked at three critical factors for a coherent network: enlargement, linking and defragmentation.

3.3.1 Enlargement of EHS areas

Size of the nature areas

The Ministry of LNV has not set quantified targets or performance indicators regarding the size of the EHS areas but its policy should in any event lead to an increase in the average size of each area and a decrease in the number of small areas. We therefore used the indicators that the MNP uses to classify large, medium-sized and small areas in the EHS. We asked the MNP to show how the size of the EHS areas had changed and to make a forecast for 2018. Areas that are less than 500 metres distant from each other are treated as a single area (landscape unit). The results are presented in table 2.



Table 2. Changes in the size of EHS areas³²

	Large areas and landscape units (> 2,000 hectares)		Medium-sized areas and landscape units (500 - 2,000 hectares)		Small areas (< 500 hectares)		Total	
	Surface area (in hectares)	Number	Surface area (in hectares)	Number	Surface area (in hectares)	Number	Surface area (in hectares)	Number
Actual in 1990	298,000	40	63,000	70	125,000	3,480	485,000	3,590
Actual in 2005	365,000	50	62,000	70	152,000	3,910	580,000	4,030
Forecast in 2018 ³³	550,000	60	65,000	70	105,000	1,760	720,000	1,890

Source: Netherlands Environmental Assessment Agency, information from 28 February 2006.

The MNP's analysis reveals that the EHS initially consisted of nearly 3,600 areas, most of them being small areas. Large areas accounted for 61% of the surface area. In 2005, the number of areas had increased to more than 4,000, most again being small areas. The surface area of the large areas had increased to account for 63% of the EHS. On completion of the net EHS in 2018 in accordance with the *National Spatial Strategy* (Ministries of VROM, LNV, V&W and EZ, 2006), the number of small areas will have been roughly halved and the large areas will make up about 76% of the surface area. Although spatial coherence in the EHS is increasing, the MNP's analysis indicates that small areas that are not part of a landscape unit will still account for 15% of the EHS in 2018.³⁴

Creation of national parks

The target for one aspect of enlarging the nature areas is clear: to establish a system of 17 national parks and one cross-border park by 2004 (Ministry of LNV, 2000). Information from the Ministry of LNV indicates that this target has been achieved. The seventeenth national park, Alde Feanen in Friesland, was established in April 2006. The cross-border park De Zoom - Kalmthoutse Heide (partly in Belgium) was established in 2001.

3.3.2 Linking EHS areas

The target is to create 12 robust corridors with a surface area of 27,000 hectares. It is the intention to create them in two stages. The first 13,500 hectares will be completed between 2004 and 2018; the second stage will begin in 2008. The creation of robust corridors has not made much progress. At the beginning of 2005, 243 hectares had been acquired and

³² Area rounded to nearest 1,000; number of areas rounded to nearest 10.

³³ On completion of the net EHS and excluding 61,000 hectares of target areas.

³⁴ There will be 1,760 areas with a total surface area of 105,000 hectares, producing an average of 60 hectares per area.



private nature management contracts had been signed in respect of 387 hectares. A further 653 hectares had been acquired outside the EHS for subsequent exchange for land inside the EHS.

The robust corridors have made such slow progress chiefly because of the many changes in policy since 1990. Changes have been made to the planned number of links, the intended surface area and the method of realisation. A proposal to scrap a number of smaller ecological linking zones met with a great deal of opposition from the provinces. They had already completed 4,464 hectares of such zones. After consultation between the Ministry of LNV and the provinces it was agreed that completion of a further 6,039 hectares would be financed (Ministry of LNV, 2005d). In total, more than 10,000 hectares of ecological linking zones will be created.

The government and provinces did not reach agreement on the achievement of the current target for robust corridors until November 2003. Ecological surveys have been carried out for most of the robust corridors. The general location of most of them is known but the exact boundaries must still be agreed upon. A final political/administrative agreement still has to be taken on three of the 12 robust corridors.

3.3.3 Defragmentation of EHS areas

Multi-Year Programme on Defragmentation

National infrastructure has consequences for the spatial coherence of nature areas. Roads, railways and national waters can act as barriers to the EHS. The *Multi-Year Programme on Defragmentation* (MJPO) includes measures to reverse the fragmentation of the EHS. The Programme's objective is to remove the main barriers to the EHS by 2018. It includes a list of 208 problems; priority will be given to 14 that are outside the robust corridors and 43 that are inside (Ministry of V&W, 2004). Since the Programme on Defragmentation was introduced only recently, it is too early to draw conclusions on the feasibility of the ultimate objective for 2018. Information from the Directorate-General for Public Works and Water Management suggests that implementation is making good progress. Fifteen problems have already been resolved and 69 of the 208 problems are being tackled. The most progress has been made with road projects. Based on the problems listed in 1994, 55% of the problem kilometres had been resolved by 2004.



Construction of fauna-friendly riverbanks and fish ladders

The target is to construct 500 kilometres of fauna-friendly riverbanks and seven fish ladders in the Rivers Rhine and Maas by 2010. Information from the Ministry of V&W shows that about 300 km of fauna-friendly riverbanks had been completed by the beginning of 2002. The Ministry did not have more recent figures. Six fish ladders have been constructed, three in the Rhine and three in the Maas.³⁵ A report issued by the RIZA (2005) refers to the construction of eight fish ladders: three in the Rhine and five in the Maas. The last two ladders in the Maas, at Grave and Borgharen, were planned for 2006. When they have been completed, it will be possible for fish to swim the entire length of the Rhine and the Maas in the Netherlands. In total, therefore more fish ladders will have been constructed than the seven originally planned.

Restoration of freshwater/saltwater transition zones

The target set in the *Agenda for a Living Countryside* (Ministry of LNV, 2004a) is to have an efficient and natural transition between freshwater and saltwater zones in each of the main river systems. The only location referred to by name is Haringvliet. The restoration of the freshwater/saltwater transition in Haringvliet is part of the Recovery and Development of National Waters project. A plan has been drawn up to open sluices in 2008 in order to strengthen the freshwater/saltwater gradient (Ministry of V&W, 2005a).

3.4 Spatial protection of the EHS

Spatial protection of the nature areas in the EHS is an important condition for the achievement of the EHS. The areas that central government wants to protect through zoning measures are shown on the map of the net EHS in the *National Spatial Strategy* (Ministries of VROM, LNV, V&W and EZ, 2006). The map is compiled from information provided by the provinces and has the status of a key planning decision (PKB).

The *National Spatial Strategy* describes the spatial protection of the EHS as follows: '... the net delineated national ecological network (with the exception of the North Sea and the main lakes and rivers), the areas subject to the Birds and Habitats Directives and the areas subject to the Nature Conservancy Act are designated as protected areas. In these protected nature areas, there is an obligation to conserve the essential features and values and implement a "no, unless" regime'. This protection

³⁵ Source: information of 3 February 2006 from the Ministries of LNV, V&W and VROM on the Court of Audit's consultation paper on the aquatic EHS.



regime does not apply to areas managed under agri-environment schemes, where the primary function remains agriculture. 'Basic spatial protection must be provided for the gross delineated nature area (chiefly aquatic areas) and robust corridors. The basic protection is designed to prevent irreversible interventions in relation to the future function' (Ministries of VROM, LNV, V&W and EZ, 2006, p. 113).

A map analysis made by the Ministry of LNV's Department of Knowledge shows that the Key Planning Decision PKB map of the net EHS comprises approximately 750,000 hectares.³⁶ It is striking that the EHS on this map is larger than the target for the EHS of 728,500 hectares. In addition to the PKB map of the net EHS in the *National Spatial Strategy*, other maps are of importance to the EHS: maps in the provinces' plans of areas that are eligible for management grants, the provinces' regional plans, the National Nature Objectives Map and provincial nature objectives maps. The areas marked on these maps do not agree with each other. Some 104,000 hectares of the net EHS, for example, do not have nature objectives on the National Nature Objectives Map. About 150,000 hectares outside the net EHS do have nature objectives on the National Nature Objectives Map.³⁷ On the one hand, part of the net EHS is not eligible for grants from the Management Programme and is therefore not included in the provinces' area plans. On the other, about 1,400,000 hectares in the provinces' regional plans qualify for grants but are not shown on the net EHS map.³⁸ It is therefore uncertain precisely which areas form part of the EHS and it cannot be said with any certainty precisely where the EHS will be located.

Provinces have recently incorporated the net EHS in their regional plans but they have not done so unambiguously and they have interpreted the 'no, unless' principle differently (IPO, 2003; VROM Inspectorate, 2005; Sanders et al., 2004; own case study). In the provinces' regional plans, moreover, it is difficult to recognise the EHS because the term EHS is not used on many of the planning maps. Furthermore, the EHS's boundaries are not precisely defined at parcel level in the regional plans. It is therefore difficult for municipalities, citizens and businesses to determine whether spatial developments are compatible with the EHS (see VROM Inspectorate, 2005; own case study).

³⁶ On an adjusted map at the Ministry of LNV, the EHS covers an area of approximately 813,000 hectares.

³⁷ The National Nature Objectives Map covers an area of about 854,000 hectares. About 704,000 hectares is located inside the net EHS and about 150,000 hectares outside.

³⁸ The greater part relates to areas managed under agri-environment schemes. About 1.2 million defined hectares qualify for agricultural nature management grants. Of this area, some 80,000 hectares are located inside the EHS, the remainder outside.



Municipalities play an important role in spatial protection because their zoning plans are the only binding plans between the public and the public authorities. There is no national overview of what spatial protection the municipal zoning plans provide to the EHS but there are indications that this matter still requires a great deal of consideration. It is clear, for example, that many of the zoning plans are more than ten years old (VROM Inspectorate, 2004). In many cases, therefore, planned and actual *new* nature areas have not yet been included in the zoning plans. These areas do not enjoy spatial protection.

3.5 Implementation problems

We found that a great deal still needs to be done to realise the intended coherent network of high-quality nature areas by 2018. By means of case studies at provinces and implementing bodies, we investigated the main problems preventing the smooth and high-quality realisation of the EHS. The main problems revealed by the case studies are described below.

3.5.1 Steering by the Ministry of LNV and the provinces

The Ministry of LNV has decentralised a large part of the EHS's implementation to the provinces and site management organisations. Despite the many agreements made,³⁹ there are still considerable uncertainties, as explained below. The provinces are responsible for coordinating a large part of the EHS's implementation but they, too, do not always make clear and well-founded decisions. This lack of steering causes problems with the implementation of EHS policy.

Regarding the *size* target, for example, the provinces have not yet decided where private nature management is preferable and where it is not. Where a parcel of land adjoins a site managed by a large nature organisation, for instance, a private owner is sometimes sought in order to meet the target for private ownership even though management by the nature manager would be more efficient.

Regarding *nature quality* different typologies and systems are used to set targets, award grants, manage nature and monitor the results. The

³⁹ Agreements with the provinces include: Ministry of LNV & IPO, 1997; Ministries of LNV, VROM, V&W and the provinces, 2002; Ministry of LNV and the provinces, 2004; Ministry of LNV, 2005c. LNV makes annual agreements on nature management with the State Forest Service. The demands made on private managers and farmers are laid down in the Management Programme.



relationship between the typologies and systems is not clear. This is an obstacle to steering by nature objectives because it is not immediately clear whether the right management is being conducted to realise the required nature objective. The State Forest Service has conversion tables for nature objectives and nature types and for nature types and management packages but they are not used consistently to select the form of nature management. Another problem is that the use of different typologies seriously impedes monitoring so that it is not clear whether steering is necessary or not.

There is no direct link between the Management Programme and the *National Nature Objectives Map* even though the Ministry of LNV wants to steer by nature objective (Ministry of LNV, 2004a). The grant scheme allows managers of existing nature areas to take measures that are not conducive to the nature objective on the *National Nature Objectives Map* or on the provincial nature objectives maps. The provinces disclose in their area plans what management packages are permitted in new nature areas. Management packages that are not conducive to the nature objective are also permitted. The State Forest Service may also take its own decisions on nature management. The government might therefore be financing unsuitable management packages. The lack of steering by nature quality is an important cause of the poor relationship between the intended nature objectives and the actual nature management.

The choice of location and nature objectives sometimes does not take account of the required *environmental quality*. Both aquatic nature and agriculture, for example, are sometimes planned for the same area yet these functions make different demands on the groundwater level.

As already indicated in section 2, there is still no generally accepted and applied system to measure groundwater depletion. Owing to the absence of clear agreements there is a great deal of uncertainty about the extent of the problem and the necessary measures. Another problem is that the provinces' policies are often implemented disjointedly by separate policy departments responsible for nature, water and the environment, all of which draw up their own policy papers.

The *coherence* of the EHS is also at risk. We observed in section 2 that there was no clear standard on the minimum size of nature areas. The Ministry of LNV provides guidance for the provinces in the *Nature Policy Plan* (Ministry of LNV, 1990) regarding the minimum size of nature areas but its advice is not compulsory. Partly for this reason, the provinces have included many small and isolated areas in the EHS.



The Ministry of LNV and the provinces, moreover, have not promoted spatial coherence in the areas managed under agri-environment schemes. It was agreed in a covenant between the Association of Provincial Authorities (IPO) and the Ministry of LNV (Ministry of LNV and IPO, 1997) that no more than one tenth of the agri-environment schemes would be located outside the EHS but no one has checked whether this is actually the case. In practice there is still little promotion of spatial coherence by means of agri-environment areas. Firstly, it could be concluded from the Spatial Policy Strategy that all agri-environment schemes are part of the EHS, even if they are located outside the net EHS. Secondly, the provinces have designated some extremely large areas that are located outside the net EHS as management areas, and in one case even the entire province. Thirdly, quotas have been set for these areas (a maximum number of hectares that are eligible for grants per area) but they are not observed when grants are awarded. About half the hectares of eligible agri-environment schemes are located outside the net EHS presented in the *National Spatial Strategy* (see section 3.1.3).

Spatial protection is also impeded by lack of agreement between the Ministry of LNV and the provinces. They have not made clear agreements on how the EHS should be protected by regional plans. There are accordingly significant differences in how the provinces incorporate the EHS in their regional plans. All the provinces have interpreted the net EHS for the Key Planning Decision PKB map in the *National Spatial Strategy* differently (see section 3.4). As a result, there are different protection regimes for different parts of the EHS.

Municipalities play an important role in the protection of nature areas but they often wait until a new nature area is acquired and developed before including new nature in a zoning plan. Including a future function in a zoning plan harbours the risk of citizens and businesses seeking compensation for planning blight (MNP, 2004a and 2004b). The existence of different protection regimes side by side (EHS, Birds Directive, Habitats Directive, see section 2.1.2) and ambiguous regional plans makes it difficult for municipalities to protect the EHS in their zoning plans.

3.5.2 The principle of voluntary participation

Voluntary participation is an important principle for the realisation of the EHS. Government policy is to encourage voluntary participation by site managers and landowners. All actors involved in the EHS say that voluntariness is an important condition for their participation and a large



proportion of the EHS has already been realised thanks to their voluntary cooperation. This audit found, however, that voluntary participation could also be a problem. It can impede necessary measures, such as lowering the groundwater level or increasing the size of an EHS area, if an owner does not wish to cooperate and cannot be forced to. If most of the actors agree upon a particular plan, it can still be vetoed by one uncooperative landowner.

3.5.3 Conflicting objectives and interests

Nature quality and the related environmental quality often have to be balanced against other interests, such as residential construction, economic activity or the infrastructure. There are often conflicts of interest in areas in which the EHS's boundaries do not coincide with the boundaries in place for water management. Agriculture, for example, requires a lower groundwater level than nature. This can compromise the quality of the EHS without the ambitions being changed or an extra effort being made to achieve the original ambitions.

3.5.4 The policy shift from acquisition to management

The shift from acquisition and development to agri-environment schemes and private management has increased the involvement of private landowners in the EHS. This can increase support and also cut costs. However, the stronger emphasis on agri-environment schemes and private management also has disadvantages for the realisation of the EHS. The provincial targets for private nature management may delay the EHS's completion if the provinces first seek a private manager for every parcel of land that becomes available. As already noted, lack of interest among private actors creates delays. Furthermore, the shift towards agri-environment schemes and private managers increases the number of managers that have to agree on what environmental measures will be taken. This too creates delays. In addition, the decision not to acquire any further nature areas that are already privately managed sometimes causes problems. If the owner of a wood or nature area does not wish to participate in, for example, the creation of a wetland habitat or integrated nature management, he cannot be bought out. This freeze on acquiring existing nature areas has since been partially reversed (Ministry of LNV, 2005e and 2006f).

Realisation of the EHS by private individuals and farmers also puts the quality of the EHS at risk. Not all nature objectives can be achieved by farmers. Agri-environment schemes can even prevent the realisation of



nature if, for example, wetland measures are not taken because they would be detrimental to farming. Nevertheless, provinces sometimes include agri-environment schemes in their management plans in places where the nature objective requires an increase in the groundwater level, such as 'wet grasslands'. In theory, private individuals are capable of realising all nature types but in practice they tend to pursue less ambitious nature objectives than large site managers (Sanders et al., 2003).

3.6 Conclusions

A great deal still has to be done to achieve a coherent network of high-quality nature areas covering 728,500 on land. Between 1990 and 2005, 38% of the total enlargement target was achieved. To achieve the target by 2018, the pace will have to be stepped up in the years ahead. A quarter of the new areas that have already been realised is located outside the net EHS. The continuity of areas managed under agri-environment schemes is inadequately guaranteed. The Ministries of LNV and V&W inadequately coordinate aquatic nature projects.

The system used to measure nature quality is not conducive to the nature quality targets. No base-line measurement was made and no plan is in place to achieve the nature objectives. Environmental conditions have improved but in many EHS areas they are not yet good enough to realise the nature objectives. The main achievements relate to nitrogen deposition, acidification and the quality of surface waters, but in these areas, too, the targets have not yet been achieved. Little progress has been made resolving the problem of groundwater depletion. EHS policy has increased the number of large nature areas and landscape units but there are still many small isolated areas. Realisation of the robust corridors is still in its infancy. Good progress has been made, however, with the implementation of other measures to create spatial coherence, such as defragmentation, the construction of fauna-friendly riverbanks and fish ladders. There is also a concrete plan to open the Haringvliet sluices in order to improve the transition between freshwater and saltwater. A start has been made on the spatial protection of the EHS (excluding the robust corridors and agri-environment schemes) at national and provincial level but the provinces have taken different approaches. There is no national overview of the status of the EHS's spatial protection in municipal zoning plans. Since many zoning plans are out of date, however, we can assume that many new EHS areas are not yet protected.



Implementation problems are impeding the realisation of the EHS. The problems have several causes. The Ministry of LNV's frameworks for the provinces, for example, lack clarity and the Ministry inadequately steers by nature objective and spatial coherence. The provinces, too, do not make clear policy choices on, for example, where certain nature types should be located. The principle of voluntary participation and the shift from acquisition to private management have also delayed the realisation of the EHS. Furthermore, conflicts between nature interests and other interests present a risk to the completion of the EHS.



4 Conclusions and recommendations

Central government has designed the EHS as a key instrument to protect biodiversity. The main conclusion to be drawn from our audit is that EHS policy is an appropriate instrument but the Ministry of LNV's steering causes implementation problems that impede the completion of a high-quality EHS.

The EHS is a major project with significant administrative complexity. It involves many actors with diverse interests. Furthermore, it costs a great deal of public money. It is therefore of great importance that the government sets clear frameworks for policy implementation and that the government and parliament retain a good insight into the progress of the EHS in the years ahead.

In our opinion, the Ministers can take concrete measures to improve the steering and monitoring of EHS policy. The Minister can also take a number of measures to improve policy implementation. We consider these measures in this chapter.

4.1 Measures to improve steering

Set clear frameworks and objectives

Provinces have been given more responsibility for implementing EHS policy. The Minister of LNV submitted the Rural Areas Development Act (WILG) to parliament in spring 2006 (Ministry of LNV, 2006d).⁴⁰ If the Act is enacted, provinces will play an even greater role than they do at present.

EHS policy, however, is of national importance and the Ministry of LNV should set clear frameworks for the provinces to design and implement policy. To date, the government's targets and performance indicators

⁴⁰ In the Report on the Annual Report 2005 of the Ministry of Agriculture, Nature and Food Quality the Court of Audit notes that the responsibility proposed in the Rural Development Act is inconsistent with the annual budget cycle (Court of Audit, 2006).



have related chiefly to the EHS's size and realisation method. There are no assurances on the quality and coherence of the EHS.

We recommend that the Minister of LNV include clear frameworks for the provinces in the WILG. They should help the provinces achieve not only the target for the size of the EHS but also the targets for nature and environmental quality and spatial coherence. The frameworks should relate to:

- national goals on size, quality and coherence;
- the minimum area to be realised for very scarce nature types, which are of great importance to secure biodiversity;
- spatial measures to protect the EHS.

We also recommend that the Minister work with the provinces to develop an integrated system to steer nature quality. The system should integrate nature objectives (the current Nature Objectives Map and nature types), financing instruments (the Management Programme, area and management plans and financing from the State Forest Service) and international obligations (such as *Natura 2000*).

Monitor progress

Our audit found that progress monitoring was not organised effectively. There is no central coordination of data collection or clear definitions of how to measure policy outputs. Enactment of the WILG will further decentralise implementation of EHS policy. If the provinces monitor policy progress in different ways, there is a risk of central government having no insight into implementation. This risk is not theoretical, as shown by the lack of agreement between the National Nature Objectives Map, the groundwater depletion map and the net EHS map in the key planning decision.

To ensure that adequate policy information is available at national level, the Ministry of LNV and the provinces must make clear and binding agreements on the progress of the EHS policy in the near future, in any event *before* the enactment of the WILG. The agreements should relate to:

- the policy outputs to be measured regarding size, nature and environmental quality, coherence and spatial protection;
- the applicable performance indicators;
- the applicable definitions and measurement methods.

Clear definitions should be agreed on:

- the terms nature quality and groundwater depletion;



- the 'no, unless' principle;
- which areas are part of the EHS.

Agreements must also be made on who is responsible for the centrally coordinated collection and analysis of data on progress. The Ministry of LNV would seem to be the most appropriate party for this. The data collected should be available to and usable by all parties concerned (Ministries of LNV, V&W and VROM and the provinces) so that they can steer implementation if necessary.

Localise and demarcate the EHS clearly

Work on the EHS began 15 years ago but it is still not clear where precisely it should be located, which areas are part of the EHS and which nature objectives should be realised. The different maps used for the EHS are inconsistent with each other. It is therefore not clear:

- which areas managed under agri-environment schemes are part of the EHS and whether and how they should contribute to the spatial coherence of the EHS;
- where the robust corridors should be located;
- where ('search areas' for) new nature areas should be located.

We therefore recommend that the Minister of LNV consult the provinces to ensure there is more clarity for all parties by improving the consistency of the maps used for the EHS. The maps should also be more consistent with the overall target of 728,500 hectares of EHS on land. The following maps are concerned:

- the key planning decision map of the net EHS in the *National Spatial Strategy* and the revised version of that map;
- the provinces' regional plans;
- the municipal zoning plans;
- the provincial management and nature area plans;
- the national and provincial nature objectives maps.

The scale of the maps should also be changed so that they are clear at parcel level wherever possible.

Improve coordination

There is inadequate coordination between the Ministries of LNV and V&W, especially with regard to aquatic nature projects and the EHS in the big lakes and rivers. The Ministries have not made clear agreements on the allocation of tasks, responsibility for implementation and progress monitoring. Furthermore, for a considerable period of time the



information available to the Ministries on the status of realisation has been open to interpretation.

We recommend that the Ministries of LNV and V&W make clear and concrete agreements with each other on these matters.

4.2 Measures to improve implementation

Promote spatial protection

Completion of the EHS is at risk from poor spatial planning. Although the preparation of regional and zoning plans is a matter primarily for the provinces and municipalities, the government should not passively wait for them to take the initiative. In particular the spatial protection provided by the municipalities should get more attention. We recommend that the Ministers of LNV and VROM actively encourage the provinces and municipalities to provide spatial protection for the EHS areas by 2008 at the latest and to monitor its progress. The provinces should also remind the municipalities of their responsibilities and provide assistance where necessary. If spatial protection is not provided, the Minister of LNV can apply section 10 of the Nature Conservancy Act 1998 in order to ensure the continuity of the investments in the EHS and to protect the areas concerned. The Spatial Planning Act will also increase the government and provinces' powers.

Reconsider the principle of voluntary participation

All parties agree with the principle of voluntary participation because it creates support for EHS policy. Over-reliance on it, however, impedes the implementation of policy. In some cases, realisation of a large, high-quality EHS area can be frustrated by the owner of a relatively small parcel of land refusing to cooperate. We therefore recommend that the Ministry of LNV and the provinces evaluate and, if appropriate, reconsider the principle of voluntary participation.

Select realisation methods more carefully

In a number of cases, the policy shift away from acquisition towards private and agri-environment management has delayed implementation of EHS policy and has failed to achieve its aims. If there is not enough interest among private owners, the focus on private nature management leads to delays. Owing to inadequate coordination of the provincial nature area plans and management plans with the National Nature Objectives Map, grants are sometimes awarded for forms of management (management packages) that are not conducive to the desired nature



types and the desired nature quality. The provinces have defined the agri-environment areas imprecisely and the *National Spatial Strategy* provides no guidance. There are therefore insufficient assurances that funds will be spent where there are the greatest opportunities for nature and that agri-environment schemes will contribute to spatial coherence within the EHS. It is also uncertain whether agri-environment schemes make an optimum contribution to the realisation of the desired nature quality since there are inadequate assurances on continuity.

We recommend that the Minister of LNV encourage the government and the provinces to select a realisation method (agri-environment, private management or acquisition and development with management by a large site manager) that will realise the desired nature objectives at the lowest cost. We also recommend that the Minister encourage the provinces to use management grants more efficiently by defining the areas managed under agri-environment schemes more precisely in the provinces' regional plans. Finally, we recommend that the Minister investigate ways to increase the continuity of agri-environment schemes.

Integrate nature objectives and environmental conditions

An important condition for the development of the EHS is that the provinces and the government take an integrated approach to nature objectives, environmental conditions and locations. The Minister of LNV must make clear agreements with the provinces to prevent too many changes being made to the ambitions. The Minister must ensure that the provinces not only define the nature types and the environmental conditions necessary for them but also draw up action plans stating who will take the measures necessary to realise the desired environmental conditions in each EHS area. If this is not possible, the desired nature objective or location should be reconsidered.



5 Response of the Ministers and the Court of Audit's afterword

5.1 Response of the Ministers

The Minister of LNV responded to our report on 11 September 2006 with the support of the Ministers of VROM and V&W. His response is summarised below. His full response (in Dutch) is available on our website: www.rekenkamer.nl.

The Minister was pleased that the Court of Audit thought EHS policy was a suitable instrument to protect biodiversity and fulfil international obligations. He noted that a great deal had been achieved in recent years and that the *National Spatial Strategy* and Rural Investment Budget (ILG) had strengthened steering and implementation. The Minister was aware that steps still had to be taken to achieve the EHS by 2018 and undertook to use the report to improve policy formulation and implementation. His response considered a number of points made in the report.

Size of the EHS

Further to our observation that the EHS policy objectives had frequently been changed, the Minister noted that the policy concept had not been changed since 1990. Different priorities had been set over the years and improvements had been made on the basis of new, scientific insights. The *Nature for People, People for Nature* policy paper (Ministry of LNV, 2000), for example, had significantly updated the policy and broadened its scope (more consideration of the importance of nature to members of the public and the introduction of robust corridors). The Minister thought he informed parliament adequately through the budget, policy papers and debates about major changes in policy objectives, such as the EHS's maximum size of 728,500 hectares on land, the introduction of robust corridors and the 'shift' from acquisition to management. With the introduction of the ILG, further steps will be taken towards the unambiguous formulation of policy objectives. The objective of 728,500 hectares will be the starting point for the ILG administrative agreements between the government and provinces and the associated seven-year performance agreements that will be made with the provinces.



The Minister thought the Court was too sombre about the quantitative progress of the EHS: our calculations did not include land purchased for subsequent exchange (acquisition) and 'work in progress' (development) but these hectares will ultimately also benefit the EHS. If the existing nature were included, according to the Minister, about 80% of the EHS on land has already been completed.

The Minister noted that the acquisition of new nature areas and agri-environment schemes are substantially on schedule but additional efforts will be needed to achieve the policy objectives for development and private management. This matter will be addressed in the ILG. An intensive two-year communication project was launched in 2005 to promote private management. The participation and effectiveness of private nature managers will be evaluated in 2007. The Minister will also evaluate both the shift from acquisition to management and the Management Programme. He will then decide whether maintaining the objectives is feasible and desirable. He will announce his findings next year.

Quality

The Minister wrote that the system of nature types provided helpful guidance to determine the required nature quality. He is talking to provinces and site managers about transforming the system into a simple, effective and reliable steering system. The opportunities of the National Nature Objectives Map will also be considered. In response to our finding that realisation of the nature objectives is not measured, the minister noted that the quality of nature had been studied on many occasions. The problem was that the available data were not comparable with each other and were not yet suitable for a steering system.

The Minister shared our opinion that environmental conditions had improved in recent years but the desired nature quality had still not been achieved. He wrote that in recent months the provinces had carried out a base-line measurement of the EHS's environmental deficits in relation to the environmental conditions necessary for certain nature types. The measurement will be repeated during the midterm review and at the end of the ILG period. The provinces have also drawn up measures to improve environmental conditions. An interadministrative working group made up of representatives of the government, provinces and water boards will issue a report later this year on the expected cost of realising the environmental quality necessary for the desired nature types. In the light of this report and the ILG activities, the Minister will consider what additional measures are necessary to raise aquatic and environmental



conditions to the desired level. The Minister also wrote that the task force on groundwater depletion⁴¹ set up in 2005 had recently made a number of useful recommendations. He would inform parliament about them soon.

Coherence and size of areas

The Minister shares our concern about the large number of small isolated nature areas. He will use the Optimising the National Ecological Network report (Lammers et al., 2005) to consider what additional measures can be taken to increase coherence. In its relationship with the provinces, the government did not steer by minimum size.

The policy of connecting nature areas to form an effective and functional network has been modified over the years in response to new scientific insights. Central government is responsible chiefly for a number of robust corridors rather than for the smaller ecological connections. Provinces want to define the robust corridors, as well as the other parts of the EHS, by 2008. The ILG administrative agreements will include agreements on the realisation of the corridors and central government's monitoring of them.

The Minister was pleased that we were satisfied with the defragmentation policy. The ILG administrative agreements will consider the problems of national infrastructure and robust corridors. The Minister said that all parties concerned would be actively involved in the area-based implementation of the *Multi-Year Programme on Defragmentation*. The Minister also thought the establishment of national parks confirmed the success and importance of the government's policy. He would encourage public involvement in the parks in the years ahead.

Spatial protection

The Minister agreed that clear agreements had not been made on which parts of the EHS should be protected or on the meaning of the 'no, unless' regime when many regional plans had been drawn up. He shared our concern that it was often difficult to recognise the EHS in many regional plans, that it was not defined at parcel level and that municipal zoning plans were often out of date. The agreements on defining and protecting the EHS and the allocation of responsibilities set out in the *National Spatial Strategy* sometimes created uncertainty in practice. The Minister also thought this was undesirable with a view to the EHS's

⁴¹ A joint task force was set up in early 2005 made up of representatives of central government, provinces, water boards, site managers and the Federation of Agricultural and Horticultural Organisations. The task force's object was to reverse groundwater depletion in the Netherlands. Its report can be found at www.verdroging.nl.



realisation. That is why the government (Ministries of LNV and VROM) and provinces had recently set up a working group to agree and clarify the 'rules' of the EHS and the related responsibilities. The Minister recently informed parliament about this (Ministry of LNV, 2006f). Once the project has been completed, the Minister will formalise the rules and allocate tasks at an administrative meeting with the Association of Provincial Authorities (IPO) and the Association of Netherlands Municipalities (VNG). Spatial protection is primarily a responsibility of the municipalities and provinces but central government is responsible for the realisation of a coherent EHS and its spatial protection and must act proactively where necessary. Should the administrative agreements on rules and the allocation of tasks provide insufficient assurances, the Minister will draw up a more specific plan, taking account of the new Spatial Planning Act.

Insight into progress

The Minister noted that it was not always easy to provide insightful information on such a long-term and large-scale project as the EHS, in which dozens of players are involved and new insights regularly have to be accommodated. He stressed that the information supply had definitely improved over the years, as illustrated by the *Multi-Year Programme for a Living Countryside 2007-2013*, the budget and the annual report of the Ministry of LNV (Ministry of LNV, 2006c, 2005b and 2006a).

Implementation problems

The Minister did not recognise all the implementation problems we referred to in our report. There was no lack of steering on the part of the Ministry of LNV but the ILG's entry into force had improved steering. The administrative agreements with the provinces would include firm performance agreements on the EHS's size and environmental quality. If the performance levels were not met, the budget could be recovered.

Although the principle of voluntary participation would remain in force, the Minister expected more land to be purchased compulsorily as the EHS's completion date approached. An important reason for this was cost effectiveness: the money spent on land acquisitions had to be seen to be well spent.

The Minister recognised the report's comments on conflicts of interest but noted that the interests of nature and the national ecological network were firmly entrenched in policy, citing the 'no, unless' principle in the *National Spatial Strategy* as a good example of this. It would ensure that, on balance, the size and quality of existing and new EHS areas would not decline if more space were given to other interests. The Minister expected



the project being carried out by the Ministries of LNV and VROM and the provinces would produce clear rules to protect the EHS. He would make agreements with the Association of Provincial Authorities (IPO) and the Association of Netherlands Municipalities (VNG) about implementing and monitoring the rules.

Finally, the Minister considered the policy shift from land acquisition to agricultural and private management, which we believe might delay the realisation of the EHS and represents a risk to quality. The Minister noted that the potential risks would be considered in the evaluation of the policy shift. He also pointed out that the policy shift had increased the involvement of farmers and private landowners in nature policy.

The recommendations

The Minister of LNV has the ambition to take concrete measures to improve the steering and implementation of EHS policy.

He noted that the ILG administrative agreements with the provinces would include clear frameworks and firm performance agreements for the period 2007-2013. The frameworks would be based in part on the results of the 'rules project' mentioned above. Under the ILG administrative agreements, central government will make concrete agreements with provinces and site managers on nature quality as soon as possible, but in any event no later than the midterm review in 2010.

The Minister undertook to make agreements with the provinces on the monitoring of the EHS as part of the monitoring and evaluation system of the *Multi-Year Programme for a Living Countryside 2007-2013* (Ministry of LNV, 2006c). The agreements would also cover performance monitoring for the ILG.

Regarding the coordination and clarity of the EHS maps down to parcel level, the Minister wrote that he had seen an improvement. The *Multi-Year Programme for a Living Countryside 2007-2013* (Ministry of LNV, 2006c) includes maps that contain targets and agreements on spatial protection. A map will also be prepared on the realisation of the EHS. The Minister said the working group drawing up the rules for the EHS would also consider maps.

The Minister said clear and concrete agreements had been made with the Ministry of V&W on the tasks and responsibilities for implementing and monitoring the realisation of aquatic nature. The agreements had been made in the Safety and Aquatic Nature Agreement (2000) and were being



followed jointly by the Ministries of LNV and V&W at director level. The Minister acknowledged that the policy information had to be less ambiguous and thought that our recommendation agreed with the improvements that had already been set in train.

The Minister underscored the importance of spatial protection and would consult the Minister of VROM to consider what the government could do. He would look principally at the opportunities offered by the new Spatial Planning Act.

The Minister thought evaluating the principle of voluntary participation would be more appropriate when more experience had been gained with the EHS's realisation. As part of the ILG, he had agreed with the provinces that he would follow this matter and consider what measures, if any, were necessary.

The Minister maintained that management of EHS areas should be as cost effective as possible. Methods were being developed to help the provinces select the most cost effective way to realise the desired nature objectives.

The Minister undertook to consult the provinces to determine how they could integrate their approach to nature objectives, environmental conditions and location of each EHS area. He would also consider the action plans on who should take what measures to improve environmental conditions.

5.2 The Court of Audit's afterword

We understand from the Ministers' response that they largely agree with the report and we are pleased they will use it to make improvements. We shall continue to follow developments with interest. Below, we consider the points made by the Minister of LNV with the support of the Ministries of VROM and V&W.

Size of the EHS

The uncertainties we highlighted about the targets relate not to the total size of the EHS on land but to the secondary targets to achieve the policy objectives and the impact of changes in those secondary targets on the achievement of the nature objectives (see section 2.2.1). 18,772 hectares of land outside the EHS has been acquired for subsequent exchange for land inside the EHS. We do not consider this land to be part of the



completed EHS because it must still be exchanged and developed. During an earlier audit⁴² we informed the Minister that the term 'development in progress' was confusing.⁴³ We therefore did not include this information in our report. The Minister rightly pointed out that additional efforts were needed chiefly in respect of development and private management.

Quality

We agree with the minister that many studies have been made of nature quality. It is particularly important, however, that the targets and monitoring data are consistent with each other so that steering of nature quality can be improved. This is not the case at present. We welcome the Minister's undertaking to work on a steering system and formulate the nature objectives as quickly as possible. The Minister did not respond to our recommendation to integrate the existing quality systems in order to make monitoring more efficient. We await with interest the report of the interadministrative working group on environmental quality and proposals for any additional measures.

Coherence and size of nature areas

We are pleased that the Minister acknowledges the need to pay more attention to the EHS's spatial coherence and that he intends to consider taking additional measures. The Minister also announced in the *Multi-Year Programme for a Living Countryside 2007-2013* (Ministry of LNV, 2006c) that he would make agreements with the provinces on this matter and would formulate policy frameworks to re-define EHS areas in 2006. The Minister wants the provinces to complete the re-definition in 2009. However, we have not yet seen any measurable goals or performance indicators for the enlargement of EHS areas.

Spatial protection

We are pleased that the Minister shares our concern about uncertain boundaries and spatial protection and that he intends to work actively on improving them. In our opinion, the 'rules for the EHS' project is a good first step.

Insight into progress

We would note that the monitoring problems we found related to the situation in June 2006. Our audit covered the budgets for 2006 and the

⁴² *State of Policy Information 2005* (Court of Audit, 2005).

⁴³ The 'development in progress' performance indicator counts not only hectares for which a development plan has been drawn up or is being implemented but also hectares for which preparations have not yet started. These hectares might still have to be acquired or they might form part of an area that cannot be developed until it has been acquired in full.



annual reports for 2005. Introduction of the ILG was an important development. In our *Report on the Annual Report 2005 of the Ministry of Agriculture, Nature and Food Quality* (Court of Audit, 2006) we recommended that a study be made of the provisions of the Government Accounts Act 2001 so that budgets can be earmarked for a longer period of time in order to achieve certain objectives. We regret the fact that the Minister did not act upon this recommendation, which would automatically provide reliable assurances on the accounting and control structure. Now that the introduction of the ILG must be taken for granted, we in any event urge the minister to make clear monitoring, accountability and control agreements – including operational definitions and measurement methods – before the ILG comes into force.

The recommendations

The Minister is willing to make improvements. He will raise many of our recommendations in the talks with the provinces and in the ILG administrative agreements that must be concluded by the end of this year. The Court of Audit applauds the Minister's willingness to make clear and binding agreements with the provinces and welcomes the fact that the government and the provinces will hold each other to them. The Court particularly welcomes the Minister's undertaking to reach agreement on progress monitoring. A precondition for monitoring agreements is to have clear objectives. The administrative agreements should relate not only to the size and the quality of the EHS but also to its spatial coherence and spatial protection. Unless targets and agreements are in place for nature quality, coherence and spatial protection, there is a risk of policy not being steered and implemented effectively. It is not clear what steps the Minister himself intends to take. There is no time schedule, moreover, that gives priority to concrete agreements on nature quality.

We cannot tell whether the maps in the *Multi-Year Programme for a Living Countryside 2007-2013* are more compatible with the targets because the maps are too general and are explained only in passing.⁴⁴ This has not resolved the problem of inconsistency between maps at government and provincial levels. Both levels should coordinate their maps and provide information to the public and businesses down to parcel level.

⁴⁴ We cannot see, for example, where the boundaries are on the maps or how they relate to the targets. The agreements and differences with regional and zoning plans cannot be seen either. The fact that the maps still contain substantial target areas and that a project will be carried out to redefine boundaries also suggests that the EHS's boundaries are not yet been definite.



The Minister did not respond to our recommendation to promote the more efficient use of agri-environment grants and to study how the continuity of the agri-environment schemes can be promoted.

We believe the Ministries of LNV and V&W should always be agree on what objectives are sought by what aquatic nature projects, who is responsible for each project and what the situation is on the ground. This does not seem to be the case, despite the agreement made in 2000 and the consultation at director level. The objectives for aquatic nature have been changed on several occasions since 2000.



Appendix 1 Main conclusions, recommendations and undertakings

Conclusions	Recommendations	Undertakings by the Ministers	Court of Audit's afterword
<p>The EHS policy is an appropriate instrument to protect biodiversity and is conducive to the Netherlands' international obligations. The Ministry of LNV's steering, however, creates problems that impede the realisation of a high-quality EHS.</p>	<p>Take the following concrete measures to improve steering and monitoring of EHS policy and to improve policy implementation.</p>	<p>The Minister of LNV responded with the support of the Ministers of V&W and VROM. He wishes to take measures to improve the formulation and implementation of EHS policy. See below.</p>	<p>We welcome the Minister's undertaking to improve steering, monitoring and implementation of EHS policy. However, there is no time schedule of the concrete steps the Minister intends to take.</p>
<p>The EHS policy's objectives are uncertain in a number of areas. Performance indicators relate chiefly to the EHS's size and realisation method and less to quality and coherence. The Ministry of LNV has not formulated clear definitions and agreements on spatial protection.</p>	<p>As part of the WILG, formulate clear frameworks for provinces to design and implement policy. Together with the provinces develop a single integrated system to steer nature quality. Make clear agreements on spatial protection.</p>	<p>The Minister has the ambition to adopt this recommendation. The ILG administrative agreements include clear frameworks and firm performance agreements for the period 2007-2013. The ILG administrative agreements will include concrete agreements with provinces and site managers on nature quality as soon as possible but in any event no later than the midterm review in 2010.</p>	<p>The ILG administrative agreements should also include clear frameworks and performance indicators on quality, coherence and spatial protection. The Minister did not respond to the recommendation to integrate the various nature quality systems.</p>
<p>Policy information on the progress of the EHS is poor. Central coordination and clear definitions to measure policy outputs are not in place.</p>	<p>Make clear and binding agreements with the provinces on progress monitoring <i>before</i> the WILG comes into force. Collect and analyse the information centrally and make the information available to all concerned.</p>	<p>As part of the Multi-Year Programme, the Minister will make agreements with the provinces regarding the monitoring and evaluation system. The agreements will include performance monitoring for the ILG.</p>	<p>We welcome the Minister's undertaking. We would point out that clear objectives are a precondition to measure policy outputs.</p>
<p>There is some uncertainty about the exact location of the EHS, what areas are part of the EHS and what nature objectives must be realised in those areas.</p>	<p>Coordinate the maps of the EHS with each other and with the targets set for the size of the EHS. Create as much clarity as possible down to parcel level.</p>	<p>An improvement can already be seen in the Multi-Year Programme, which includes maps with targets and agreements on spatial protection. A map showing the realisation of the EHS (amongst other things) will also be prepared. The interadministrative working group that is drawing up the rules for the EHS will also consider this matter. This working group, made up of representatives of the Ministries of LNV and VROM and the provinces, will clarify the allocation of responsibilities.</p>	<p>The maps are too general and lack sufficient detail to judge them on their merits. A map showing the realisation of the EHS and the project to agree rules are steps in the right direction but ultimately the government, provinces and municipalities must make unambiguous maps and provide clear information to the public and businesses down to parcel level.</p>



<p>There is not enough coordination between the Ministers of LNV and V&W about aquatic nature projects and the EHS in major lakes and rivers.</p>	<p>Make clear and concrete agreements on tasks, responsibility for implementation, and monitoring.</p>	<p>The Minister notes that such agreements have already been made. They are included in the Safety and Aquatic Nature Agreement (2000) and are monitored by a joint committee at director level. Cooperation at implementation level is also good. The Minister thinks the policy information should indeed be clearer. He thinks our recommendation agrees with the improvements already in train.</p>	<p>Despite the agreement made in 2000 and the consultation at director level, there are not enough clear agreements on the objectives, tasks and monitoring (which have since been changed).</p>
<p>Provinces have included the EHS in a variety of ways in their regional plans. The EHS is not always clearly recognisable in those plans. A great deal of attention still has to be paid to spatial protection of the EHS in municipal zoning plans.</p>	<p>Actively promote spatial protection of the EHS. If necessary use section 10 of the Nature Conservancy Act or the powers provided by the Spatial Planning Act.</p>	<p>The Minister recognises the importance of embedding spatial protection of the EHS. He writes that where necessary the government actively exercises its responsibility for a coherent EHS and its spatial protection. In consultation with the Minister of VROM, the Minister of LNV will consider the government's role, taking account of the new Spatial Planning Act.</p>	<p>We are pleased to learn of this.</p>
<p>The principle of voluntary participation sometimes creates problems in the implementation of EHS policy.</p>	<p>Evaluate the use of this principle and reconsider it if necessary.</p>	<p>Evaluating the principle of voluntary participation will be more appropriate when the EHS has made more progress and more experience has been gained. As part of the ILG, the Minister has agreed with the provinces that he will follow this matter and take measures if necessary.</p>	<p>We are pleased the Minister is willing to evaluate and reconsider the principle of voluntary participation.</p>
<p>The policy shift towards more private management and agri-environment schemes may delay realisation of the EHS. The shift also harbours the risk of nature objectives not being realised. There are inadequate assurances that agri-environment schemes contribute to the spatial coherence of the EHS.</p>	<p>The government and provinces should select their realisation method based on which manager can best realise the desired nature objective at the intended EHS area and at the lowest cost. Provinces should award agri-environment grants more efficiently by setting more precise boundaries for agri-environment schemes in regional plans. Study opportunities to promote continuity in agri-environment schemes.</p>	<p>Management should, of course, be as cost effective as possible. The Minister is currently developing methods to help the provinces select the most cost effective way to realise the desired nature objectives.</p>	<p>The Minister does not comment on the recommendation regarding the efficiency and continuity of agri-environment schemes.</p>



<p>Environmental conditions in the EHS areas are still not high enough to realise the desired nature quality. Provinces do not always take well-founded decisions on nature objectives, locations and environmental conditions. There is still no clear action plan with concrete measures to improve environmental conditions.</p>	<p>For each EHS area, take well-founded decisions on nature objectives, environmental conditions and location and ensure that provinces draw up action plans indicating who will take what measures to improve the environmental conditions.</p>	<p>In the consultation with the provinces, the Minister will consider how provinces can help improve nature quality and environmental conditions.</p>	<p>We recommend that plans be prepared with concrete measures and a time schedule.</p>
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Appendix 2 Case studies

Certain EHS policy outputs were disappointing. To determine the possible causes, risks and solutions, we carried out case studies among provinces and managers of EHS areas. The themes were: spatial protection of the EHS, realisation of the desired nature objectives, reversal of groundwater depletion in EHS areas and the coherence of the completed EHS. Using documentation on the cases, talks were held with all parties concerned. As indicated in section 1, the results of the case studies were verified in a workshop with all parties in March 2006. This report uses only the results that the parties recognised during the workshop.

Nature objectives

On the basis of a map analysis (Sanders et al., 2006) we selected areas where the nature objectives were inconsistent with the type of management. We made the following hypotheses on the possible causes of the disagreements:

- poor coordination between government and manager;
- corresponding management packages are inappropriate to conserve or promote biodiversity;
- the Management Programme does not promote optimal nature quality.

The cases are shown in the table below.



Table 3. Description of nature objective cases

Area	Province	Manager	Discrepancy between nature objective and management
Sallandse heuvelrug	Overijssel	State Forest Service, Private owners, Society for the Preservation of Nature	Nature objective: Semi-natural woodland (18 – 21) Management: Multifunctional woodland (State Forest Service type 13.1 – 13.15) and basic woodland package (PB 409)
De Wijbosch	North Brabant	State Forest Service	Nature objective: Woodland on low moors and clay (18) and fertile land (20) Management: Woodland in river valley (State Forest Service type 3.09)
De Stippelberg	North Brabant	Society for the Preservation of Nature	Nature objective: Semi-natural woodland (18 t/m 21) Management: Basic woodland package (PB 409)
Boswachterij Dorst	North Brabant	State Forest Service	Nature objective: Multifunctional woodland (27) Management: Woodland on poor sandy soil (State Forest Service type 3.03) and woodland on loamy/sandy soil (State Forest Service type 3.04), woodland in river valley (State Forest Service type 3.09)
Boswachterij Gees	Drenthe	State Forest Service	Nature objective: Multifunctional woodland (27) Management: Semi-natural woodland with exotic species (State Forest Service type 4.5)
Schoolse Duinen	North Holland	State Forest Service	Nature objective: Dune landscape (5) Management: Chiefly open dunes, dry open heath and some peatland and lakes on sand (State Forest Service type 6.1, 6.3 and 11.2)
Deurnse Peel	North Brabant	State Forest Service	Nature objective: River and sandy woodland (1) Management: Chiefly heath with thickets and woodland, upland moor, deciduous woodland on poor land (State Forest Service type 6.5, 5.2 and 3.3)
Drentse Aa	Drenthe	Farmers	Nature objective: Water meadows (9a) Management: Agri-environment scheme, chiefly grassland for meadow birds (PB 313 and 314)
Reestdal	Drenthe	Farmers	Nature objective: Water meadows (9a) Management: Agri-environment scheme and nature management scheme



Groundwater depletion

We selected cases according to their location and vulnerability to groundwater depletion. We selected areas in both upland and lowland parts of the Netherlands owing to the differences in the nature of groundwater depletion. We selected two nature objectives that are very vulnerable to groundwater depletion and that are present in only a very small area: wet heathland and bluegrass land. We also selected areas with four different managers:

- Wet heathland in Leenderbos (province of North Brabant, managed by the State Forest Service). A groundwater depletion project is being carried out in the Laagveld area.
- Wet heathland in Lange Maten (province of North Brabant, managed by the Society for the Preservation of Nature). Reversing groundwater depletion in this area has reached an impasse.
- Wet heathland and river valleys in Scharreveld and Reestdal (province of Drenthe, managed by Het Drents Landschap).
- Bluegrass land in Krimpenerwaard (province of South Holland, managed by Zuid-Hollands Landschap). Groundwater depletion in the Nooitgedacht area has been successfully reversed.

Small areas

We selected cases in three provinces: Drenthe, North Holland and North Brabant. The cases selected are described in table 4.

Table 4. Small area cases

Area	Province	Manager	Description
Scharreveld (and comparable small heathlands)	Drenthe	Het Drents Landschap	Small heathlands scattered throughout the province of Drenthe
The northwest and west of North Brabant	North Brabant	Various	Many small woods in both the northwest and west of North Brabant
De Ronde Hoep, Middenpolder, Beetskoog, Zuiderwoude, areas in West Friesland	North Holland	Various	Small isolated areas in a chiefly agricultural area

Spatial protection

We selected three provinces, each having its own spatial problems: North Brabant (with a large rural area and considerable urban pressure), Drenthe (chiefly a rural area) and North Holland (urban problems).



Appendix 3 Standards

Standards to formulate objectives (SMART+C)

Specific

(1) Objectives should preferably be formulated in output terms (what policy outputs will be delivered) and in terms of the desired social impact (what social situation or change is sought). If this is not possible, process objectives can be formulated.

(2) If the policy is not targeted at the entire population, its target group should be identified and defined as clearly as possible. Reasons should also be given for the choice of target group.

Measurable

The objectives must be formulated in verifiable/measurable terms: 1) the intended situation when the objective has been achieved must be clearly described; 2) terms must be measurable and not open to interpretation; 3) where objectives are related to a reference point, the details of the reference point must be known (base-line measurement).

Agreed

(1) The objectives must be agreed with the House of Representatives: objectives must be stated in parliamentary papers. Midterm steering/ adjustments should be specifically reasoned in parliamentary papers.

(2) The objectives must be agreed with policy implementers.

Realistic

The objectives must be selected so that they can be realised in all conceivable circumstances (exogenous variables and policy measures).⁴⁵

Time-related

A date must be set on which the final objective must be achieved; intermediate objectives and dates should be set for long-term projects.

Consistent

(1) Consistency between objectives: the policy objectives must agree with each other. The objectives of certain parts of policy must be consistent with the general objectives for the policy field as a whole (hierarchical order). Interim objectives must be consistent with the final objective. Where policy is implemented locally, the objectives of central government

⁴⁵ This criterion is included here for the sake of completeness. The Court of Audit has not investigated whether the objectives of EHS policy are realistic.



and those of the implementing bodies (for example, municipalities, executive agencies) must be consistent. The formulation of objectives must be consistent over time. Changes in the objectives must be specifically disclosed and reasoned.

(2) Consistency between objectives and underlying policy information/basic data: the objectives must be consistent with the basic data on which they are based. If there are changes in the data, the objective must be adapted. The formulation of policy objectives should be consistent with a good social analysis of the problem based on adequate policy information.

Standards for policy information

Relevant

The policy information should be relevant. Relevant policy information should be:

- 1) complete: all the steering and accountability information necessary to achieve the policy objectives should be available. Relevant policy information should not be withheld. Future scenarios and model simulations are nearly always based on a series of assumptions and simplifications of reality. It is important that they are specified. If relevant aspects/factors are not taken into account, this should be specifically disclosed and reasoned;
- 2) up to date: the information should be sufficiently up to date (not obsolete). An exact standard for 'up to date' has not yet been quantified. Information on outputs and impacts should be evaluated at least once every five years unless another period is agreed upon on the inception of the policy;
- 3) timely: the necessary information should be provided on a timely basis. Information must be available before decisions or actions are taken. The information supply should be steered by a logical sequence of steps in the policy chain.

Reliable/accurate

Policy information should be reliable and valid.

- 1) Reliable: the measuring instrument should be used accurately; repeat measurements should always produce the same result. The degree of reliability should be stated. If there is significant uncertainty, information from several sources should be compared and uncertainties should be identified;
- 2) Accurate/valid: the measuring instrument should be technically adequate: concepts should be measured validly, i.e. they should be



operationalised so that what should be measured actually can be measured.

Understandable

Policy information should be accessible and clear to its users (for example, members of parliament, policy makers). The policy information should also be unambiguous (not open to interpretation).

Comparable/consistent

There are three forms of consistency:

- 1) consistency over time: the information should be comparable over time. Changes in information already provided should be disclosed;
- 2) consistency between the links in the policy chain: the information should be consistent with the way in which policy is formulated. The method of performance measurement should agree with the instruments used and the output goals. The impact measurement method must be consistent with the social problem and the intended social impact;
- 3) consistency between different sources of information: information from different sources about the same subject should be consistent, comparable and preferably presented alongside each other. If some information is not consistent, this should be disclosed and, if possible, explained.



Appendix 4 Organisations involved in the audit

Provinces

Association of Provincial Authorities	Flevoland
Drenthe	Utrecht
North Brabant	Groningen
North Holland	Gelderland
Overijssel	Zeeland
South Holland	Limburg

Managers

Foundation Management Nature and Countryside (Stichting Beheer Natuur en Landelijk Gebied)

Natural Countryside Netherlands (Natuurlijk Platteland Nederland)

Organisation of Forest Groups (Unie van Bosgroepen)

State Forest Service (Staatsbosbeheer)

Society for the Conservation of Nature (Vereniging Natuurmonumenten)

Organisation of Provincial Nature Conservation Societies (De Landschappen)

Provincial Nature Conservation Society Drenthe (Het Drents Landschap)

Provincial Nature Conservation Society Utrecht (Utrechts Landschap)

Provincial Nature Conservation Society South Holland (Zuid-Hollands Landschap)

Provincial Conservation Society Nature and Castles Gelderland (Geldersch Landschap en Geldersche Kasteelen)

Provincial Nature Conservation Society Overijssel (Landschap Overijssel)

Provincial Nature Conservation Society North Holland (Landschap Noord-Holland)

Real Estate Holterberg (Landgoed de Holterberg)

Others

Ministry of Agriculture, Nature and Food Quality (LNV):

- Nature Department
- Department of Knowledge
- Financial and Economic Affairs Department
- National Regulation Agency
- Department of Rural Affairs

Ministry of Transport, Public Works and Water Management (V&W):

- Directorate-General for Water Affairs
- Main Finance, Management and Control Directorate
- Directorate-General of Public Works and Water Management, Road and Hydraulic Engineering Institute

Ministry of Housing, Spatial Planning and the Environment (VROM):



- National Spatial Planning Agency
- Directorate-General for Environmental Protection
- Financial and Economic Affairs Department
- VROM Inspectorate

Netherlands Environmental Assessment Agency

Alterra

Statistics Netherlands

Amstel, Gooi and Vechtstreek district water control boards

Dutch Federation of Agricultural and Horticultural Organisations

Council for the Rural Area

Netherlands Institute for Spatial Research

Dutch National Green Fund

Association of Netherlands Municipalities

Wageningen University, nature management and plant ecology faculty

WING Process Consultancy



Appendix 5 Terms and abbreviations

Acquisition and development	A method to realise EHS areas. New nature is developed in an area that previously did not have a nature function. The land is acquired and developed by the government before ownership and management are handed over to a large site management organisation such as the State Forest Service, the Society for the Preservation of Nature or one of the Provincial Nature Conservation Societies. The manager receives a grant from central government or a nature management grant under the Management Programme.
Agricultural management areas	A method to realise EHS areas. In these areas, the main function remains agriculture but the land is managed in an environmentally-friendly manner to increase the area's ecological values. In return, the farmer receives a grant under the Management Programme, agri-environment scheme (SAN).
Agri-environment scheme	Part of the Management Programme with grants for agricultural management (SAN: Subsidieregeling Agrarisch Natuurbeheer).
Alterra	A scientific research centre that studies rural areas and their sustainable social use. Alterra is part of Wageningen University and Research Centre.
Aquatic nature	Nature in and around water.
Area management plan	Provincial plan that acts as an assessment framework for applications under the agri-environment scheme. The plan lays down which management packages are applicable in which areas.
Biodiversity	Biodiversity encompasses the overall biological diversity of all living plants and animals on earth. Biodiversity relates to the variety of species, the hereditary variation within species and the variation in habitats or ecosystems.
Birds Directive	EU directive to conserve all natural bird species living in the wild in the European territory of the EU member states. The directive provides for the conservation, management and regulation of these species and sets rules on their exploitation. It is applicable to birds, their eggs, their nests and their habitats. The member states are obliged to take all measures necessary to ensure that the bird species have habitats of sufficient size and sufficient variety.
CBS	Statistics Netherlands (Centraal Bureau voor de Statistiek).
Defragmentation	The removal of physical barriers between nature areas that are caused by infrastructure (roads, canals, railways).
DLG	Government Service For Sustainable Rural Development of the Ministry of LNV (Dienst Landelijk Gebied).
DR	Regulations Agency of the Ministry of LNV (Dienst Regelingen).
Ecological linking zone	Small-scale linking zone within a nature area that connects different



	parts of that nature area.
EHS	National ecological network. An ecological network of high-quality, protected nature areas (Ecologische Hoofdstructuur).
EZ	Ministry of Economic Affairs (Economische Zaken)
Government Service For Sustainable Rural Development	Service of the Ministry of LNV responsible for the acquisition and development of new EHS areas.
Habitats Directive	EU directive that requires member states to designate habitat areas and implement the protection framework in national legislation. The protection provided by the Habitats Directive is laid down in the new Nature Conservancy Act. The Flora and Fauna Act provides for the protection of indigenous and exogenous flora and fauna.
Hectare	An area of 10,000 m ² . 100 hectares is equal to 1 km. ²
ILG	Rural Investment Budget (Investeringsbudget Landelijk Gebied).
LNV	Ministry of Agriculture, Nature and Food Quality (Landbouw, Natuur en Voedselkwaliteit).
Management package	A combination of the flora, tree species, management regulations, fauna and landscape characteristics described in the Management Programme that is eligible for financial support. Examples include: 'general meadow bird grassland', 'fast-growing coniferous woodland', 'shifting dunes' and 'bogs'.
Management Programme	A coherent package of measures and grants to manage woodlands, nature and landscape in the Netherlands. The measures are implemented through the agri-environment scheme and the nature management scheme 2000 of the Ministry of LNV. These schemes provide grants for EHS areas.
MJPO	Multi-Year Programme on Defragmentation (Meerjarenplan Ontsnippering).
MNP	Netherlands Environmental Assessment Agency (Milieu- en Natuurplanbureau).
National Regulations Agency	Agency of the Ministry of LNV that implements nature management schemes.
Natura 2000	Network of nature areas of European significance that is protected under the European Birds Directive and/or the European Habitats Directive.
Nature area plan	Provincial plan that acts as a framework to assess grant applications under the nature management scheme 2000. The plan lays down which management packages are applicable in which areas.
Nature management scheme	Part of the Management Programme with grants for the management of nature areas (SN: Subsidieregeling natuurbeheer).
Nature quality	An area's nature quality is high if there is a large variety of plant and animal species that are characteristic of a certain nature type that, it is assumed, is sustainable.



Nature objective	<p>A combination of several nature types as described in the <i>Manual for the National Classification of Nature Types</i> of the Ministry of LNV.</p> <p>Nature objectives are divided into three categories:</p> <ul style="list-style-type: none"> • Large-scale nature: virtually natural nature types and assisted nature types in which large-scale natural processes (whether guided by management measures or not) determine the outcome. • Special nature: semi-natural nature types with small-scale planning or management. • Multifunctional nature: nature in which other user functions play a role in development and management.
Nature type	<p>A type of ecosystem sought by nature policy that hosts a certain biodiversity and a certain degree of naturalness. Nature types are described in the Ministry of LNV's <i>Manual for the National Classification of Nature Types</i> by means of target species and necessary habitat and management.</p>
NMP	<p>The government's National Environmental Policy Plan (Nationaal Milieubeleidsplan).</p>
PKB	<p>Key planning decision pursuant to section 2a of the Spatial Planning Act (Planologische Kernbeslissing). This is a government plan for certain aspects of national spatial policy. The most recent key planning decision on the EHS is set out in the <i>National Spatial Strategy</i> (2005) and is indicative in nature. Local authorities must take account of the PKB when drawing up or revising their plans.</p>
Private nature management	<p>Management of nature areas by private individuals rather than by traditional site management organisations.</p>
Private nature management with change in function	<p>Method to realise EHS areas. An area that previously was not a nature area is given a nature function; the land remains the property of the private owner. The land's main function in the zoning plan is nature. To compensate for the land's decline in value, the owner receives a one-off grant under the Management Programme's nature management scheme 2000. Under this scheme, grants can also be awarded for management costs.</p>
Provincial Nature Conservation Societies	<p>Private organisations that manage nature areas in a province, for example Zuid-Hollands Landschap and Fryske Gea.</p>
RBON	<p>Management Agreements and Nature Development scheme, grant scheme in force before the Management Programme (Regeling Beheersovereenkomsten en Natuurontwikkeling).</p>
Red List	<p>A list of flora and fauna that have become extinct or are critically endangered, endangered or vulnerable in the Netherlands. A list is prepared for each species (birds, butterflies, vascular plants, mosses, etc.). The lists are drawn up by the Minister of LNV and published in the <i>Government Gazette</i>.</p>
Robust corridors	<p>Large-scale nature corridors between large nature areas in the EHS.</p>



	These corridors increase plant and animal habitats. They enable, for example, red deer to move from the Veluwe national park to the River IJssel floodplains.
SBB	State Forest Service (Staatsbosbeheer).
Spatial coherence	A combination of the size of a nature area, the distance between nature areas and the presence of connections between them. If there is sufficient spatial coherence, plants and animals can move or spread from one area to another.
V&W	Ministry of Transport, Public Works and Water Management Verkeer en Waterstaat).
VBTB	From Policy Budgets to Policy Accountability, an operation to redesign central government budgets and annual reports. The aim of the VBTB is to promote result-oriented budgeting and accountability at the Ministries (Van beleidsbegroting tot beleidsverantwoording).
VROM	Ministry of Housing, Spatial Planning and the Environment (Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer).
WILG	Rural Areas Development Act (Wet Inrichting Landelijk Gebied).

Appendix 6 EHS targets and realisation (in hectares)

	Target		Realisation										
	Total area	A Acquisition	B Development	C Agri-environment	D Private nature management	Total area completed	A Acquisition	B Development	C Agri-environment	D Private nature management			
New nature, of which:	151,500	111,741	146,450	5,050	34,709	47,173	66,454 (+ 17,732 for subsequent exchange)	47,173	see management areas	2,701			
- NURG	7,000	7,000	7,000	0	0	2,060	4,071 (+875 for subsequent exchange)	2,060	0	0			
- In buffer zones	2,827	2,827	2,827	0	0	1,393	2,234	1,393	0	0			
- Maaswerken, of which:	at least 1570 (+60 nature compensation)	at least 1570 (+60 nature compensation)	at least 1570 (+60 nature compensation)	0	0	0	0 (+216 for subsequent exchange)	0	0	0			
+ Grensmaas	at least 1,000	at least 1,000	at least 1,000	0	0	0	0 (+23 for subsequent exchange)	0	0	0			
+ Zandmaas I	570 (+60 nature compensation)	570 (+60 nature compensation)	570 (+60 nature compensation)	0	0	0	0 (+193 for subsequent exchange)	0	0	0			
Agricultural management areas in the EHS	90,000	0	0	90,000	0	56,688	0	0	SAN 51,885 RBON 4,803 Total 56,688				
Robust corridors	27,000	16,303	24,365	2,635	8,062	0	243 (+ 653 for subsequent exchange)	0	?	?			
Aquatic nature, of which:	6,500	2,810	6,500	0	0	1,886	136 (+387 for subsequent exchange)	1886	0	0			

- South Holland delta	2,400	2,400	2,400	0	0	0	0	0	136 (+387 for subsequent exchange)	3	0	0
- North Netherlands	0/ 500	0	0	0	0	0	724	0	0	724	0	0
- IJsselmeer area	3,000?	0	3,000?	0	0	0	1,159	0	0	1,159	0	0
- Zandmaas II	460	460	460	0	0	0	0	0	0	0	0	0
- National waters ⁴⁶	0	0	0	0	0	0	0	0	0	0	0	0
Total	275,000	130,904	177,315	97,685	42,771	105,747	66,833 (+ 18,772 for subsequent exchange)	49,059	56,688	2,701		

⁴⁶ It was not clear from the policy papers what part of the size target was for the account of the national waters. In his response to the draft of this report, the Minister of LNV wrote that no size target had been set for the national waters. The Minister said the target for national waters related to the construction of fauna-friendly riverbanks and fish ladders.

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