

# PLUREL



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**Working paper**

## European lessons for Green and Blue Services in The Netherlands

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Application	Decision	Number	Country	Title	Originating from CAP/ RDP?	Topic/ measures	Area	Beneficiaries	Duration	Aid	Total €	Fees	Organisation	Remark
2006	feb-07	N754/ 2006	Germany	Alte Rinder	no	Old cattle breeds, extensive farming, landscape maintenance, environment, genetic resources	Biosphere Reserve Flusslandschaft Elbe		4 years	Investments and Technical assistance, pilot	174573			
jan-04	dec-04	N69/ 2004	Germany	East Friesian barrier hedgerow landscape	no	Hedgerow barrier landscape, maintenance by farmers, recreation	Aurich-Oldendorf (Grossefehnh)	20 farmers	5 years	pilot	83500 p y	450 €/ha hedgerows, 1,10 €/m <sup>2</sup> /year maintenance, also fees for planting, max 171 €/ha for grassland small parcels	NOVA Institut	Maintenance intervals of 10 years!
sep-06	nov-06	N617/ 2006	Germany	Weide- und Almwirtschaft	yes	Maintenance of cultural landscape, extensive grazing, improvement of agricultural buildings, infrastructure and machines, fencing to protect forests	Bayern	Farmers, owners of alps and cooperatives	2006-2011 (6 years)	50-80% depending on extensiveness/ site conditions and number of measures	1,3 M p y	Complex system of calculation, max € 66500		Prolongation of N748-2000
jan-06	sep-06	N67/ 2006	Germany	Protection of drinking water	yes	Year-round green cover; avoiding certain crops; use of technology; reduced use of manure; reduced tilling; mechanical weed control; extensification	Lower Saxony	Farmers	Unlimited, contracts of at least 5 years	100%	9 M p y	basic: 15,50 €/ha nutrient records. Additional: a.o. crop rotation 400 €/ha, active greening 150 €/ha, extensive grassland management 450 €/ha, reduced use of N fertilizers 150 €/ha, reduced use of herbicide 150 €/ha, manure and soil tests 65 €/analysis, non-use of farm livestock manure 250 €/ha, use of stabilised N fertilizers 60 €/ha, conversion arable land to extensive pasture 350 €/ha. Totals may not exceed maximum rates /ha EC 1698/2005		Blue service: water quality. Resembles Catalogue in pick and choose measures
jan-03	aug-05	N55/ 2004	Germany	Promotion of regionalised agri-environmental measures - pilot area	no	Sustainable tourism, biodiversity preservation, water quality, production and marketing of products. No fertilisation (at all) or use of pesticides. High water levels in winter. Flooding. Temporarily taking out of use special habitats. Constructing tourist infrastructure. Conversion arable land to pasture or environmental friendly crops.	Luebecker Bucht	Farmers and forestry undertakings	2005-2009, 5-year contracts	100%	130000	352 or 144 €/ha		Blue service: water retention. Amount of animals (cattle) will be adjusted to carrying capacity of the land.
feb-05	apr-05	N65/ 2005	Italy	Forestry measures	yes	Improvement, protection and development of forest in plains, creation of environmental networks and conservation of landscape	Lombardia	Farmers and public and private parties	7 years, 3 year periods	forestry measures, infrastructures for public use, conservation of landscape heritage features, 60-100%, depending on area and productive or non-productive	50 M p year	max € 100.000 per beneficiary per 3 years		Forest to be kept for 50 years, no hunting
feb-05	apr-05	N65/05	Italy	Forestry measures		Improvement, protection and development of forested areas (superfici forestali pianziali), creation of ecological networks and landscape conservation	Lombardia	Farm businesses (azienda agricola), public and private companies, land development consortiums (consorzi di miglioramento fondiario), public and private associations	Until 31st December 2011	Aids for forestry measures (woodland creation and management), traditional landscape conservation, environmental quality improvement (e.g. sewage treatment) and agri-tourism	50,000 €/year	Forestry measures: 60% (75% for underprivileged zones); preservation of valuable non-productive farm features (traditional landscape conservation): up to 100%; preservation of productive farm features: up to 60% (75% underprivileged zones); improvement of environmental quality conditions: 60% (75% for underprivileged zones); agritourism and forest infrastructures: up to 100,000€/three year period		New woodlands must cover 70% of the area; land use change not allowed in 50 years
apr-04	may-04	N152/2004	Italy	Pilot project for the conservation of natural habitats of communitarian interest in protected areas		Small pilot project aimed to maintain and preserve habitats of communitarian interest and traditional landscape in protected areas	Bologna (province)	Farm businesses that produce, transform or commercialize agricultural products; land owners	Two years	Diverse pilot actualizations of limited scale aimed at improve farm land management, promote biodiversity conservation and protect endangered species	184,050 €	For each project the quantity available is 830 €		
aug-03	jun-04	N385/2003	Italy	Stirone Regional Park - Demonstrative Project "Intervention for the environmental improvement of agricultural areas in the Park and the Pre-Park (peripheral area)"		Application of experimental agrotechnics aimed to protect vertebrate wild fauna: a) substitution of cultivated land in benefit of wild fauna; b) utilization of specific machinery (barre da involo) for the removal of the previous cultivation; c) no chemical and no mechanical treatment of perimetral boundaries; d) research on hen brooding	Stirone Regional Park and peripheral area	Land owners and farmers within the protected area of the Park and the peripheral area (pre-park). Participation in the project is voluntary.	Two years 2004/2005 and 2005/2006	Measure a): up to 360 €/year per beneficiary; measure b): up to 320 €/year per beneficiary; measure c): up to 180 €/year per beneficiary; measure d) up to 525 €/year per beneficiary	7890 € (3945 € per year)	Measure a): 0.09 €/m <sup>2</sup> dedicated to the project; measure b): 0.08 €/m <sup>2</sup> ; measure c): 60 €/ha; measure d): up to 175 €/ha	Management and control of the project: Consorzio del parco regionale dello Stirone (Park authority)	
feb-01	apr-02	N105/2001	Italy	Aid to farms located in regional protected areas		a) Coordination, information and technical assistance by park authorities; b) measures aimed to the protection of wild fauna, restoration of traditional cultivation and landscape, forestry and environmental requalification measures, adjustment of mechanical equipment, computerization plan (for farms); c) intervention in private areas through contract or agreement with owners	Regional protected areas	Parks authorities and farm businesses located in protected areas; also owners of non-productive land within the protected area.	Indefinite	Aids for agri-environmental measures aimed to preserve wild fauna; reduce wild fauna impact on crops; plantation of traditional fruit trees; restoration of meadows; landscape improvement (restoration of hedges, fountains and other landscape features); environmental impact reduction; forestry measures; environmental requalification	1,975,500 € for the first three years	Depending on each measure (e.g. 450 €/ha per year for wild fauna measures; 240-330 €/ha for turning cultivated area into meadow; up to 75% of the total cost of landscape restoration; etc.)		
mar-02	jul-02	N220/2002	Italy	Tax credit in benefit of investments in agriculture		Different aids to farm businesses, including measures aimed to preserve traditional landscape	National	Farm businesses	Until 31st December 2006	(Among other non-environmental measures) Investment to preserve traditional landscape: a) without an increase of productivity or b) with an increase of productivity	155,000,000 € / year	a) up to 75% for less developed zones and up to 60% for other zones; b) up to 50% for less developed zones and 40% for the rest (supplementary aid: up to 100% of additional costs derived from the utilization of traditional materials)		Modifies aid N646/C/2000
nov-01	jul-02	N769/2002	Italy	Regional intervention in benefit of the forestry sector	No, but complementary to the RDP	Investment for the promotion of the economic, ecological and social values of forests; the expansion of woodlands; and the realisation of research and educational activities	Marche (region)	Depending on the measure: Comunità Montana ("mountain community"), farm businesses or their associations, public and private entities, Regional Authority	2001	(Among other measures) Afforestation measures: a) arboriculture; b) creation of natural woodland; c) creation of tree rows (hedges or energy production); d) planting of truffles and chestnuts	431,000 €	Up to 100% of the total cost of the measure in case the beneficiary is a farmer. Up to 100% for the implantation of natural woodland. In other cases, the aid is up to 80% of the total cost. The aid won't exceed 4830 €/ha.		
aug-01	mar-02	N584/2001	Italy	Contribution for a rural development compatible with the promotion of zoological and environmental values		a) Forest management; b) pasture land restoration; c) change of cultivation (cultivo a perdere); d) restoration and management of wetlands; e) differentiation of cultivations; f) plantation and conservation of hedges, bushes, groves and rows; h) aid to the alpine wildlife	Lombardia	Farmers; co-operatives of farmers; consortiums and associations of land owners; mountain communities (comunità montane)	Indefinite		750,000-1,000,000 €/year for the first three years	a) 400€/ha/year; b) 400€/ha/year; c) 500-1500 €/ha/year (up to 6000 €); d) 40 €/ha/year; e) restoration of wetlands 500 €/ha/year, management 250 €/ha/year, fountains 120 €; f) 35-75 €/ha/year; g) 075-2 €/ha/year; h) 500-2000 €		Modified by N599/2001
mar-00	dec-00	N130/2000	Italy	Water quality scheme for the Laguna (lagoon) di Venezia hydrographical basin - Aid for the agricultural and livestock sector		Measure 1: Management of hydraulic flows derived from cultivated areas; Measure 2: reduction of the environmental impact (on water quality) associated to livestock farming	Veneto	Farmers	Indefinite	Measure 1: Aids for restructuring the existing irrigation systems, the development of draining systems, and the creation of vegetal barriers; Measure 2: Aids for the rationalization and reutilization of livestock effluents.	Measure 1: 30,000,000 ITL; Measure 2: 53,000,000 ITL	Measure 1: from 20 to 100% of the total investment (depends on the specific actuation); Measure 2: from 35 to 70% of the total investment (depends on the specific actuation)		Linked to aids N053-03, N412-01 and N718/97, all of them related to the "Laguna di Venezia Scheme"
oct-00	mar-01	N729/A/2000	Italy	Implementation of the instruments defined in the negotiated programme in the agriculture sector		1. Aids to investment in farm businesses (including landscape preservation measures); 2. Aids to investments in the sector of transformation and commercialization of agricultural products; 3. Aids to the associations of farm businesses; 4. Aids to the promotion and publicity of agricultural products; 5. Aids to the research and development oriented to improve the quality of the products; 6. Aids to investments in the forestry sector	National	Farm businesses	Indefinite	(Among other non-environmental measures) Investment to preserve productive features of the traditional landscape: a) without an increase of productivity or b) with an increase of productivity; investment to preserve non-productive landscape features (e.g. historical, archaeological); investments in afforestation and forestry measures	Indefinite	Investment to preserve productive features of the traditional landscape: a) up to 75% for less developed zones and up to 60% for other zones; b) up to 50% for less developed zones and 40% for the rest (supplementary aid: up to 100% of additional costs derived from the utilization of traditional materials); investment to preserve non-productive landscape features (e.g. historical, archaeological): up to 100%; investments in afforestation and forestry measures: up to 100%		Modifies the aid N128/99 (not available in the EU register on internet)
mar-02	sep-02	N229/2002	Italy	Aids to farmers in mountain areas		a) Agri-environmental interventions: environmental management of land, woodlands and water courses; afforestation and management of forested areas; management of roads between farms; non-productive cultivations; landscape preservation; social and recreational infrastructures; hydrogeological works; fire prevention activities. b) Acquisition of forest properties.	Trento (province)	Farmers, co-operatives and public entities	Indefinite		Indefinite	a) Agri-environmental interventions: up to 100% of the total expenses; b) Acquisition of forested properties: up to 50% for the purchase and 100% of legal and administrative costs.		Modifies aid N536/98
jun-00	dic-03	N369/2000	Italy	Development of agriculture in mountain areas		Different aids to benefit farming activities in mountain areas, including measures aimed to preserve traditional landscape features	Veneto	Farmers, farm businesses, agricultural co-operatives	1 year	(Among other aids) a) investment for the conservation of non-productive features located in a farm of historical interest ; b) investment for the conservation of non-productive features located in farms of historical or archaeological interest, with no increase of productivity.	1,549,370.70 €	up to 75% of the total expense; up to 40% if the beneficiary is not a full-time farmer.		Derives from the aid NN 177/95
jan-00	feb-01	N368/2000	Italy	Rural Development Plan (aspects related to State Aids)	RDP	Different measures aimed to strengthen the agricultural sector, including restoration of environmentally degraded land and forestry measures	Valle d'Aosta	Farmers, public entities	2000-2006	(Among other aids) a) Aids for the restoration of degraded land, aimed to reduce natural risks and preserve natural values, wildlife and landscape; b) aids for afforestation, natural management of forested areas and fire prevention	Restoration of degraded land: 1,500,000 €; Afforestation: 187,474 €; Forest management: 27,580,000 €; fire prevention: 6,870,000€	a) up to 150 €/ha for basic actualizations and up to 300 €/ha for supplementary interventions; b) afforestation: up to 75% for private beneficiaries, 90% for public entities, and 100% for a determinate species composition; forest management: up to 100%; fire prevention: up to 100%		Environmental restoration measures: only valid for land degraded for at least three years; commitment for five years

Application	Decision	Number	Country	Title	Originating from CAP/ RDP?	Topic/ measures	Area	Beneficiaries	Duration	Aid	Total €	Fees	Organisation	Remark
sep-04	sep-04	XA38/04	Italy	Conservation of the landscape and rural buildings of historic and archaeological interest		The aid scheme covers actions to conserve and enhance the landscape and heritage features of rural buildings on holdings active in the production, processing and/or marketing of the agricultural products	Veneto	(farmers)	Until 30th June 2007	Expenditure on measures to conserve non-productive aspects of agricultural holdings, including structural work of historical or archaeological interest or to conserve traditional aspects of the agricultural landscape; expenditure to compensate for work carried out by farmers, family members or workers dependent on them up to a maximum of EUR 10 000,00 per year.	200,000 €/year (indicative)	Up to 100 % of the eligible expenditure.		
sep-04	sep-04	XA45/04	Italy	Restoration of the rural built heritage		The scheme applies to work to preserve and improve the landscape and the rural built heritage of enterprises active in the production, processing and/or marketing of agricultural products	Veneto	(farmers)	Until 30th June 2007	Costs for work on rural buildings used for on-farm production, provided that such work does not increase the production capacity of the holding.	200,000 €/year (indicative)	60 % of eligible expenditure; 75 % of eligible expenditure in less-favoured areas. The proportion of aid may be raised to 100 % of added costs incurred by restoration work using traditional materials in order to preserve the architectural features of the building.		
jan-05	feb-06	N33/ 2005	Netherlands	Green Fund Midden Delfland	no	Nature, biodiversity, landscape, cultural heritage through score system. Old cattle breeds, meadow bird protection, maintenance of landscape elements, maintenance historical buildings.	Midden Delfland	51-100 farmers in Midden Delfland	5-10 years	Productive cultural elements 60%, not productive cultural elements 100%. Nature and landscape measures: 100%	400,000 €/ year	Diverse based on score system	Stichting Groenfonds Midden Delfland (foundation) and Vockestaert agricultural nature association	Municipalities Midden Delfland, Delft and The Hague
feb-05	jul-06	N58/ 2005	Netherlands	Farming for Nature	no	Zero-input at farm level. Adjusted (natural) water levels. By creating these conditions, diversity are expected to develop and nature values to increase. Both cattle and arable land needed.	Biesland polder and Twickel country estate	farmers	Ten years	Pilot, 100%	565.570 €/year together with N476/2007	1223 €/ha/year dairy cattle Biesland, 1042 €/ha/year dairy cattle, Twickel	Alterra WUR, Province, Ministry of LNV	linked to N476/2007
aug-07	nov-07	N476/2007	Netherlands	Farming for Nature	no	Zero-input at farm level. Adjusted (natural) water levels. By creating these conditions, diversity are expected to develop and nature values to increase. Both cattle and arable land needed.	Biesland polder and Twickel country estate	farmers	Ten years	Pilot, 100%	565.570 €/year together with N58/2005	1042 €/ha/year all types of cattle, Twickel	Alterra WUR, Province, Ministry of LNV	linked to N58/2005
aug-06	feb-07	N577/ 2006	Netherlands	Catalogue Green and Blue Services	no	Catalogue of measures at activities level, based on which provinces, municipalities and water boards can design their own 'state aid proof' agri-environmental schemes.	Netherlands (outside Main Ecological Structure)	farmers	5-7 years	Diverse, up to 100%	120 M€ /year	Diverse (elaborated list of prices)	IPO (Provinces)	
jun-03	nov-03	N278/03	Spain	Aids to the promotion of agri-environmental measures in the cultivation of seed potatoes		Application of techniques of integrated production for the cultivation of seed potato; substitution of cultivated areas for grassland where erosion risk exists	Navarra	land owners	indefinite	annual allowance to compensate yield loss and complementary costs	75000	integrated production: 270 €/ha per year; substitution of cultivated areas: 200 €/ha per year		five years commitment for the beneficiaries
oct-02	feb-03	N672/02	Spain	Aids to the development of management plans for cattlestock droppings		Improvement of infrastructures for the control of livestock droppings in farms located in vulnerable areas, in order to prevent or reduce nitrate pollution in waters	Cataluña	land owners	2002-2007 (six years)	25% of the total cost of infrastructures	22000000		Regional government	linked to N673/02
oct-02	jul-03	N673/02	Spain	Aids to the voluntary abandon of livestock farms in vulnerable areas		Abandonment of livestock farms located in vulnerable areas that cannot reach acceptable environmental standards, in order to avoid nitrate pollution in waters	Cataluña	land owners	five years	Compensation for the economic loss	7850000	Allowance stipulated per animal species / breed	Regional government	linked to N672/02
jul-06	oct 2006	N454/ 2006	UK	Areas of Outstanding Natural Beauty: Landscape Protection and Enhancement	yes, but locally governed	The renovation of boundary features: dry stone walls, hedges, wrought iron railings and gates, and dry and wet ditches; The removal of scrub; The planting of hedges; The fencing of woodland of high environmental value to prevent grazing by livestock; The pollarding of trees; The planting of small copses and feature trees; The provision of ponds and other wet landscape features; The management and renovation of archaeological sites; The renovation of historic agricultural buildings using traditional materials; The provision of water troughs to enable improved management of rich grassland by livestock.	designated areas within England	> 1000 farmers	5,5 years	40-100% depending on measure and area	34,7 M	Including labour, materials, machine hiring	governed by local authorities, funded by national government	Including archeological services
jun-06	jul-06	N425/ 2006	UK	Areas of Outstanding Natural Beauty: Technical support scheme	yes, but locally governed	Training, advise, guidance, monitoring and evaluation, workshops	designated areas within England	> 1000 farmers	5,5 years	up to 100%	6,13 M	max € 100.000 per beneficiary per 3 years	governed by local authorities, funded by national government	Connection with N454/ 2006
aug-03	feb-04	N380/ 2003	UK	Environmental Enhancement through Agriculture, National Parks	yes, but locally governed	Ways of using agricultural land which are compatible with the protection and improvement of the environment, the landscape and its features, natural resources, the soil and genetic diversity; an environmentally-favourable intensification of farming and management of low-intensity pasture systems; the conservation of high nature-value farmed environments which are under threat; the upkeep of the landscape and historical features on agricultural land; the use of environmental planning in farming practice; technical support	England and Wales	individuals or businesses (incl farmers) managing land within boundaries of NPs	Management agreements 5-10 years	up to 100%	22.3 M pounds	600 €/ha annual crops, 900 €/ha perennial crops, 450 €/ha other land uses, max € 100.000 per beneficiary per 3 years	National Park Authorities	
mrt-03	sep-03	N340/ 2002	UK	Management agreements Designated Conservation Areas	no	Management of land of importance to wildlife	Isle of Man	land owners and occupiers managing land in designated areas	2002-2011, management agreements 5-10 years	investments 40-45 %, income foregone 100%, specific management activities 100%, incentive up to 20%	250.000 p y	600 €/ha annual crops, 900 €/ha perennial crops, 450 €/ha other land uses,	Isle of Man authority	Did not comply, many remarks from EC, not enough information and payments too high. Strict legislation on Isle of Man leads to high threshold of Good Farming Practice: payments are forbidden

# Contents

Abstract	4
1 Introduction	5
2 Green and Blue Services as an operationalisation of the ecosystem services concept	8
2.1 Ecosystem services and agriculture	8
2.2 Economic valuation of ecosystem services	9
2.3 An example: Payment for Environmental Services (PES)	9
2.4 Agri-environmental schemes (AES)	10
2.5 Green and Blue Services (GBS)	10
3 Similar initiatives in Europe	12
3.1 Germany	12
3.2 Spain	14
3.3 United Kingdom	15
4 State aid decisions	17
5 Catalogue Green and Blue Services	19
6 Recommendations for updates of the Catalogue Green an Blue Services	20
Epilogue	21
References	22
Annex 1 Relevant state aid decisions	24
Annex 2 Farming for Nature	25
Annex 3 SEARCH for regional initiatives	26



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## Abstract

Green and Blue Services were developed in The Netherlands to reward farmers for the environmental services they provide to society. Especially the first initiatives were area-specific, developed together with farmers and different from the national Agri-environmental scheme. In the PLUREL case study region Haaglanden, Green and Blue Services are seen as a strategy to strengthen agriculture in the urban fringe.

For the Dutch Ministry of Agriculture, Nature and Food Quality (LNV), Green and Blue Services are part of the agenda for the CAP reform. Therefore, the Ministry is interested in similar developments in other European countries.

In this study, initiatives in Europe are described that are in a way similar to the Green and Blue Services in The Netherlands. Special attention was given to initiatives that passed the European state aid procedure. Several of these initiatives can be inspiring for policy development and governance strategies in The Netherlands and elsewhere in Europe.



# 1 Introduction

Green and Blue Services (GBS) were introduced as a policy concept in Dutch national policy in the Structuurschema Groene Ruimte in 2002, (the National Structure scheme on the Green Environment). The introduction followed a publication by a national advisory council on rural areas (Raad voor het Landelijk Gebied, 2002). GBS came up as a concept in addition to the national Agri-environmental Scheme (AES) Programma Beheer (PB).

The Netherlands government promoted the GBS concept because:

- The PB was meant to be implemented in the Main Ecological Structure (EHS), a network of nature reserves and connecting areas. The original idea behind the PB was that only farms inside the EHS should participate (IPO, 2007). However, various Provinces used their competence and designated areas outside the EHS where farmers can apply for PB-subsidies. Green and Blue Services would explicitly open opportunities for farmers to receive payments for agri-environmental measures in other parts of the country. Parallel to the emergence of the GBS-concept, ideas for alternatives to the PB came up in various regions, perhaps most notably in per-urban ones (e.g. Farming for Nature near Delft and Hengelo<sup>1</sup>, Green Fund Midden Delfland near Delft<sup>2</sup>, Ooijpolder near Nijmegen, Wijk en Wouden near Zoetermeer, Groenewoud between Den Bosch, Tilburg and Eindhoven).
- In that time, the concept of Green and Blue Services was expected to enthruse private parties to (co-) finance agri-environmental measures.
- Even though the idea was still that mainly governments would subsidize the services, the concept was believed to pay more respect to the entrepreneurship of the farmer than the current system of subsidies because a kind of market development around Green and Blue Services was envisioned.

The Netherlands government supported the development of Green and Blue services through:

- Policy development
- Financial support for research on Green and Blue Services initiatives
- Taking care of the state aid procedures with the European Commission for initiatives that were labelled 'Green and Blue Services'.
- Financial contribution to some of the regional funds connected to these initiatives (Farming for Nature, Ooijpolder and Groenewoud)

The initiatives that were developed and put forward in Brussels for the state aid procedure were very diverse as they had their origin in different areas, with different physical characteristics and various local ambitions. The European Commission and the Ministry of LNV (Agriculture, Nature management and Food quality) invested considerable time in calculations and discussions about the contents of the initiatives and how these related to established policy. The procedures took a long time which was experienced as discouraging and frustrating by those involved in the initiatives (Zwaan and Goverde, 2007, Buizer, 2008). Therefore, the European Commission requested the Netherlands government to develop a framework for Green and Blue Services, in order to avoid that each and every local initiative would require lengthy and complex decision

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<sup>1</sup> State aid decisions N58-2005 and N467-2007, not to be confused with the Interreg IIIB project Farmers for Nature

<sup>2</sup> N33-2005

making about state support. This resulted in the Catalogue Green and Blue Services, which passed the state aid procedure in February 2007 (N577-2006).

In The Netherlands, the development of Green and Blue Services is still a continuing process. They are considered as an important form of multifunctional farming<sup>3</sup> and play a key role in the Netherlands' agenda for the reform of the Common Agricultural Policy. This is so for the national government as well as for instance for the Randstad Region (PURPLE, 2007). However, stakeholders experienced the state aid procedures as a bottleneck in the process of innovation.

Therefore, the Netherlands government wishes to find allies in Europe and to learn from initiatives that have been developed elsewhere. The Ministry of LNV asked Alterra, part of Wageningen UR, to carry out a survey on Green and Blue Services in Europe. The Ministry wanted to know more about the following:

- Do other European countries recognize this way of dealing with Green-blue services?
- What are the experiences of other EU countries with blue (water) services and soil services (e.g. the protection of archaeological values)?
- What can be learnt from each other?
- Can EU countries be joint in formulating a petition for rewarded environmental services executed by farmers? Seen in the light of a joint agricultural policy after 2013?

These were translated into the following research questions:

- Which initiatives can be found in Europe that are similar to the Green and Blue Services in The Netherlands?
- Which Green and Blue Services have passed the state aid procedure?
- Which measures are approved of in other countries, that could be useful for The Netherlands?
- Can a methodology be found that is similar to the Dutch Catalogue Green and Blue Services?



Biesland polder in Haaglanden region, in the West of the Netherlands, home to one of the Farming for Nature initiatives (Fabrice Ottburg)

Landscape is an issue of growing interest both with the public and with policy makers in The Netherlands. It is on the agenda of the ministries of agriculture, nature and food quality (LNV), housing, spatial planning and environment (VROM), and education, culture and sciences (OCW). The Provinces were recently given a greater responsibility with respect to the landscape, including the necessary funds. Green and Blue Services also became a responsibility of the Provinces, as well as the national AES Programma Beheer.

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<sup>3</sup> Multifunctional farming comprises of more market-oriented activities, such as childcare or sales of farm products, and less market-oriented activities, such as landscape management and education.



The Catalogue Green and Blue Services was developed by the consulting body of the Provinces IPO (Inter-Provinciaal Overleg).

This study is relevant to PLUREL because of multiple reasons. Especially in a peri-urban landscape, farmers deliver services to society and especially to the nearby urban dwellers. In the Haaglanden case study, Green and Blue services are described as a strategy to counter the pressure on agriculture in the urban fringe. The strategy is interesting because of the way that it deals with the problem of land ownership in planning: the strategy is directly aimed at the land owners. Furthermore, the governance aspect is interesting: this study involves initiatives from below, that could offer alternatives to established policy practices and could be a valuable source of inspiration for strategy development.

In the interaction with researchers and practitioners in PLUREL, it became clear that the expression Green and Blue Services is typically Dutch. In the next chapter the concept of Green and Blue Services is placed in a context of the ecosystem services (a concept more generally known) and the policy practice of agri-environmental schemes. It is shown that Green and Blue Services encompass more than agri-environmental schemes and that they are an operationalisation of the theoretical concept of ecosystem services and related to agricultural ecosystems.

In the chapters thereafter, the research questions are answered within the limited scope of this study. The final chapter gives recommendations for updates of the Catalogue Green and Blue Services in The Netherlands. The epilogue sketches the next steps by means of which the researchers aim to take this subject further.

## 2 Green and Blue Services as an operationalisation of the ecosystem services concept

The importance of the benefits that nature provides to human societies is widely recognized. These benefits take place in a wide range of scales, from global issues like the regulation of climate or the maintenance of the chemical composition of the atmosphere, to regional and local processes like water regulation in river basins, maintenance of soil fertility or provision of support to local biodiversity. Relevant cultural and social benefits, like the beauty of the landscape or the recreational values associated to natural and rural spaces, have also to be considered part of these ecological services. Recent times have seen the appearance of several scientific or policy-related terms that try to conceptualize these important functions of nature. Concepts like ecosystem goods and services, landscape services, environmental services or green and blue services, are increasingly being used by academic researchers, policy-makers and technicians worldwide. The abundance of terms, the diversity of approaches to their application, and, in some cases, the lack of consensus in relation to their definition, seem to be leading to a certain conceptual complexity that can hinder the exchange of knowledge and experience between professionals on this topic.

### 2.1 Ecosystem services and agriculture

The term ecosystem service is the most used among researchers and policy-makers to name the benefits that society obtains from natural processes. One of the most cited definitions of this concept is that provided by Daily in her influential work “Nature’s Services: Societal Dependence on Natural Ecosystems” (1997). In words of Daily, “ecosystem services are conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfil human life” (Daily, 1997). Others emphasize that ecosystem services may also be generated by human-modified ecosystems. Nowadays, it is highly accepted that human-modified ecosystems, such as urban open spaces and farmland, can provide important benefits to the environment and thus, improve the quality of life of human communities.

In this sense, the role of agriculture seems to be especially relevant, and thus is gaining progressive attention both from scientists and policy-makers. In fact, agriculture can be defined as a managed ecosystem (Antle and Capalbo, 2002). Among the ecological processes related to farming activities we could mention, for example, net photosynthetic capacity, soil fertility, maintenance of water quality and quantity, nutrient supply, ecological carrying capacity, maintenance of biologic and genetic information, biotic regulation, and emission of greenhouse gases. Cultural issues have also to be considered, like the preservation of rural landscapes, which are intimately linked to the identity of local communities. In any case, some of these aspects can be regarded as services (positive externalities), while other are clearly dis-services (negative externalities) to society. The flows of these services and dis-services depend directly on how agricultural ecosystems are managed and upon the diversity, composition, and functioning of remaining natural ecosystems in the landscape.

Farms can deliver ecosystem services, but at the same time profit from services that are provided by surrounding ecosystems. Examples are clean water, soil conservation, wind breaking and moderation of temperature.

The concept of landscape services can be considered closely related to the ecosystem service discourse. It expresses the landscape dimension of ecosystem services. From the literature, no clear distinction can be made between the two concepts.

## **2.2 Economic valuation of ecosystem services**

For many centuries, these services have been taken for granted, being ignored by markets and dissociated from pricing (Newcome et al., 2005). This is perceived by many authors as one of the main factors in the loss of valuable ecological areas due to land use change. According to the Millennium Ecosystem Assessment (2005), economic valuation of services can be useful in many ways: to assess the total contribution of ecosystems to human well-being, to understand the incentives that individual decision makers face in managing ecosystems in different ways, and to evaluate the consequences of alternative courses of action. In the last sense, economic valuation of ecosystem services can, according to these authors, be used as a powerful tool to help decision-makers decide between different policies, e.g. promoting specific land use changes instead of others, or encouraging certain management regimes through incentives.

Starting from this economic perspective, some economically and market-oriented environmental policies have emerged in the recent decades: for example, the creation of new markets for services that are ignored by traditional markets, or the design of funding mechanisms to encourage ecosystem managers to preserve the performance of ecological services in their own properties. They represent an alternative to classic top-down, command-and-control policies, like outright protection and establishment of natural preserved areas, standard regulation or economic regulation (e.g. “polluters pay” principle). The development of Payment for Environmental Services schemes (PES) in Central America, the Agri-environmental Schemes (AES) in the European Union, or the Green and Blue Services concept in the Netherlands are examples of this new approach to nature conservation. From the point of view of these concepts, ecosystem services are positive environmental externalities of the production process that have to be conserved and promoted through the implementation of economic tools.

## **2.3 An example: Payment for Environmental Services (PES)**

In Latin America, the Payment for Environmental Services (PES) concept has been put into practice. In fore-runner Costa Rica a scheme has been operational since 1997 and several countries have followed (Russo and Candela, 2006). As has been defined by Wunder (2005), a PES is a voluntary transaction, where a well-defined ecosystem service (or a land use likely to secure that service) is being bought by a (minimum one) buyer from a (minimum one) service provided. In order to assure the economic viability of PES, two prerequisites have to be fulfilled (Kosoy et al., 2005):

- the compensation of landholders should be at least equal to the opportunity costs of land use change, and
- the amount of payment should be lower than the economic value of the environmental externality.

Given that the actual value of an ecosystem service is extremely difficult to estimate and highly subjective (i.e. dependent on the experience and valuation of a wide variety of actors), especially in relation to biodiversity conservation, payment levels are generally established attending the opportunity costs of land use change. Most of the current PES schemes focus on one of the following ecosystem services: carbon sequestration and storage, biodiversity protection, watershed protection and landscape beauty (Wunder, 2005). In practice, PES schemes are mainly linked to forest conservation, reforestation and promotion of silvo-pastoral systems (Mayran and Paquin, 2004).

## 2.4 Agri-environmental schemes (AES)

According to the OECD (2003a, cited by Herzog, 2005), AES are “payments (including implicit transfers such as tax and interest concessions) to farmers and other landholders to address environmental problems and/or promote the provision of environmental amenities”. In the context of the European Union, AES consist basically in a set of measures designed at national or regional level, established with the objective to encourage farmers to protect and enhance the environment on their farmland (EU, 2005). Agri-environmental measures go beyond statutory environmental requirements, defined in the Good Farming Practice codes, which act as a baseline level. Thus, measures are optional for farmers, who are paid for the loss of income (e.g. due to reduced production) or the additional costs derived from the adoption of environmentally-friendly farming techniques. Some of the most frequent commitments adopted by farmers in the context of AES are (EU, 2003): environmentally favourable extensification of farming, management of low-intensity pasture systems, integrated farm management and organic agriculture; preservation of landscape and historical features such as hedgerows, ditches and woods; and conservation of high-value habitats and their associated biodiversity. Since the EEC Regulation 2078/1992, all EU member states are obliged to develop agri-environmental schemes as part of their rural development policies.

The EU considers AES as an incentive for environmental services: ‘Agri-environment schemes encourage farmers to provide environmental services which go beyond following good agricultural practice and basic legal standards’. Farmers willing to participate in AES sign a contract with the administration for a five year minimum period, and the payments are co-financed by the EU and the Member States.

## 2.5 Green and Blue Services (GBS)

In the introducing chapter, the history of the coming about of the concept of Green and Blue Services in the Netherlands was summarized. One of the first definitions of Green Services (Blue was at that time not yet included in the name) originates from the report of the Council for the Rural Areas in 2002. This Council defines Green Services as ‘activities in the field of nature, water, landscape, cultural history and recreation that improve the quality of the rural and urban area and that go beyond legal obligations. Green services can be paid or not paid. The government is an important, but not the only commissioner of green services’ (RLG, 2002, translation by the authors).

In the Catalogue Green and Blue Services, GBS are defined as ‘the provision of supra-legal public achievements aimed at the realisation of public demands concerning nature, landscape, water management and recreational use (accessibility), for which a cost-recovering compensation is given’ (IPO, 2007, translation by the authors).

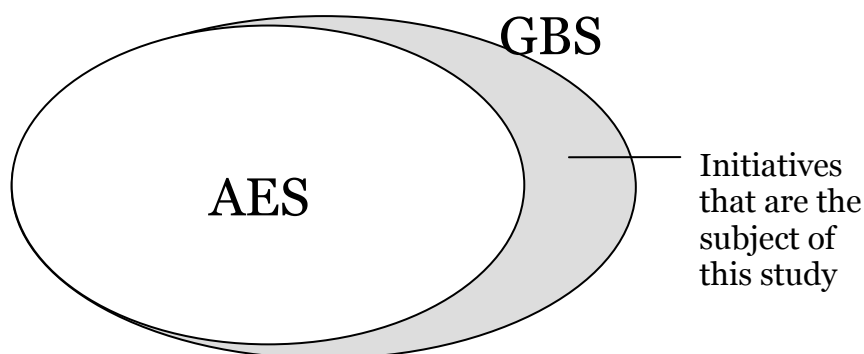
It could be argued that AES are a particular form of Green and Blue Services. Agri-environmental schemes can in the light of the abovementioned definitions be seen as a purely public system of payment for Green and Blue Services. However, the concepts do not completely overlap. GBS include possibilities for private funding and also include services that are not paid for at all. The definition of RLG seems to refer to the environmental services that more or less automatically come from the agro-ecosystem, such as the open landscape, that are enjoyed by society but not financially rewarded.

In practice, the Green and Blue Services initiatives in The Netherlands present some distinctive features that make them different from the “standard” national AES in the Netherlands (Programma Beheer).

1. The funds for GBS are intended to originate at lower administrative levels – municipalities, regional authorities, provinces and waterboards- while in the case of national AES linked to the CAP, funds are provided mostly by the European Union and the national government.
2. Green and Blue Services initiatives often explicitly include the possibility of private financial contributions. Several area funds have emerged to enable the bundling of contributions from different sources. With Programma Beheer, private contributions are also possible in theory, but no examples are known to the authors.
3. The measures and schemes are generally developed together with farmers and other local stakeholders, with the aim to match measures with the local landscape, ecology and the local needs.
4. Some of the GBS initiatives are an expression of the need for a new relationship between urban and rural areas. This new rural-urban balance can be achieved not only by the recognition of the important services that agro-ecosystems provide to cities, but also through the implementation of economic measures that encourage farmers to provide these services.

The emergence of the Catalogue Green and Blue Services narrows down and opens up possibilities for bottom-up development of GBS. Not all thinkable measures are included in the Catalogue. In theory, farmers can take the Catalogue, develop a proposal for a scheme and start negotiations with the municipality, the waterboard or the province. However, the document is experienced as complicated and bureaucratic even by government officials. On the other hand, the Catalogue is more flexible than the more rigid national AES, that contains packages which cannot easily be transformed to match with regional needs. Furthermore, to know in advance that a certain measure is state-aid-proof may be a relief for many new initiatives, because they do not need to engage in lengthy procedures.

This report focuses on services that were developed outside the national agri-environmental schemes, as is illustrated in the drawing below. These initiatives are hardly ever studied as most research projects on this issue focus on mainstream AES. Moreover, it is in these regional initiatives, that innovation can be sought.



## 3 Similar initiatives in Europe

*Which initiatives can be found in Europe that are similar to the Green and Blue Services in The Netherlands?*

In the search for initiatives in Europe that are similar to Green and Blue Services, the similarity was defined as:

- Agri-environmental measures for which farmers receive a payment
- Diverging from mainstream policy, developed in addition to the country's national AES
- Local or regional
- Mostly not European co-financed

The ITAES<sup>4</sup> WP4 Final Report (Eggers et al., 2007a) states that almost half of the approached experts and officials answered that there are non-EU cofinanced measures in their regions or countries. Non-cofinanced agri-environmental schemes are by the respondents seen as more flexible. In other words, there must be many initiatives and schemes that did not originate from the CAP (Common Agricultural Policy) and the CAP-related AES. However, information on such initiatives appeared hard to find. Eggers et al. (2007b) state that up to now bottom up approaches to AES development have been an exception, even though the EC Council Regulation No. 1698/2005 aims at the application of the LEADER approach in all the axes of rural development, including AES.

The initiatives described below have been found through literature study, internet search, and a search through the state aid decisions since 2002 (see also chapter 4). Research programs that have yielded much information were MULTAGRI and ITAES. However, most literature (including ITAES), focuses on the national AES. Other sources of information were internet searches for LIFE and LEADER projects. Regio-Aktiv surfaced as an especially relevant German program, while the Land Management Initiatives in the United Kingdom also yielded some very interesting projects.

This study was limited to the countries Germany, France, United Kingdom, Ireland, Italy and Spain. It had an exploring nature and is not exhaustive. This report must therefore be seen as a summary of preliminary findings.

### 3.1 Germany

The program Region Aktiv from the German Ministry of Agriculture BMVEL worked in close cooperation with LEADER+. The program yielded several initiatives that can be considered similar to Green and Blue services in The Netherlands.

#### **Barrier hedgerow program in East Friesland (Wallheckenprogram Ost-Friesland)**

The barrier hedgerow landscape in East Friesland is very similar to those in the East of The Netherlands (houtwallen en singels). In the barrier hedgerow program, farmers are paid by the Land Niedersachsen for the maintenance of the barrier hedgerows and the meadows in between. The state aid procedure was passed in 2004 (N69-2004) and the decision permits a pilot with 20 farmers in the area of Aurich-Oldendorf. The contracts are for 5 years. The aim is to preserve the cultural landscape and improve its qualities for sustainable tourism. The participating farmers are united in a Wallheckenzweckverband,

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<sup>4</sup> A European Sixth Framework research programme on Agri-environmental Schemes

an association that will administer the measure and provide advice. This association is similar to the agrarische natuurverenigingen in The Netherlands.

### **Coastal agriculture in Lübecker Bucht**

Lübecker Bucht is an area at the coast in North-East Germany. An agri-environmental scheme was designed for

- Coastal flooding areas of Pötenitz-Rosenhagen (Kreis Nordwestmecklenburg);
- Tidal reach of the Schwartau (Schwartaumündung) and Schellbruch (Kreisfreie Stadt Lübeck).

The measures include the environmental-friendly use of retention areas:

- Zero-input
- Postponed mowing (after 20 July)
- High water levels and flooding in winter
- Grazing or mowing once a year
- Natural rotation

The state aid procedure was passed in 2004 (N55-2004).

### **GRANO**

The GRANO project was a cooperative project of research institutions from Berlin and Brandenburg and was aimed at the development of sustainable farming practices in North East Germany. Within this project, two regional Agri-environmental Forums were started in 1999 with representatives of many stakeholder organisations (Schleyer, 2003). This AEF designed a local AES for the fen areas, but it did not become part of the Regional Development Plan in Brandenburg. For that reason financing the scheme was not possible (Lehmann et al., 2005). Eggers et al. (2004) explain this failure through the risk-avoidance of Land officials. Accepting the locally developed AES, incorporating it in the RDP, would mean EU co-financing and a possibly a more complicated administration. The Land did not have sufficient means to finance the whole scheme itself and was not willing to replace the current AES with the locally designed AES. Private sponsors were not found.

The following measures were part of the local AES (Eggers et al., 2004):

- Protection of Sölle (ponds)
- Permanent set-aside of ecologically sensitive parts of arable land (only plots with higher risk of soil erosion)
- Non-plough tillage (only plots with higher risk of soil erosion)
- Permanent soil cover (e.g., intercrops, only plots with higher risk of soil erosion)
- Turning arable land in extensively used grassland (only plots with higher risk of soil erosion)
- Purchase of wide tires

### **Northeim**

The University of Göttingen developed a new agri-environmental scheme within the interdisciplinary R&D project BIOPLEX on “Biodiversity and Spatial Complexity in Agricultural Landscapes under Global Change” (2000-2006). The need for a new scheme originated from criticism against most of the existing agri-environmental programs (Bertke and Marggraf, 2003):

- Missing innovation incentives for farmers due to action-orientation
- Missing efficiency in resource allocation
- Missing transparency in the demand for ecological goods and services
- Centralisation and action-orientation lead to the formulation of targets which are not adjusted to the specifics of a region.

The scheme had the following characteristics:



- Outcome-based reward system for ecological services, ‘ecological goods’ as result of services provided by farmer (e.g. ‘grassland’)<sup>5</sup>.
- ‘Botanical goods’ as indicator for biodiversity
- Farmers are free to decide how to realize the goods
- Supply and demand through tendering
- Public funds
- Regional payment scheme, region-specific goods in ‘catalogue’
- Decentralised decisions made by a Local Advisory Board, representing local authorities, environmental agency, agricultural administration, NGO’s

The tendering procedure included bidding components in order to create competition among the participating farms. Through tendering, the initiators expected to have met the subsidiarity demand of the European Union.

The district of Northeim in Niedersachsen was chosen as a case study area. The university carried out a project with a small private fund<sup>6</sup>, in which the university played the role of administrating body that carried out the tendering. For the project, a Local Advisory Board was established in 2001. 199 farmers made an offer, 28 eventually participated in the program. The Local Advisory Board was supported with information out of a willingness to pay survey among the local population (Fischer et al., 2003).

### **3.2 Spain**

#### **Baix Llobregat Agricultural Park**

The Agricultural Park concept has sprung from the urban-rural relationship. An agricultural area receives the title of a park, which could be effectuated by legislation. Planning is done for the area as a whole. Branding of the area is an important characteristic, which is linked to regional marketing of products from the area, landscape development, infrastructure, modernization of farms, natural and cultural heritage, recreation and leisure, and payments to farmers for agri-environmental measures such as landscape maintenance (Maranges, ?).

The Baix Llobregat Agricultural Park is located to the west of Barcelona in the valley and delta of the River Llobregat. The park covers parts of 14 municipalities. The Agricultural Park Consortium, in which the municipalities, the provincial council of Barcelona, the county council and the farmers’ union cooperate, and was founded in 1998. The Agricultural Park forms part the Network of Natural Spaces managed by the Department of Natural Spaces of the Provincial Council of Barcelona. Farming activities are seen as necessary to preserve the area.

In the Landscape Development Guide Plan, the following measures are included:

- Temporary flooding of fields: traditional farming activity that benefits bird life. Loss of production is economically compensated by the Park.
- Collection of traditional fruit tree varieties in an arboretum.
- Establishment of Agropolos, locations with concentrations of facilities, necessary for the farm economy, in order to prevent ‘industrial sprawl’ in the landscape.
- Water management and its quality control through monitoring.
- Management of the network of tracks and irrigation ditches.
- Environmental and urban control through a surveillance service.

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<sup>5</sup> This result-oriented system is in that sense similar to the ‘packages’ system of the Netherlands AES Programma Beheer.

<sup>6</sup> For that reason, a state aid procedure was not needed.



### 3.3 United Kingdom

The UK Countryside Agency co-ordinated the Land Management Initiatives (LMI) since 1999. The LMI are area-based projects that aim to work with local people to develop solutions to the problems and challenges facing rural areas (Countryside Agency, 2004). The projects aimed to keep farm businesses viable, while providing a wide range of economic, environmental and social benefits to the areas. All projects were locally developed with the stakeholders under the umbrella of the national programme. A number of LMIs originally sought to develop agri-environment packages responding to local needs. For several, the emphasis shifted, but in three projects attention was given to AES: the Humberhead Levels LMI, The North Yorkshire Moors Upland LMI and the Peak District LMI. The Northumberland National Park LMI investigated the public and commercial goods that farms in the area can provide. Recommendations were made with respect to public funding, but they remained of general character.

The **Humberhead Levels Land Management Initiative** aimed to contribute to the development of agri-environment measures and policies for the region and the country, focussing on water and land management. Part of the LMI was a contribution to the design of the new Environmental Stewardship scheme. Among others, recommendations were made concerning crops and sustainable outdoor leisure and tourism.

The **North Yorkshire Moors Upland LMI** developed an agri-environment scheme that was tailored to the area based on consultation with farmers. The landscape has high cultural and ecological values and is important for tourism. Twenty voluntary, whole-farm, 5-year Land Management Agreements covering 864 hectares were established, under which 5,100 metres of wall and 3300 metres of hedge were maintained or restored, 235 hectares of conservation grassland brought under management, and 2500 metres of fencing (Countryside Agency, 2004). The funds were provided by the National Park Authority. The experience contributed to the development of the new UK Environmental Stewardship Scheme. The project worked with a high involvement of the local community and aimed for the strengthening of links between the community and the farmers. The report of the Countryside Agency states the following lesson from this LMI: 'It is important that policy makers recognise the value of 'bottom-up' approaches and that rural policies are simple, flexible and able to take account of local needs and decision-making'.

The following lessons from the project were written down by the National Park Authority (Land Use Policy Group, year unknown):

- Delegated grant schemes delivered worked particularly well in enabling a degree of flexibility and innovation.
- Delivery mechanisms must be flexible and simple. Complicated mechanisms can lead to exclusion, high delivery costs and an ineffective allocation of resources.
- Application procedures for schemes should be simplified.
- Tailored agri-environment schemes may be needed where national schemes are not compatible with local farming circumstances.

The **Peak District LMI** focused on the development of an 'Alternative Payment Mechanism (APM)' together with local stakeholders. The main issues facing the area and its agriculture included (Countryside Agency, 2004):

- financial pressure on farms leading to a reduction in labour;
- loss of biodiversity and decline of landscape features as a result of overstocking or loss of farm labour and traditional skills;
- low levels of participation in rural development and environmental schemes and a strong reliance on production subsidies;
- complicated and time-consuming application processes for rural development funding; and

- issues of farm succession with few young people wishing to take on the family farm.

Detailed proposals for the APM were developed in discussion with a Steering Group, Defra and the European Commission (Parker, 2003). The APM intended to encourage the development of business ideas that would be both economically and environmentally beneficial. It was meant to be simple and as little bureaucratic as possible.

For the APM, no European co-financing was to be expected. Furthermore, a state aid procedure with the European Commission was necessary. The basis of a submission to the state aid procedure was agreed with Defra. However, a deadlock occurred when the UK government only wanted to consider funding after a successful state aid procedure, while the European Commission never received an application without funding before. After a meeting with the Minister it was decided not to proceed with pilots and the submission with the European Commission because of the expected changes in the agricultural and rural development policies in the UK (the new Environmental Stewardship Scheme of 2004). The project then concentrated on delivering conclusions and recommendations for policy making (Parker, 2003):

- Agricultural support schemes need simplifying in order to promote integrated rural development, business development and environmental protection.
- Agri-environment and other programme payments should be based on 'results achieved', thereby engaging land managers more creatively in identifying best ways of achieving desired results.
- Delivery of the different public funding programmes is currently fragmented between many different agencies and geographical areas, often causing difficulties for rural businesses. A locally-based integrated rural delivery mechanism could help to address some of these problems.

## 4 State aid decisions

*Which Green and Blue Services passed the state aid procedure? Which of these measures could be useful for The Netherlands?*

As far as we know, only a few of the initiatives that were described in the previous chapter were taken to Brussels for the state aid procedure. In Annex 1 an overview is given of state aid decisions that are interesting from the viewpoint of this study:

- Schemes that are decentralized or locally governed
- Measures that offer opportunities for the situation in The Netherlands, among others measures related to water quality or water retention
- Measures that were developed additional to the national AES
- Local or regional measures

In several schemes, organic farming is a measure that is eligible for aid<sup>7</sup>, among others in the United Kingdom, Spain, Ireland, Portugal, France and Italy (see the internet sources in the Literature section). Also capacity building, organization and education of farmers is part of several schemes. Other common measures are extensive grazing, the conversion of arable land to pasture, and market development for regional products. Landscape measures often include investments on traditional farm buildings and roads.

For an overview and comparison of CAP-related AES is referred to the publications of the ITAES research program.

Of the regional schemes, the following have been selected as particularly interesting:

**Wallhecken Ost Friesland (Germany, N69-2004):**

The agricultural plots between the hedgerows are usually small. Maintenance of these plots require relatively much work. A grant is paid to compensate for this disadvantage for plots below 5 ha.

**Lübecker Bucht (Germany, N55-2004):**

Farmers receive a payment based on income foregone as a result of a.o. zero-input, high water levels and occasional flooding.

**Protection of drinking water, Lower Saxony (Germany, N67-2006):**

The Land of Lower Saxony developed a scheme for the protection of groundwater in drinking water extraction areas.

The basic contract for arable land concerns improvement of nutrient management by keeping records at individual agricultural parcel level. Measures additional to the basic contract are:

- A. Time limits on the spreading of farm livestock manure
- B. Non-use of farm livestock manure
- C. Spreading of farmyard manure in a manner which protects water
- D. Farmyard manure and soil tests
- E. Active greening
- F. Use of crop rotation systems in a manner which protects water
- G. Extensive management of grassland
- H. Reseeding of grassland without ploughing
- I. Reduced use of nitrogen fertilisers
- J. Reduced tillage

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<sup>7</sup> In the Netherlands, conversion to organic farming was subsidized from 1994-2002 and in 2004. Since 2006, organic farms receive a subsidy to compensate for the costs of certification.

K. Sowing maize in narrow rows

L. Under-foot fertilisation

M. Use of stabilised N fertilisers

N. Reduced herbicide use on row crops

Also, the conversion from arable crops to extensive grassland, forest erosion protection and conversion of coniferous to mixed forest are subsidized.

In the state aid decision, the maximum payments are specified per measure. The farmer can select the for his situation most appropriate combination of measures. The total amount of the annual compensation payments, however, may not exceed the maximum rates per hectare listed in the Annex to Council Regulation (EC) No 1698/2005.

**Areas of outstanding natural beauty (UK, N454-2006):**

Includes the management and renovation of archaeological sites.

**Alte Rinder (Germany, N754-2006)**

In this pilot project of the German ministry BMVEL, Friends of the Earth and a research institute on organic farming, traditional breeds of cattle are re-introduced in an extensive grazing system. The cattle is to replace the fashionable grazing with Galloway and Konik in the Elbe Wetlands Biosphere Reserve. The project is carried out from 2007 until 2011. A maximum of 50% of the investment costs for introduction of the traditional breeds is subsidized. A large part of the project consists of dissemination of knowledge and experience.

Traditional types of cattle can be the key to an adapted farming system. Extensification can be a 'natural' effect.

## 5 Catalogue Green and Blue Services

*Can a methodology be found that is similar to the Dutch Catalogue Green and Blue Services?*

The Catalogue Green and Blue Services has the following characteristics:

- A national framework ('toolbox') for the development of local or regional agri-environmental schemes.
- Provinces and other local or regional governments are to design their own schemes on the basis of the Catalogue.
- Measures are geographically defined: no physical overlap is possible between two measures. Several measures can occur adjacent to each other, for instance a hedgerow, a fence and a botanic meadow.
- Prices to be paid are specified at the activities level. Measures and fees in the local and regional schemes are to be constructed from these activities and prices.
- Schemes based on the Catalogue do not need to pass the state aid procedure.
- The Catalogue is to be updated and re-assessed by the European Commission each year.

The idea of a 'programme' with voluntary 'packages' of measures for which subsidies could be obtained (Programma Beheer, CTE and many other AES) bears resemblance to the idea of a catalogue. However, the fact that in the Catalogue Green and Blue Services the 'packages' are now separated into 'activities' means that local and regional governments can more easily compose sets of measures that match with local circumstances. The activities are still grouped into 'clusters' based on types of landscape elements, to prevent unrealistic combinations of activities.

The expression 'catalogue' has been used in relation to the former CTE scheme in France (Buller, 2004) and the AES in Spain (MAPA, 2007). The word catalogue is also used in the Northeim concept, where farmers can choose from a catalogue of ecological goods to provide (Bertke and Marggraf, 2003).

Prices were specified at the activities level in both the initiative Wallhecken Ost Friesland (N069-2004) and the drinking water protection project in Lower Saxony (N67-2006).

Although elements were used before, the Catalogue Green and Blue Services is the first of its kind in Europe. We did not find other 'toolboxes' in Europe by means of which governments can construct schemes without the need for a state aid procedure.

## 6 Recommendations for updates of the Catalogue Green and Blue Services

The current version of the Catalogue contains descriptions of activities and prices for landscape elements and parcels. Farming system approaches are not taken up in the current version of the Catalogue. It should be considered whether whole-farm approaches like organic farming, Farming for Nature, extensification and the use of traditional breeds of cattle could be included in an update.

Measures that could be adopted from other (approved) schemes in Europe, are:

- Compensation for disadvantage of small plots
- High water levels
- Occasional flooding
- Renovation and management of archaeological sites
- Drinking water protection (a.o. avoiding certain crops and use of specialized technology)
- Traditional cattle breeds
- Organic farming

Naturally, the payments should be calculated for the situation in the Netherlands.

An analysis should be made of measures in national AES in other European countries. The national AES were hardly touched by this study. They may yield more measures that are possibly interesting for the Catalogue.

The search for initiatives in Europe made it painfully clear that so little has been published in English about the Green and Blue Services policy development in The Netherlands. This project was not aimed at a description of the Dutch initiatives, but the initiatives outside The Netherlands. It is recommended, however, that the experience with Green and Blue Services in the Netherlands is made accessible to the scientific community and practitioners in Europe through an English publication. In Annex 2, a summary is given of the Farming for Nature concept. For a more in-depth description of one of the Farming for Nature initiatives is referred to Buizer (2008). The Haaglanden case study report for PLUREL will contain a description of the Green Fund Midden Delfland.



Landscape in the Twickel estate in the East of the Netherlands, home to one of the Farming for Nature initiatives (Alterra)

## Epilogue

It was not easy to find the initiatives described in this report. We had to dig deep and search long. We still expect that there must be many more. Why are they so hard to find? Is it because research focuses on the mainstream policy? Is it because very little is published about them? Are they so local or regional that the initiators would not expect anybody outside their area to be interested? Are their websites in languages that we do not read? Did they not reach the implementation phase and were they not described for that reason?

However, the described initiatives were like discoveries for us. There was recognition and also amazement. Several promising and innovative initiatives were never put into practice, because of shortage of funds, a lack of support from governments, or because of state aid procedures.

Innovation seems to be accompanied by obstacles. New discourses and coalitions may be formed, but rules and resources are still 'programmed' to support the current policies (see Buizer, 2008). We support the plea by Parker (2003) that more legal and financial space is needed for innovation from below.

It is our wish to exchange our own experiences with Farming for Nature and other Green and Blue Services initiatives with the people behind other innovative initiatives that try to combine farming and nature (see Annex 3). Such a meeting may yield valuable recommendations for other initiators, but also regional and national governments and the European Commission.



Yorkshire Dales (Gerard van Wakeren)



## References

- Antle, J.M., Capalbo, S.M., 2002. Agriculture as a managed ecosystem: policy implications. *Journal of Agricultural and Resource Economics* 27 (1), 1-15.
- Bertke, E. and R. Marggraf, 2003. An incentive based tool for ecologically and economically efficient provision of agrobiodiversity. Presentation.
- Buller, H., 2004. The 'espace productif', the 'théâtre de la nature' and the 'territoires de développement local': the opposing rationales of contemporary French rural development policy. *International Planning Studies* Vol. 9, Nos 2-3, p101-119.
- Buizer, I.M., 2008. Worlds apart. Interactions between local initiatives and established policy. PhD thesis Wageningen University 252 pp.
- Daily, G., 1997. What are ecosystem services? In: Daily, G. (Ed.), 1997. *Nature's Services: Societal Dependence on Natural Ecosystems*. Island Press, Washington, DC.
- Eggers, J., V. Beckmann, E. Mettepenningen, M.H. Ehlers, A. Hurrelmann, A. Kunz and K. Hagedorn, 2007 (a). Analysing institutional arrangements for agri-environmental schemes in Europe: ITAES WP4 Final Report. Document number ITAES WP4 P5 D14.
- Eggers, J., E. Mettepenningen and V. Beckmann, 2007 (b). Assessing the efficiency of local action groups and auctions for designing and implementing agri-environmental measures in the EU - Results from an expert survey. Paper prepared for presentation at the 47th annual conference of the GEWISOLA (German Association of Agricultural Economists) and the 17th annual conference of the ÖGA (Austrian Association of Agricultural Economists), 'Changing Agricultural and Food Sector', Freising/Weißenstephan, Germany, September 26-28, 2007
- European Commission, 2003. Agriculture and the environment. Directorate General for Agriculture.
- European Commission, 2005. Agri-environment measures. Overview on general principles, types of measures and application. Directorate General for Agriculture and Rural Development.
- Fischer, A. S.K. Hespelt und R. Marggraf, 2003. Ermittlung der Nachfrage nach ökologischen Gütern der Landwirtschaft – Das Northeim-Projekt. *Agrarwirtschaft* 52 (2003)
- Herzog, F., 2005. Agri-environment schemes as landscape experiments. *Agriculture, Ecosystems and Environment* 108, 175-177.
- IPO, 2007. *Catalogus Groene en Blauwe Diensten*. Inter-Provinciaal Overleg, Utrecht.
- Land Use Policy Group, ?. *Europe's Rural Futures – UK case study*. North York Moors Farm and Rural Community Scheme. Land Use Policy Group, UK
- Leguen de Lacroix, E., 2004. The common agricultural policy explained. European Commission Directorate General for Agriculture
- Mayran, K., Paquin, M., 2004. Pago por servicios ambientales: Estudio y evaluación de esquemas vigentes. Comisión para la Cooperación Ambiental.
- Milieu- en Natuurplanbureau (MNP), 2007. Ecologische evaluatie regelingen voor natuurbeheer; Programma Beheer en Staatsbosbeheer 2000-2006. Bilthoven, mei 2007. MNP-publicatienummer 500410002
- Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Current State and Trends* (vol. 1). Island Press, Washington DC.
- Ministère de l'agriculture, de l'alimentation, de la pêche et des affaires rurales, 2003. CIRCULAIRE DGFAR/SDEA/C2003-5030 Date : 30 OCTOBRE 2003
- Newcome, J., Provins, A., Johns, H., Ozdemiroglu, E., Ghazoul, J., Burgess, D., Turner, K., 2005. The economic, social and ecological value of ecosystem services: A literature review. Final report for the Department for Environment, Food and Rural Affairs (Defra). London.
- Nitsch, H., B. Osterburg, V. Beckmann and A. Lütteken, 2005. Inventory of institutional arrangements of agri-environmental schemes in Europe. ITAES WP4 P5 D8.
- Pagiola, S., Von Ritter, K., Bishop, J., 2004. Assessing the economic value of ecosystem conservation. The World Bank Environment Department. Washington.



- Parker, K. 2003. The peak district land management initiative 2000-2002: The project report. Peak District National Park Authority, Bakewell.
- PURPLE, 2007. Purple and CAP reform. Position Paper. Peri Urban Regions Platform. Final version, November 8.
- Raad voor het Landelijk Gebied (2002). Groene diensten: van ondersteunen naar ondernemen, advies over groene diensten in het landelijk gebied, Amersfoort, Raad voor het Landelijk Gebied, Den Haag, publicatie 02/07
- Russo, R.O. and G. Candela, 2006. Payment of environmental services in Costa Rica: evaluating impact and possibilities. University of Bologna.
- The Countryside Agency, 2004. Experiences from the Land Management Initiatives. The Countryside Agency, Wetherby
- Working Group 7: Rural-urban relations, short-term and sustainable development
- Wunder, S., 2005. Payments for environmental services: Some nuts and bolts. Center for International Forestry Research.
- Zwaan, P. and Goverde, H., 2007. Green Services and State Aid Requirements: New urban-rural relationships considered in institutional and sensemaking perspectives. Paper to be delivered at XXXII Congress European Society for Rural Sociology, Wageningen University and Research Center, 20-24 August, 2007

Internet sources:

- Defra, 2007. <http://www.defra.gov.uk/erdp/schemes/oels/handbook>
- MAPA, 2007. <http://www.mapa.es/es/desarrollo/pags/magam/medidas.htm>
- AFF, 2008. <http://www.agriculture.gov.ie/index.jsp?file=schemes/reps.xml>
- MADRP, 2008. <http://portal.min-agricultura.pt/portal/page/portal/MADRP/PT/foco/agro-amb>
- PAAF, 2008. [http://www.politicheagricole.it/SviluppoRurale/Programmi\\_2007\\_2013/default.htm](http://www.politicheagricole.it/SviluppoRurale/Programmi_2007_2013/default.htm)
- [http://ec.europa.eu/research/fp6/ssp/iteas\\_en.htm](http://ec.europa.eu/research/fp6/ssp/iteas_en.htm)
- [www.fedenatur.org](http://www.fedenatur.org)

State Aid Register

## Annex 1 Relevant state aid decisions

See the next page.

With the digital version, this annex is delivered separately.

## Annex 2 Farming for Nature

### **Farming for Nature: rather unique**

The Dutch initiative Farming for Nature has come up several times in this report. The search for initiatives for this report had two objectives: to find initiatives that can be compared to the Green and Blue Services concept, and to find initiatives that are similar to Farming for Nature. Green and Blue Services were found, although not many. An initiative resembling Farming for Nature was not found at all. What makes Farming for Nature so unique?

It is a **farming system**, a whole-farm approach. In that respect it resembles organic farming, but Farming for Nature encompasses more. On farm level, no nutrients can be imported at all: the farmer relies on the production of manure and compost within the boundaries of the farm, including possible 'outfields'. This leads to deliberate harvesting of biomass and allocation of manure, resulting in diversity in landscape and habitats. Furthermore, water and landscape measures are taken. Water plays an important buffering role in the nutrient cycle and higher water levels in spring are important for meadow birds.

It is regarded as a **public service** for which the farmer receives a payment from a regional fund. Contributions to the regional fund originate from different local, regional and national governments (municipalities, provinces, city regions, water boards and Ministry of LNV). In that respect it is a Green and Blue Service. However, the Catalogue Green and Blue Services only defines measures for (parts of) fields and landscape elements and includes no farming systems.

The Farming for Nature agreements are **long-term** (thirty years). This period is chosen because of the long time that nature values normally need to develop, the far-reaching water measures and the high investments that farmers have to make for the conversion. The European Commission recognized the necessity of a longer period than usual and permitted implementation of the measure for ten years<sup>8</sup>.

Farming for Nature is deliberately not outcome-based. It is a farming system from which high results are expected in the field of ecology, water quality and public appreciation, but the farmer is paid for the measure and not for the result. In the Netherlands, the experiences with (partly) outcome-based schemes have not been very positive. The ecological effects are disappointing (MNP, 2007). It can be argued whether it is fair to hold a farmer responsible for the outcome of his measures, while he is greatly depending on natural processes and the surrounding environment, including the behaviour of his neighbours. In Farming for Nature, the farmer is paid for creating favourable **conditions for the development of on-farm nature**. These conditions, however, are well thought of. They include a closed-cycle farming system, a more natural water regime and the establishment and maintenance of (preferably functional) landscape elements.

The farmer is challenged as **entrepreneur**. Within the strict boundaries of zero-input and a natural water regime, the farmer is free to carry out his own management. He can decide himself where and when to carry out the in his own eyes necessary activities. Agricultural ecology has traditionally been a by-product of agricultural management and entrepreneurship. Farming for Nature strengthens the interdependence between the farmer and the natural processes.

The initiative attracts many supporters and volunteers. Around the four farms that started with the measure, hundreds of people are involved in the development of the concept, the local lobby and in monitoring and evaluation.

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<sup>8</sup> After five years, the payment level is evaluated. After 10 years, the whole measure is evaluated. The Ministry of LNV aims at prolongation of the measure.

## Annex 3 SEARCH for regional initiatives

### *Context*

Ever since the emergence of European Agri-Environmental policies in the nineties, they are widely researched and debated, among other things because their implementation differs so much across European countries. Far less energy is invested in researching innovative initiatives which do not directly result from these policies, but which are rather *different* from them. In the Netherlands, the past years displayed appearance of various public/private initiatives which subsequently faced lengthy negotiation processes to be accepted at European and national levels. These and other initiatives throughout Europe may represent **options that could be promising in terms of linking agriculture and nature, water and landscape management**. As yet, they hardly feature in discussions about the future of European agri-environmental policy however, whereas including these options may significantly enrich the debate in policy, practice and science domains.

Our main question is what kind of initiatives these are, and in what circumstances they came about. Did initiators try to influence policy, did they realize breakthroughs? And, importantly: do they, indeed, offer thinkable alternatives?

### *Search*

We are specifically looking for initiatives in Europe, which integrate agricultural and environmental objectives in **far-reaching** ways, at farm- or area-level. We do *not* particularly refer to initiatives that merely *add* environmental or landscape measures to 'mainstream' farming practices. Rather, we search for initiatives in which landscape, natural and agricultural values are considered as **interdependent**.

### *What is 'far-reaching'*

Alternative farming systems could offer many environmental services. An example of an alternative system is no-input farming such as the Farming for Nature initiative in the Netherlands. It means that no nutrients are imported to the farm. Thus, the farm needs to be self-supportive to provide for required fodder and manure. When nutrients are scarce, conditions are created at farm-level for the enhancement of biodiversity and landscape. In such a circumstance, available water will no longer be a threat, but a potential source of nutrients. The number of cattle per hectare will decrease. In landscapes with significant 'natural handicaps' in particular, approaches like these may be viable alternatives. However, such alternatives depend on additional sources of income, which may be provided by different public and/or public private arrangements. The initiatives that we have seen developing in the past few years often contained ideas about organizational and financial aspects as well.

Our assumption is that there are surely more of such interesting examples in Europe.

### *Our question*

Our question is whether you know of **initiatives focusing on the integration of landscape, agriculture and nature**, initiatives which at present do not fit within the frames of existing policies. Initiators may have tried to obtain support for their ideas at various policy levels, perhaps even to the extent that a National Ministry got involved (for financing, state aid requests or other procedural or substantive reasons). They may also have tried to implement their ideas without such involvement.

### WHAT ARE YOUR STORIES?

Marleen Buizer ([marleen.buizer@wur.nl](mailto:marleen.buizer@wur.nl)) or Judith Westerink ([judith.westerink@wur.nl](mailto:judith.westerink@wur.nl))  
Researchers from Wageningen University and Research Institute who got involved in such local initiatives in the Netherlands. When there is sufficient response to our search we intend to organize a meeting at which initiators can exchange experiences and plans, and perhaps team up to achieve more. So please let us know if and on what conditions you would be interested in such a meeting as well.