22 Mayo 2014

El proyecto SEGURA RIVERLINK participa en un encuentro europeo para la adaptación y mitigación del cambio climático

Un total de 29 proyectos europeos participaron en el encuentro sobre "Cambio Climático: servicios ambientales de los ecosistemas para la adaptación y mitigación" celebrado durante los días 13-15 Mayo en Norwich (Inglaterra) organizado por el programa LIFE de la Unión Europea y con el LIFE Futurescapes (LIFE10 INF/UK/000189) como proyecto anfitrión.

Este encuentro, que incluyó distintas ponencias y visitas de campo, reunió a distintos profesionales (gestores, técnicos e investigadores en planificación hidrológica, expertos en modelización de los impactos del cambio climático y ecologistas) lo que permitió abordar el tema desde diferentes enfoques. También se aprovechó la ocasión para destacar las oportunidades que ofrece el programa para el periodo 2014-2020 en temas de Cambio Climático.

Los proyectos expuestos, ya realizados o en marcha, se estructuraron en cuatro bloques:

- Cambio costero: necesidad de adaptarse a un aumento del nivel del mar y predicción de tormentas
- Los ríos y las llanuras de inundación : el valor de la restauración de ríos en la reducción de los riesgos de inundación y su mejora en la conservación de la vida silvestre
- Ciénagas, pantanos y turberas : captura de carbono , gestión del agua y conservación de la vida silvestre
- Las tierras agrícolas: transformación agrícola e importancia de una gestión sostenible

El proyecto SEGURA RIVERLINK explicó la problemática ambiental existente en la cuenca del Segura y cómo su extrema climatología determina la gestión del agua. La disminución de los recursos hídricos y un incremento en los episodios climáticos extremos como la pasada Riada de San Wenceslao (28/09/2012) serán dos de los principales efectos del cambio climático que sufrirá esta cuenca.

Una de las acciones contempladas en el proyecto para mitigar sus efectos son las restauraciones ecológicas de las riberas que permitirán, en este sentido, reducir la escorrentía superficial durante eventos extremos. La incorporación de un enfoque de servicios ecosistémicos en la gestión del agua puede proporcionar beneficios económicos, sociales, ambientales y culturales, incluyendo mejoras en la calidad de vida y la seguridad alimentaria, reducción del riesgo de desastres, conservación de la biodiversidad y secuestro de carbono.

LIFE Platform Meeting- 14th-15th May 2014

Climate change – ecosystem services approach for adaptation and mitigation

Norwich, England

Outline programme-version 07/05/14

Tuesday 13th May

Arrive in Norwich. The City of Norwich can be reached by train from London running every 30 minutes during the day with journey time of 1 hour 50 minutes.

Wednesday 14th May

Assemble at 08.45. A coach will leave the Premier Inn Nelson City Centre Norwich (NR1 1DX) at 9.00 prompt for a meeting and excursion on the North Norfolk Coast. The meeting venue is Brancaster Staithe and Deepdale Village Hall (PE31 8BY).

Introductory session and focus on Ecosystems Services

10.30-10.40 Juan Pérez-Lorenzo (chair), European Commission, Climate Action DG: Welcome and introduction to the workshop

10.40-11.00 Aidan Lonergan, RSPB[1]: Climate Change and the Adaptation Response needed from Conservationists

11.00-11.30 Project presentations

1. Linda Maria Martinello, Province of Trento, Italy[2]: Landscape planning, ecological networks and participatory processes.
2. Martin Forsius, Finnish Environment Institute[3]: Modelling and assessment of climate change impacts on key ecosystem services in Finland: experiences from the VACCIA-project.
3. Benedetta Concetti, ERSAF, Lombardy, Italy[4]: The Making Good Natura project

11.30-12.00 Discussion and refreshment break

Thematic areas 1 & 2: Coasts and agricultural land

12.00-12.15 Sue Rees, Natural England[5]: Living with the Sea; how can Natura 2000 respond to a changing coast?

[1] LIFE10INF/UK/000189 Futurescapes
[2] LIFE11NAT/IT/000187 TEN
[3] LIFE07ENV/FIN/000141 VACCIA
[4] LIFE11ENV/IT/000168 MGN

12.15 -13.00 Project presentations
1. David Mason, National Trust[6]: The Alde-Ore Estuary: Adapting the management of coastal reserves in a changing climate
2. Patricia Prado, IRTA, Spain[7]: Habitat restoration and management in two coastal lagoons of the Ebro Delta
3. Ali Nadir Arslan, Finnish Environment Institute[8]: Climate change indicators and vulnerability of the boreal zone - applying innovative observation and modelling techniques.
4. Rob Lucking, RSPB[9]: Introduction to the field trip- managed coastal realignment at Titchwell Marshes and conserving the stone curlew in East Anglia.

13.00 -13.30 Sandwich lunch at the Village Hall

Thematic field trip: coasts and agricultural land

13.45-15.45 Titchwell Marsh reserve and North Norfolk Coast
The visit will see how the Titchwell Marsh Coastal Change LIFE project[10] protected SPA freshwater habitats from the storms of winter 2013-2014 and how the North Norfolk coast is allowed to respond to coastal processes. The field meeting will also introduce the issues of climate and coastal change being addressed by the Little Tern Recovery Project[11]. The species is susceptible to the loss and modification of nesting sites resulting from storms and coastal squeeze[12].

16.00-17.00 Managing land for stone curlew
Visit to Muckleton Farm, Burnham Market, (PE31 8JT) to see land managed for stone curlew in North Norfolk, in the most north easterly part of its European range. We will meet David Lyles, a farmer currently on both Entry Level Stewardship (ELS) and Higher Level Stewardship (HLS) agri-environment schemes, with stone-curlew nesting plots in his agreement. David will take us out to view a nesting plot and explain the importance of the soil structure. David has seen stone-curlews on his farm this year.

Excursion guides Rob Lucking and Andrew Holland (RSPB)

Return to Norwich and free evening
Thursday 15th May

8.45 Meeting at The Assembly House, Theatre Street, Norwich City Centre (NR2 1RQ).

Thematic areas 3 & 4: Wetlands and rivers

9.00 Opening of Day 2, Juan Pérez-Lorenzo, European Commission, Climate Action DG

9.10-10.10 Project Presentations

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[5] LIFE99NAT/UK/006081 Living with the Sea
[6] LIFE08NAT/UK/000199 Alde-Ore
[7] LIFE09NAT/ES/000520 Δ Lagoon: Ebro Delta
[8] LIFE12ENV/FI/000409 MONIMET
[9] LIFE11INF/UK/000418 Stone Curlew
[10] LIFE07NAT/UK/000938 TaCTICS
[11] LIFE12NAT/UK/000869 Little Terns
[12] See the recent press release http://www.rspb.org.uk/news/367790-climate-change-leaving-seabirds-with-nowhere-to-tern

1. Lisa Tenning, County Administrative Board of Jämtland County [13]: LIFE to ad(d)mire-restoring drained and overgrowing wetlands in Sweden
2. Eduardo Lafuente Sacristán, Segura River Basin [14]: Riparian connectivity and climate change in the Segura River Basin
3. Georg Rast, WWF Germany[15]: Floodplain restoration and adaptation of forestry and agriculture.
4. Simon Hooton, The Broads Authority: The Broads: adaptation planning with water in mind
5. Elisabetta Rossi, Lombardy Region[16]: GESTIRE: management of the Natura 2000 Network in Lombardy

10.10 Discussions and refreshment break

Towards the new LIFE programme 2014 - 2020

10.40-10.55 Juan Pérez-Lorenzo, European Commission, Climate Action DG: The LIFE programme 2014-2020 – supporting adaptation in Europe

10.55-11.10 Sam Somers and Simon Duffield, Natural England[17]: Climate change adaptation and Natura 2000 sites- the Prioritised Action Framework for England

11.10 - 11.20 Juris Jatnieks, Nature Conservation Agency of Latvia[18]: Development of the national PAF for Latvia

11.20-11.30 Joao Silva, Senior Expert, LIFE Communications Team: LIFE projects addressing climate change- review of experience so far.

11.30-12.00 Panel discussion and conclusions-close of official meeting
- Juan Pérez-Lorenzo, European Commission, Climate Action DG
- Juris Jatnieks, Nature Conservation Agency of Latvia
- Richard Findon, Department for Environment, Food and Rural Affairs, UK Government
- Aidan Lonergan, Futurescapes Programme Manager, RSPB

12.00-13.00 Lunch: For those staying for the afternoon excursion a packed lunch will be provided

Thematic field trip: Wetlands and rivers

12.30-17.00 Optional visit to Norfolk Broads with The Broads Authority. Board coach Assembly House and travel to Whitehouse Farm, Ludham (NR29 5PA).

13.30 Disembark and follow footpath to How Hill estate (a National Nature Reserve managed by The Broads Authority). See the River Ant and the work undertaken to restore the floodplain to reed-bed / wet fen as part of the LIFE bittern project[19] and acid grassland restoration. Continue to How Hill education centre seeing riverside mills/wind pumps, moorings, nature reserve management and interpretation.

[13] LIFE08NAT/S/000268 Life to ad(d)mire
[14] LIFE12ENV/ES/001140 LIFE SEGURA RIVERLINK
[15] LIFE08NAT/D/000013 Elbauen bei Vockerode
[16] LIFE11NAT/IT/00044 GESTIRE
[17] LIFE11NAT/UK/000384 IPENS
[18] LIFE11NAT/LV/000371 NAT-PROGRAMME
[19] LIFE02NAT/UK/008527 Bittern

15.00 Board coach and travel short distance to Barton Broad (NR12 8XR).

15.20 Disembark and walk along board-walk through the wooded fen to the broad edge. Barton Broad was mud-pumped in 2000 with follow up bio-manipulation to try to re-create clear water. Consider issues of its restoration and management as a multi-use lake connected to the River Ant

16.00 Re-board coach for return to Premier Inn Norwich by 17.00. The hotel is 100m from the Railway Station.

Acknowledgements
The European Commission would like to thank both RSPB and Natural England for supporting the platform meeting by covering the main costs of the event through the project budgets of the Futurescape and IPENS LIFE+ projects. The event has been organised through the Astrale UK team and we are grateful to the staff of both organisations, and to The Broads Authority, for helping to put the programme together and for making the arrangements for field trips.

Links to further information
For information on Futurescapes go to http://www.rspb.org.uk/futurescapes/
For information on Titchwell go to http://www.rspb.org.uk/reserves/guide/t/titchwellmarsh/
On this page you will also find a link to 'Coastal Change Project'
For information on the Stone Curlew project go to
http://www.rspb.org.uk/ourwork/projects/details/342233-EU-LIFE+-Project-Securing-the-future-of-the-stone-curlew-in-the-UK
For information on The Broads Authority and climate change go to http://www.broads-authority.gov.uk/looking-after/climate-change

For further information contact chris.rose@astrale.org

Climate Change Platform Meeting-Norwich, UK

Summary of projects

Presentations in order of programme

Futurescapes (also field trip to Broads)
TEN (PAF project)

VACCIA
MGN
Living with the Sea (also field trip at Titchwell)
Alde-Ore
Δ Lagoon: Ebro Delta
MONIMET
TaCTICS (field trip at Titchwell)
Stone Curlew (field trip)
Little Terns (field trip at Titchwell)
Life to ad(d)mire
Segura Riverlink
Elbauen bei Vockerode
GESTIRE (PAF Project)
IPENS (PAF Project)
Natura 2000 Latvia (PAF Project)

Other projects represented

Boreal Peatland LIFE
MoorLIFE
RESTORE
SI Natura 2000 Management (PAF Project)
Natura 2000 Spain (PAF Project)
N2K Wales (PAF Project)
SPIN4LIFE (PAF Project)
NaturEtrade
Bittern (field trip with Broads Authority)
Urban Oases
LIFEPeatLandUse
River Ijssel floodplain development

Project	LIFE10 INF/UK/000189
Title	Futurescapes : promoting the development of green infrastructure in 34 priority areas throughout the UK
Acronym	Futurescapes
Country/ Region	East Midlands
Dates	01-SEP-2011 to 31-DEC -2014
Coordinating beneficiary	RSPB
Associated beneficiaries	-
Budget	3,855,426.00 € (1,927,713.00 € =50%)
Contacts	Aidan Lonergan Aidan.Lonergan@rspb.org.uk
Website	http://www.rspb.org.uk/futurescapes

Background

Despite the Natura 2000 network there is an ongoing loss of biodiversity and ecosystem services throughout Europe. This loss is due largely to the continued degradation of the 'wider countryside' outside protected areas. There is therefore an increasing need to supplement protected areas by ensuring that the landscapes in which they are embedded are as 'green' and as biodiversity-friendly as possible. The Futurescapes project is rising to the challenges set out in the LIFE Focus publication, "LIFE building up Europe's green infrastructure" by looking at what could be achieved in the United Kingdom. The UK is an ideal 'test bed' for landscape-scale approaches to conservation. It is densely populated and highly developed, and as such has suffered more damage to its natural habitats than most other countries. At the same time, however, it has effective laws and regulations relating to planning and biodiversity and enjoys general public support for conservation efforts. Therefore, addressing nature conservation issues at a landscape scale is intended to complement the existing network of protected areas and enhance this network by improving overall connectivity. The rationale for the project is that the spatial scale of current conservation activities in the UK and elsewhere is insufficient if we wish to halt the loss of biodiversity, and that it is therefore essential to increase the area of land that is suitable for wildlife. Another issue is that landscape-scale approaches will become increasingly necessary if climate change proceeds as expected.

Objectives

The main objective is to encourage the development and implementation of landscape-scale conservation initiatives, involving many partners, in 34 priority areas across the UK. These areas, known as 'Futurescapes', cover a total area of 2.18 million ha and include populations of 3.83 million people. The 34 areas have been chosen to give good geographical coverage and to reflect both their need and potential. Additional objectives are to carry out high-level advocacy work to promote the landscape-scale approach and to disseminate information about the project to relevant stakeholders throughout the EU. The key messages will be that landscape-scale conservation is important and that it can bring major benefits to local communities as well as to wildlife.

Project	LIFE11NAT/IT/000187
Title	T.E.N. (Trentino Ecological Network): a focal point for a Pan-Alpine Ecological Framework
Acronym	T.E.N.
Country/Region	Italy: Trentino-Alto Adige
Dates	01/07/12-31/12/16 (42 months)
Coordinating beneficiary	Autonomous Province of Trento
Associated beneficiaries	None
Budget	1,818,741€ (EC 907,006€ =49.87%)
Contact	Claudio Ferrari claudio.ferrari@provincia.tn.it

Objectives

The objective is to plan a long-term Natura 2000 management and restoration programme for the Province of Trento. The project proposes to implement a new management model at regional level to deal with the management of the Natura 2000 network in a long-term and complete manner, based on three key concepts: responsible subsidiarity, participation and integration.

The approach is based on a 'multipurpose' ecological network at provincial level divided into 'Reserve Networks' legally established as a means to enhance biodiversity through decentralised management involving local communities. Under overall guidance of the Province the Reserve Networks will draw up integrated management systems within which conservation policy will interact with agriculture and tourism, thus supporting socioeconomic use of sites based on the ecosystem services of Natura 2000.

Local participation, involving all sectors, will lead to the development of detailed local action programmes aimed at safeguarding semi-natural habitats and ensuring the ecological connection and function of the network, with particular attention to habitats and species in Natura 2000 sites. Guidelines will be drawn up to plan action, with support from of demonstration projects. By quantifying the costs and identifying financial instruments, funding a Prioritized Action Framework will be developed at regional level. Round tables with neighbouring regional authorities will be used to develop inter-regional projects which can be funded using specific financial instruments.

Main actions and expected results

- Assembling data on Natura 2000 species and habitats to define conservation priorities and identify the areas of connection and fragmentation in the ecological network
- Drawing up guidelines for reserve network management plans, for monitoring, for habitat management and action plans for "central" Trentino species
- Identification of six Reserve Networks, preparation of intervention programmes for nine homogeneous environments and quantification of long-term management costs
- Carrying out 12 demonstration projects for priority species and habitats and to combat invasive species
- Establishing a working group with agricultural and tourist sectors to define strategies and common measures and to define measures for the new rural development plan.
- Co-operation with neighbouring regions to contribute to the creation of a Pan-Alpine Ecological Network

Project	LIFE07ENV/FIN/000141
Title	Vulnerability assessment of ecosystem services for climate change impacts and adaptation
Acronym	VACCIA
Country/ Region	Uusimaa
Dates	01-JAN-2009 to 31-DEC-2011
Coordinating beneficiary	Finnish Environment Institute (SYKE)
Associated beneficiaries	University of Helsinki, University of Jyväskylä, Finland University of Oulu, Finland Finnish Meteorological Institute
Budget	3,121,573 € (1,546,538 € =49.5%)
Contacts	Martin Forsius martin.forsius@ymparisto.fi
Website	http://www.environment.fi/syke/vaccia

Background
Climate change presents a major challenge for the sustainable management of key ecosystem goods and services, including biodiversity, forests, water and agricultural production. Despite increasing efforts to reduce emissions, results from global models show that major changes in the current climate cannot be avoided. Sector-specific adaptation measures are therefore needed. These have to be based on understanding of (i) the likelihood of change, (ii) the vulnerability of the specific sectors to the predicted change, and (iii) the local-scale possibilities for adaptation. A methodology and tools must be developed to connect the global/regional scale climate-change scenarios to the local/regional scale where realistic adaptation measures are planned and conducted. Authorities and stakeholders need access to such information – provided in a format suitable for decision making – to understand and plan the necessary adaptation measures

Objectives
The project aimed to derive realistic climate change scenarios for specific sites for impact and vulnerability assessments and to suggest the most appropriate adaptation measures. It planned to demonstrate the use of Global Monitoring for Environment and Security (GMES) satellite-data services for assessing climate change impacts. GIS-based platforms and computer programmes were to be developed for effective modelling. On the basis of the site-specific information database, results from the modelling tools and expertise of the partner (FinLTSER environmental network) vulnerability and impact assessments would be made on the main ecosystem resources faced with climate change. The project team planned to work with local/regional administrations and stakeholders to make an inventory of possible appropriate adaptation measures to respond to the identified threats. The assessments would also be used to define critical environmental impact thresholds, which take into account predicted climate change and possibilities for adaptation, to inform specific policy targets and measures.

Results
The project studied the vulnerability of ecosystem services to climate change and the possibilities for different sectors of society to adapt to these changes. These studies allowed probability-based vulnerability assessments to be made. In particular, the project assessed how anticipated climate change would change the production of selected main ecosystem services/sectors (biodiversity, forest and agricultural production, carbon sequestration, water resources and quality, fishery production, tourism), and identified critical change thresholds. The derivation of these climate change scenarios and vulnerability assessments (database) was the main result of the project. The use of satellite data based GMES-services for making these assessments and adaptation studies (maps, databases) was another key result.

The key challenges and adaptation options were found to be:
- For coastal ecosystems – the reduction of load from agriculture; countermeasures to increased runoff due to precipitation and floods; buffer zones, fertiliser amounts and the use of crop land; and bio-manipulation and reduction in cyprinid numbers.
- For urban environments – the design of new types of infrastructure and technical solutions to optimise ecosystem services in the urban environment, and the artificial recharge of storm waters via use of more permeable surfaces.
- For agricultural production – the breeding of cultivars that can make use of the prolonged growing season and higher temperatures but are still adapted to long day conditions.
- For catchment areas and lakes – attention paid to the predicted increase of runoff, erosion, and nutrient loads, and to their temporal element; differentiating between the effects of climate change and land use.

- For forest production – addressing adaptation challenges in forestry, in species selection, stand regeneration, optimal stand densities and timing of intermediate cuttings.
- For fisheries production – the adaptation of commercial fishing to changes in fish stocks and the operational environment; the ice-cover period will shorten so the trawling season will be longer.
- For biodiversity in coastal ecosystems – land-use planning; selection of management and grazing practices to minimise the loss of nests of meadow breeding birds via wind-raised floods.
- For tourism-related communities – consideration of the predicted uncertainty of weather conditions due to climate change as a risk for those dependent on winter tourism; use of the most apparent and proactive adaptation measures; the development of year-round tourism and of tourism services that can cope with the changing climatic conditions.

Project	LIFE11ENV/IT/000168
Title	Making Good Natura
Acronym	-
Country/ Region	Lombardia, Emilia-Romagna, Campania, Basilicata, Calabria, Sicilia
Dates	01-SEP-2012 to 15- JUN-2016
Coordinating beneficiary	Consorzio Universitario per la Ricerca Socioeconomica e per l'ambiente
Associated beneficiaries	Accademia Europea per la Ricerca Applicata e il Perfezionamento Profesionale di Bolzano, WWF Italia Onlus WWF Richerche e Progetti S.r.l., Regione Lombardia, Ente Regionale per i Servizi all'Agricoltura e alle Foreste (ERSAF), Regione Siciliana-Dipartimento Regionale Azienda Regionale Foreste Domaniali, Parco Nazionale del Pollino, Parco Nazionale del Cilento e Vallo di Diano, Parco Naturale del Sasso Simone e Simoncello
Budget	3,751,684 € (1,863,441 € =49.7%)
Contacts	Benedetta Concetti benedetta.concetti@ersaf.lombardia.it
Website	http://www.lifemgn-serviziecosistemici.eu/EN/progetto/Pages/short.aspx

Background
Efficient management of Natura 2000 sites is essential for their conservation and to ensure the continued delivery of ecosystems services. However, conservation activities come with an administrative and management cost, and, in many cases, management plans cannot be implemented because of scarce financial resources. Thus, governance tools and innovative models for financing are necessary for efficient management of Natura 2000 sites, based on qualitative and quantitative valuation of the ecosystems services they provide. Such tools and models should be adaptable to Natura 2000 sites in different eco-regions (Alpine, Mediterranean and Continental), with their varying management approaches.

Objectives
The overall objective of the project is to establish and demonstrate innovative procedures and approaches to solve an environmental problem, taking a strategic approach based on the concept of ecosystems services. The project's specific objectives are:

- To identify and evaluate the ecosystems services provided by Natura 2000 sites;
- To create and demonstrate innovative models for funding the implementation of Natura 2000 management plans and conservation measures;
- To identify innovative financing models that will be used during the next programming period of the Common Agricultural Policy (2014-2020);
- To create and demonstrate models for better governance in conservation management and for the socio-economic development of local communities;
- To define and apply a model of participation that will improve the interaction between public governance and the private sector; and
- To apply the new approaches and models to selected study sites to demonstrate their effectiveness

Expected results
The project will aim to achieve better governance standards for the conservation of Natura 2000 sites, and for socio-economic development in local communities. Specific results will include:
- Defining ecological and socio-economic descriptors for each study site;
- Preparing 'habitat x ecosystems services' matrices to identify and evaluate ecosystems services;
- Defining models for the evaluation of ecosystems services and management efficiency;
- Defining a governance model based on the concept of payments for ecosystems services, and other types of self-financing;
- Creating a web-based tool for Natura 2000 sites that will enable the qualitative and quantitative evaluation of ecosystems services using spatial datasets; and
- Publishing a handbook

Project	LIFE99 NAT/UK/006081
Title	Living with the sea : Managing Natura 2000 sites on dynamic coastlines
Acronym	Living with the sea
Country/ Region	East Anglia, South East (UK)
Dates	01-AUG-1999 to 31-JUL -2003

Coordinating beneficiary	English Nature (now Natural England)
Associated beneficiaries	Environment Agency, Natural Environment Research Council, Defra
Budget	2,234,433.48 € (1,117,217.50 € =50%)
Contacts	Sue Rees Sue.rees@naturalengland.org.uk

Background
The coastline along the eastern shores of the UK is eroding under the pressure of rising sea levels. However, rather than try to combat this with artificial sea defences the policy, in many places, is one of 'managed retreat'. This, however, has implications for Natura 2000 where, to maintain the continuity of the network, losses are made good by gains elsewhere, by for example, the re-creation of areas with similar habitats. The project was designed to develop a strategic approach to integrating the management of flood risk with the ecological needs of Natura 2000. This would enable the UK Government to meet the obligations of Article 6(2) of the Habitats Directive.

Objectives
The primary objective was 'to provide a strategic framework, guidance and practical mechanisms for the management and maintenance of the ecological requirements of Natura 2000 sites on dynamic coastlines in the long term'. Specific objectives were:

- to develop a strategy for the management of coastal habitats on dynamic coastlines through the development of a model for Coastal Habitat Management Plans (CHaMPs)
- to develop best practice guidance on the recreation and restoration of coastal habitats;
- to implement demonstration projects on coastal habitat recreation and restoration and to understand what their role may be in maintaining the ecological integrity of the features of European importance.
- to develop a framework for maintaining features of European importance in dynamic coastal situations.

Results
Seven Coastal Habitat Management Plans were completed. The example for North Norfolk can be found at http://www.naturalengland.org.uk/Images/Norfolk%20Final_tcm6-2734.pdf . The process included an assessment of predicted change over a 30 -100 year timescale on designated habitats. Broad habitat changes were identified and proposals for offsetting losses or relocating habitats were presented. Following the completion of the project, revised guidance to operating authorities was published by the Government. The development of CHaMPs was iterative and concluded that 'super-CHaMPs' may be necessary to look at issues at the regional level.

A demonstration site was completed at Brancaster involving managed realignment, aided by excavation of rills and channels for saltmarsh and reed bed restoration work. The work involved the removal of a seawall and other artificial structures to re-establish the dune system's natural form and function. The CHaMPs approach provided case studies to support a more strategic way of looking at the cumulative impact of a number of projects and marked a change from experimentation to policy. An England Action Plan was one of the final outputs to guide future work. The managed re-alignment work at Titchwell is an example of a project which benefitted from the Living with the Sea project.

One of the key issues was the question of when should a designated habitat be maintained in situ. The project approach showed that there need be no conflict between flood and coastal defence requirements on the one hand and the preservation of the habitats along the coast on the other, providing a long-term view is taken and that appropriate action is taken in advance of major problems. Overall the approach is designed to support the Natura 2000 network by seeking the maintenance of favourable conservation status with no net loss of habitat or interest features. This is an important adaptation tool.

Project	LIFE08 NAT/UK/000199
Title	The Alde-Ore Estuary - Securing a sustainable future for wildlife
Acronym	Alde-Ore
Country/ Region	East Anglia, UK
Dates	01-APR-2010 to 31-MAR -2014
Coordinating beneficiary	National Trust
Associated beneficiaries	RSPB
Budget	1,066,290.00 € (533,145.00 €=50%)

Contacts	David Mason info@lifealdeore.org
Website	http://www.lifealdeore.org/

Background

This project aims to develop the management and infrastructure of two exceptional Natura 2000 wildlife sites, Orford Ness and Havergate Island, in the Alde-Ore estuary in East Anglia to sustain and enhance the habitats and species of European significance. The proposed actions build on conservation work already carried out on these sites by The National Trust and the Royal Society for the Protection of Birds.

Objectives

- To establish a functional, efficient and sustainable infrastructure for water management and control of the coastal lagoons and marshes to enable adaptation to the effects of climate change including changing rainfall patterns and rises in sea-level.
- To carry out management, targeted at Annex 1 breeding bird species and habitats, including the creation of new breeding sites and improvements to existing sites and habitats for avocet (*Recurvirostra avosetta*), sandwich tern (*Sterna sandvicensis*) and redshank (*Tringa totanus*).
- To improve protection from predation and disturbance by red fox and brown rat, through fencing, ditching, remote monitoring work and direct predator control measures.
- To monitor and evaluate the effects of the management systems during the project.
- To implement systems to control access on the Orford Ness spit to prevent damage to shingle habitats and little tern (*Sterna albifrons*).
- To improve the visitor experience at both of the sites and to disseminate the project results to a wide European audience of site managers, ecologists and the general public.

Project	LIFE09 NAT/ES/000520
Title	Restauración y gestión del hábitat en dos lagunas costeras del Delta del Ebro: Alfacada y Tancada
Acronym	Δ-LAGOON
Country/ Region	Cataluña
Dates	01-SEP-2010 to 31-DEC -2014
Coordinating beneficiary	Institut de Recerca i Tecnologia Agroalimentàries
Associated beneficiaries	Fundació Caixa Catalunya, Departament de Medi Ambient i Habitatge-Generalitat de Catalunya (Parc Natural del Delta de l'Ebre), Dirección General de Sostenibilidad de la Costa y del Mar, Ministerio de Medio Ambiente y Medio Rural y Marino-Gobierno de España
Budget	3,054,703.00 € (1,490,084.00 € =48.78%)
Contacts	Carles Ibañez carles.ibanez@irta.cat
Website	http://lifedeltalagoon.eu/lifedeltalagoon/

Background
The Alfacada and Tancada lagoons are located in the Ebro Delta Natural Park. Though the Alfacada lagoon is a protected area, it was until recently a private estate used for hunting. It is also vulnerable to the effects of climate change on the water and sediment flux of the Ebro river, which has accelerated the rise in sea level and coastal erosion processes. Therefore specific management and restoration measures are necessary to mitigate these negative effects. The target salt marshes of San Antonio in the southern part of the Tancada lagoon have been damaged by intensive fish farming and much work is required to restore this now-protected area to its natural state.

Objectives
The main goal of the project is to improve the ecological status of the 350 ha of lagoons through habitat restoration and management measures, such as improvement of hydrological function, elimination of infrastructure that interferes with connectivity, and creation of new lagoon habitats in existing rice fields and abandoned aquaculture facilities.

Specific goals include:
- Improving the ecological status and hydrological function of the Alfacada lagoon through restoration measures designed to mitigate the effects of coastal retreat and climate change, as well as to improve the status of priority habitats and species;
- Increasing the Alfacada coastal lagoon habitat by restoring original lagoon areas that have been converted to rice fields;
- Improving the ecological status and hydrological function of the Tancada lagoon through the restoration of areas affected by aquaculture activities; and
- Developing measures to monitor and disseminate the ecological values of the restored areas, to increase public awareness and knowledge among stakeholders, managers and wider society.

Expected results:
- Improvement of the status of 350 ha of coastal lagoon habitat;
- Creation of 62 ha of new wildlife habitat including 50 ha of coastal lagoon habitat;
- Restoration of 16 ha of coastal ponds and salt marshes;
- Increased resilience and better adaptability of the coastal lagoons to the effects of climate change;
- Improvement of the conservation status of several endangered species, including *Porphyrio porphyrio, Botauris stellaris, Ixobrychus minutus, Larus genei, Sterna albifrons* and *Aphanius iberus*;
- Construction of new infrastructure for public use and environmental education, including a visitor centre, hides, paths and information boards; and
- An increase in knowledge about the conservation status and evolution of the most relevant habitats and species of the area, as well as the proposal of further conservation measures to managers.

Project	LIFE12 ENV/FI/000409
Title	LIFE MONIMET - Climate change indicators and vulnerability of boreal zone applying innovative observation and modeling techniques
Acronym	LIFE MONIMET
Country/ Region	Uusimaa,Varsinais-Suomi,Satakunta,Häme,Pirkanmaa,Päijät-Häme,Kymenlaakso,Etelä-Karjala,Etelä-Savo,Pohjois-Savo,Pohjois-Karjala,Kainuu,Keski-Suomi,Etelä-Pohjanmaa,Vaasan rannikkoseutu,Keski-Pohjanmaa,Pohjois-Pohjanmaa,Lappi,Ahvenanmaa/Åland,Baltic Sea Suomi (SF)
Dates	02-SEP-2013 to 01-SEP -2017
Coordinating beneficiary	Ilmatieteen laitos
Associated beneficiaries	Metsäntutkimuslaitos, Finnish Environment Institute (SYKE), Helsingin yliopisto
Budget	2,755,288.00 € (1,366,952.00€ = 50%)
Contacts	Ali Nadir Arslan ali.nadir.arslan@fmi.fi
Website	

Background

The magnitude of climate change is dependent on the atmospheric load of carbon dioxide (CO_2) and methane (CH_4). The terrestrial biosphere plays an important role in the global carbon balance, and boreal forests and peatlands are an important part of this global carbon cycle. The future development of carbon and water balances and their relationship to climate change in boreal zones are currently poorly understood and obtaining accurate figures of country-based carbon balances and their future development is a challenge.

Objectives

The project aims to better understand the future development of carbon and water balances and their relationship to climate change in boreal zones. It will also fill knowledge gaps concerning indications of a region's vulnerability by implementing an innovative approach to in-situ monitoring and mapping of climate change indicators. This is based on a combination of different information sources describing phenology, CO_2 and CH_4 exchange, land cover, snow evolution and albedo. The sources include in-situ observations and Earth Observation (EO) (satellite) data, as well as ancillary data supporting vulnerability assessments. Regional models will be applied to describe climate and land surface fluxes of carbon and water by different ecosystems.

The actions will include:
- Bringing together information, data and expertise to build a comprehensive platform for analysing climate change effects;
- Establishing links and adding value to existing monitoring mechanisms and making use of data acquired in previous LIFE-funded, and other, projects on ecosystem monitoring;
- Creating a new webcam monitoring system to facilitate EO systems by providing time-series of field observations, as well as to improve the assessment of forest ecosystem services;
- Synthesising modelling and observation approaches to identify climate indicators
- Linking the climate change indicators and their effects to create vulnerability maps based on climate change scenarios.

The expected results are:
- A harmonised webcam network for monitoring the seasonal cycle in boreal ecosystem carbon exchange;
- A demonstration of the mapping of climate indicators in boreal forest zones; and
- A demonstration of the vulnerability assessment for Finnish municipalities to climate change effects

Project	LIFE07NAT/UK/000938
Title	Tackling Climate Change-Related Threats to an Important Coastal SPA in Eastern England
Acronym	TaCTICS
Country/ Region	South East (UK)
Dates	01-JAN-2009 to 31-DEC -2012
Coordinating beneficiary	The Royal Society for the Protection of Birds
Associated beneficiaries	None
Budget	2,009,660.00 € (1,004,830.00 € =50%)
Contacts	Nick Folkard nick.folkard@rspb.org.uk
Website	http://www.rspb.org.uk/reserves/guide/t/titchwellmarsh/coastalchange/

Background

The coast of eastern England is one of the richest areas for birdlife in the UK. However, this part of the British coastline is also under considerable pressure from climate-induced sea-level rise, leading to what is termed 'coastal squeeze' – intertidal habitats are prevented from migrating landwards due to the presence of sea walls. Government policy on shoreline management now tends to favour management solutions that respect natural processes and adapt to coastal change. These approaches were demonstrated in the LIFE Nature project 'Living with the Sea' (LIFE99NAT/UK/006081). While the RSPB supports policies that work with nature, allowing natural change along the coast has been shown in some areas to threaten the interests of freshwater habitats lying immediately inland. The RSPB reserve at Titchwell Marsh in north Norfolk is such a case where there is an imminent risk of habitat loss.
Titchwell Marsh is part of the North Norfolk Coast SPA and contains significant areas of freshwater reedbed (17 ha), freshwater marsh (12 ha) and brackish marsh (11 ha), which support such rare species as the bittern (*Botaurus stellaris*), marsh harrier (*Circus aeruginosus*) and avocet (*Recurvirostra avosetta*).

Objectives

The project has two main objectives. The first is to protect the freshwater habitats from destruction as a result of coastal erosion; the second is to mitigate and compensate for the inevitable loss of important brackish marsh. The project will implement a 'managed realignment' scheme at Titchwell Marsh in response to climate change. This will involve strengthening two seawalls to protect the freshwater habitats for at least the next 50 years, and also breaching a third, seaward wall with the loss of the brackish marsh. To compensate for the loss of 11 ha of this habitat, and, in particular, to provide breeding sites for avocet, several islands will be created within the freshwater marsh. New habitats will also be provided at the RSPB's Lincolnshire Washes reserve adjacent to the Wash SPA. The project is thus a good example of using mitigation and compensation in the context of Natura 2000. The RSPB will promote the project as a case study for raising awareness of the impacts of climate change on coastlines and their wildlife.

Project	LIFE11INF/UK/000418
Title	Securing the future of the stone-curlew (*Burhinus oedicnemus*) throughout its range in the UK
Acronym	Securing the stone-curlew
Country/ Region	East Anglia, South East (UK), South West (UK)
Dates	01-SEP-2012 to 31-AUG -2016
Coordinating beneficiary	RSPB
Associated beneficiaries	None
Budget	1,654,692 € (823,032 € =50%)
Contacts	Emily Field emily.field@rspb.org.uk
Website	http://www.rspb.org.uk/securingthestonecurlew

Background

The stone-curlew occurs across much of Europe, but its total population is comparatively small (46 000-78 000 pairs). Its European population underwent a large decline between 1970 and 1990, and again between 1990 and 2000. During the latter period, some national populations remained more or less stable, but others decreased significantly, including that in Spain, the species' European stronghold. The UK currently holds only a small proportion of the European stone-curlew population, with approximately 375 pairs in total. However, it is the only country in Europe where numbers of this species are currently increasing. Moreover, it will become ever more important for the stone-curlew if climate change proceeds as expected. This is because climate change is predicted to render the southernmost parts of the bird's current range increasingly unsuitable, and thus shift its 'climate space' northwards. A recovery project run jointly by the RSPB and Natural England has helped to double the population of stone-curlews since the early 1990s. However, the bird is still dependent on hands-on nest protection work, and it will not be possible for such intensive effort to be maintained over the longer term.

Objectives

The project plans to deliver a comprehensive, integrated suite of communications actions, aimed primarily at farmers and other land managers, to encourage the adoption of management practices beneficial to the stone-curlew. The overall objective of the project is to secure the future of the species in the UK by making it much less dependent on conservation work than at present, and therefore much more self-sustaining. The reason that UK stone-curlews are so conservation-dependent is that most of them breed on arable farmland, where their nests are liable to be destroyed by agricultural machinery. The only effective way to minimise such losses is for staff and volunteers from conservation bodies to carry out labour-intensive nest protection work. The project aims to tackle this problem through a comprehensive, integrated programme of advisory, communications and awareness-raising actions, designed primarily to increase the amount of safe nesting habitat available to stone-curlews and thus to reduce (and ultimately eliminate) the need for nest protection work.

Expected results

The UK population of stone-curlews is expected to increase during the project period, at a time when the pressure for farm intensification is high. The project is not intended to bring about a major increase in this population in the short term, but is designed to put the species on a much more sustainable footing and lay the foundations for potential increases in the future.

Project	LIFE12 NAT/UK/000869
Title	Improving the conservation status of the little tern in the UK through targeted action at the most important colonies
Acronym	LIFE Little Terns
Country/ Region	North,Yorkshire and Humberside,East Midlands,East Anglia,South East (UK),South West (UK),North West (UK),Wales
Dates	02-SEP-2013 to 31-AUG -2018
Coordinating beneficiary	RSPB
Associated beneficiaries	National Trust, Cumbria Wildlife Trust, Denbighshire County Council, Durham County Council, Natural England, Lincolnshire Wildlife Trust, Northumberland County Council, Spurn Bird Observatory Trust Ltd
Budget	3,287,140.00 € (1,643,570.00 € =50%)
Contacts	Susan Rendell-Read susan.rendell-read@rspb.org.uk

Background

The decline in the population of the little tern (*Sterna albifrons*) in the UK since the 1990s is a cause for concern. The decline is caused by a number of factors, including disturbance, predation, habitat change and high tides linked to summer storms. There has been a reduction in the number of colonies, a loss of range in the west of the UK and poor levels of productivity. Sea-level rise also poses a threat to a number of current colonies. The total UK population is estimated to be less than 2 000 breeding pairs. The project will be the first nationally co-ordinated programme of action for the species, working with 29 colonies (about 65% of the total population) in 15 Special Protection Areas (SPAs) of the Natura 2000 network.

Objectives

The overall aim of the project is to lay the foundations for the long-term recovery of the little tern, by securing robust breeding populations at key sites. This will be achieved by:
Increasing the population through management of existing breeding sites and the restoration and creation of new sites; this will help to offset colony loss through the predicted effects of climate change and sea level rise.
Securing commitment from statutory agencies and local authorities to support little tern conservation in the longer term; it will be essential for conservation actions to be aligned with wider and longer-term policy and legislative frameworks such as Shoreline Management Plans for flood risk management;
Ensuring that the public supports the long-term protection of the project sites; most breeding sites experience heavy visitor pressure and management will have to exclude visitors from key areas.

Expected results

- Site management and wardening to address issues of predation, disturbance, habitat change and high tides;
- Suitable habitat suitable created at several sites;
- Site monitoring to inform project management decisions;
- A colour ringing programme to develop a population model to inform the species recovery strategy;
- A little tern species recovery strategy for the UK;
- Longer-term plans agreed with statutory agencies and local authorities;
- Public support increased and demonstrated by public attitude surveys;
- Best practice guidelines published;

Together, these actions will lead to an increase in the breeding population of little terns across the project sites, from the current figure of 1,241 breeding pairs, the mean breeding productivity across targeted sites will be at least 0.75 chicks per pair per year and sites for sustainable colonies will be identified where current colonies are threatened.

Project	LIFE08 NAT/S/000268
Title	Life to ad(d)mire – Restoring drained and overgrowing wetlands
Acronym	Life to ad(d)mire
Country/ Region	Östra Mellansverige,Småland med Öarna,Sydsverige,Västsverige,Norra Mellansverige,Mellersta Norrland
Dates	01-JAN-2010 to 31-DEC -2015
Coordinating beneficiary	Länsstyrelsen Jämtlands Län
Associated beneficiaries	County administrative board of Dalarna, County administrative board of Östergötland, County administrative board of Jönköping, County administrative board of Kronoberg, County administrative board of Västernorrland, County administrative board of Skåne
Budget	6,813,474.00 € (3,406,737.00 € =50%)
Contacts	Lisa Tenning Lisa.Tenning@lansstyrelsen.se
Website	http://www.lifetoaddmire.se

Background

Almost 15% of Sweden's threatened species live in peatlands or on freshwater margins. Threats to these species include hydrological changes and plant invasion in wetlands. Tall plant- and forest invasion in drained mires is a major problem for several bird species and for the plants displaced by the invaders. Nitrogen deposition is a contributing factor to vegetation changes in some regions. Some parts of the wetlands have historically been used as meadows, but agricultural modernisation has made this use unprofitable and therefore almost none of these sites are in use today. Several species live in these sites, but their populations are decreasing or becoming extinct because of overgrowth and new management practices. Southern Sweden in particular has seen a significant loss of wetlands (e.g. approximately 90% in Skåne region).

Objectives

The project aims to halt the decline of habitats and species within a project area of 3,852 ha within 35 Natura 2000 sites covering a total area of 40,430 ha through hydrological restoration and vegetation management. One positive expected outcome would be that the current loss of CO_2 (due to drained peat) will stop, and, hopefully most of the restored active bogs will revert to being carbon sinks. The priority habitats include active raised bogs and aapa mires and the project will also target degraded raised bogs and alkaline fens.

Expected results

- 2 885 ha of drained wetland will be hydrologically restored;
- 1 866 ha of overgrown wetland will be cleared;
- A 7.7 ha shallow lake will be opened;
- 13 ha of wetland hay meadows will be restored.

After completion of the restoration work, the 'meadow sites' will be in a condition ready to be maintained through the EU´s agri-environmental subsidies. In other areas, the natural processes will be restored in such way that no more active management will be needed for at least two decades.

Project	LIFE12 ENV/ES/001140
Title	LIFE Segura Riverlink
Acronym	RIVERLINK
Country/ Region	Murcia
Dates	01-AUG-2013 to 30-JUL -2017
Coordinating beneficiary	Confederación Hidrográfica del Segura
Associated beneficiaries	Asociación de Naturalistas del Sureste, Dirección General de Medio Ambiente-Consejería de Presidencia-Comunidad Autónoma de la Región de Murcia, Centro Tecnológico Agrario y Agroalimentario ITAGRA.CT, Universidad de Murcia
Budget	3,424,250.00 € (1,655,555.00 € =48.3%)
Contacts	Eduardo Lafuente Sacristán eduardo.lafuente@chsegura.es

Background

The Segura River Basin, in south east Spain, covers a surface area of 18, 870 km². The surrounding area has historically experienced significant climatic extremes and water imbalances, going from extended periods of drought, through torrential rains and frequent flooding. This variability has, for centuries, led to efforts to control the river and today the Segura River Basin is one of the most regulated in Europe with numerous dams and weirs. This human intervention has significantly altered the water flow regimes and has affected the natural cycles of floods and droughts leading to several environmental problems.

Objectives

The project aims to support the recovery of the Segura River Basin through management measures for developing a green infrastructure approach to river basin management. It will remove a weir, construct fish passages across others, and carry our river restoration work along 54km including rivers in urban areas, to encourage stakeholder engagement. It will demonstrate that the implementation of a green infrastructure approach, still uncommon in Mediterranean areas, will improve continuity, help the recovery of the natural ecosystem, restore biodiversity resilience and increase the mobility of species along the river. It also hopes to reverse landscape fragmentation by reviving the green corridor role of the river and the connectivity between protected areas. The project hopes to act as a catalyst for extending river restoration techniques along the whole 325 km river length over a 15 year period.

Expected results

- Removal and adaptation of weirs to provide fish passages;
- Improvement of the longitudinal river permeability along 54 km;
- Increased migration of fish - and other aquatic life – along the river;
- Increased cooperation amongst public and private stakeholders;
- Improved conservation of riparian habitats, restored ecosystems and increased biodiversity;
- Validation of the green infrastructure approach; and
- Progress towards achieving good ecological status for the river.

Project	LIFE08 NAT/D/000013
Title	Improvement and Long-Term Safeguarding of the Natura 2000 Site "Dessau-Wörlitz Elbe Floodplain"
Acronym	Elbauen bei Vockerode
Country/ Region	Sachsen-Anhalt
Dates	01-JAN-2010 to 31-DEC -2018
Coordinating beneficiary	WWF Deutschland
Associated beneficiaries	Biosphärenreservatsverwaltung, Mittelelbe, Landesbetrieb für Hochwasserschutz und Wasserwirtschaft Sachsen-Anhalt
Budget	2,184,912.00 € (1,092,456.00 €=50%)
Contacts	Georg Rast rast@wwf.at
Website	http://www.wwf.de/regionen/elbe/life-projekt-dessau-woerlitzer-elbauen/

Background

Flood prevention is not only a technical task, but also a far reaching, multi- disciplinary and cross-border undertaking. According to the Flood Risk Management Guidelines of the EU, all floodplain areas with risk of flooding are required to have a flood risk management plan in place. Therefore a range of measures has to be developed and implemented according to the set priorities.

Objectives

The project aims to achieve favourable conservation status for the middle Elbe by connecting the natural conservation functions inherent in riparian dynamics and floodplain development with aspects of flood protection. The main objective will be to enable natural succession dynamics of the entire area and to ensure a unique floodplain landscape and a favourable water status. The relocation of a dyke will give extra retention areas to enhance the role of natural flood protection.

The project also enables approval process of the dyke relocation to be influenced through the integration of natural protection dyke planning. It will set a precedent for the restoration of large river systems in middle Europe. Furthermore it presents a unique opportunity to use natural protective measures in this flood plain area to provide the necessary future flood protection incorporating natural techniques. The project measures serve to enhance the current state of the area and to restore it into a natural dynamic floodplain landscape with typical site specific habitat types. In some specific locations the goal is to prevent the transformation of the forest by invasive species such as the American green ash and promote endemic species. Ox-bow stretches, currently detached from the river will also be revitalised, for example with the creation of new wetland ecosystems, thereby improving habitat conditions for some species in the area.

Project	LIFE11NAT/IT/044
Title	Development of the strategy to manage the Natura 2000 network in the Lombardia Region
Acronym	GESTIRE
Country/ Region	Italy: Lombardy
Dates	01/10/12- 30/09/15 (36 months)
Coordinating beneficiary	Regione Lombardia
Associated beneficiaries	Ente Regionale per I Servizi all'Agricoltura e alle Foreste Fondazione Lombardia per l'ambiente Centro Turistico Studentesco e Giovanile Comunità Ambiente Srl LIPU Lea Italiana Protezione Uccelli onlus
Budget	3,259,700€ (1,626,916€ = 49.91%)
Contact	Luisa Pedrazzini luisa_pedrazzini@regione.lombardia.it

Objectives

The objective of the project is to produce a plan for the Lombardy Region to restore and manage sites, habitats and species, taking into account sources of EU, national and regional funding, and establishing a list of priority actions to be carried out in the next decade. The two main outputs are i) the Programme for the management of Natura 2000 sites and ii) the Prioritised Action Framework for the regional Natura 2000 network. The project will produce a realistic overview of the value of the Natura 2000 network in Lombardy not only from a nature conservation point of view and in terms of ecosystem services but also from a socio-economic perspective.

Main actions and expected results

The project has the following main actions:

- creation of an integrated Natura 2000 group, including members of different regional directorates (i.e. agriculture, tourism, transport etc), scientific experts, representatives of stakeholder groups, NGOs;
- collation and analysis of documents in relation to managing Natura 2000 sites in Lombardy;
- production of an estimate of the socio-economic value of the Natura 2000 network;
- analysis of green jobs connected to Natura 2000 and identification of a proposal to create new incentives;
- production of management measures for Natura 2000 sites and measures needed to connect the regional sites;
- development of a financial plan for the management of the Natura 2000 network 2014 -2020
- identification of guidelines for conservation actions by citizens and businesses
- production of a programme document for the management of the Natura 2000 network;
- development of the regional Priority Action Framework;
- a scientific monitoring plan;
- a strategic communication plan on how to contribute to the conservation of Natura 2000.

The programme document will include the following elements:

- a list of Natura 2000 sites in the area,
- information on the results of the evaluation of conservation status under Article 17
- information on risks and threats to key habitats and species
- a general description of nature conservation values and ecosystem services
- information about plans and other initiatives
- strategic objectives for the conservation of habitats and species for the period 2014-2020.

Project	LIFE+11NAT/UK/384
Title	Improvement Programme for England's Natura 2000 Sites
Acronym	IPENS
Country/ Region	UK: all regions in England (8 in total)
Dates	01/07/12 -30/06/15 (36 months)
Coordinating beneficiary	Natural England
Associated beneficiaries	The Environment Agency of England
Budget	3,575,345€ (1,787,672€ =50%)
Contacts	Sam Somers sam.somers@naturalengland.org.uk

Objective

The project will develop a programmed approach to achieving target conservation status on all Natura 2000 sites in England, working with key stakeholders to help them adopt and implement this strategic approach.

The programme structure will contain i) an overview of the Natura 2000 network in England, analysing the risks and threats to each site, ii) financing plans for sites and surrounding green infrastructure and iii) a programme of projects that will begin implementation during and after the LIFE+ project.

The project will identify evidence gaps about issues and risks affecting Natura 2000 sites and the mechanisms to tackle them and will fill these gaps or build it into action plans for sites, features or themes.

The After LIFE plan will outline how the Natura 2000 programme will be taken forward and will establish a stakeholder steering group to oversee and monitor progress.

Main actions and expected results

- The overall Programme Plan will be developed to show how individual action plans will be implemented and operate as a whole programme including i) site by site assessment of risks and issues; ii) analysis of the available mechanisms to tackle those risks, iii) identification of evidence gaps, iv) information about funding options, v) stakeholders who will need to contribute and vi) a time line.
- Development of a practical 'mechanism directory' including delivery and funding options and actions required to address evidence gaps
- Funding options will be reviewed and developed for site implementation, feature implementation, theme implementation and marine implementation
- Action plans will be produced for sites and themes and, where relevant, will be integrated into River Basin Management Plans
- Dissemination of results through Communications Plan which will document the process and lessons learnt in the project including sharing best practice with UK and EU stakeholders.
- Consultation and confirmation of mechanisms, including 'After LIFE' plan, with delivery partners
- A final workshop to disseminate the results of the programme, lessons learned and best practice
- Networking with other projects especially LIFE+ projects.
- Cross border networking in the UK to share project methodologies

Project	LIFE11NAT/LV/371
Title	National Conservation and Management Programme for Natura 2000 Sites in Latvia
Acronym	NAT-PROGRAMME
Country/ Region	Latvia: all regions
Dates	01/09/12 – 28/02/17 (53 months)
Coordinating beneficiary	Nature Conservation Agency
Associated beneficiaries	None
Budget	1,609,700€ (804,850€ =50%)
Contacts	Juris Jatnieks Juris.Jatnieks@daba.gov.lv ; Erika Klavina Erika.Klavina@daba.gov.lv

Objectives

1. To develop a National Conservation and Management Programme for Natura 2000 sites in Latvia to adopt and implement a programmatic approach to the long term conservation and management the Natura 2000 network.

2. To promote effective and harmonized management for habitats by elaborating comprehensive, tested, up-to-date common Guidelines for all habitat types and species.

3. To increase awareness of public authorities, nature conservation experts, NGOs, municipalities, local entrepreneurs, land owners and other stakeholders on appropriate nature conservation and management measures and financial resources for Natura 2000 sites and promote involvement in nature management implementation.

Main actions and expected results

- Preparatory actions will provide an assessment of the effectiveness of management measures in Natura 2000 sites. Visits will be organized to other Member States to gain experience on the elaboration and implementation of management plans, guidelines, programmes and other relevant materials as well as methods, practices and results of habitat management for Natura 2000 sites.
- Information gathered will be used for the elaboration of Guidelines for habitat management and the National Conservation and Management Programme for Natura 2000 Sites in Latvia. Guidelines for management of coastal areas, freshwater habitats, grasslands, bogs and forests, rocky habitats and caves will be published. The National Conservation and Management Programme for Natura 2000 sites in Latvia will be promoted through workshops, meetings and discussions with state institutions, municipalities, NGOs and other stakeholders and to other countries.
- Habitat mapping and recommendations for support measures will be developed to inform the next Rural Development Programme.
- Public awareness and dissemination activities will help promote the Guidelines for habitat management and the National Conservation and Management Programme. Training courses will be held for responsible authorities, NGOs, nature experts and other nature conservationists on nature conservation planning and management issues.

Project	LIFE08 NAT/FIN/000596
Title	Boreal Peatland Life - Restoring the Natura 2000 network of Boreal Peatland Ecosystems
Acronym	Boreal Peatland Life
Country/ Region	Uusimaa,Varsinais-Suomi,Satakunta,Häme,Pirkanmaa,Päijät-Häme,Kymenlaakso,Etelä-Karjala,Etelä-Savo,Pohjois-Savo,Pohjois-Karjala,Kainuu,Keski-Suomi,Etelä-Pohjanmaa,Vaasan rannikkoseutu,Keski-Pohjanmaa,Pohjois-Pohjanmaa,Lappi,Ahvenanmaa/Åland,Baltic Sea Suomi (SF)
Dates	01-JAN-2010 to 31-DEC -2014
Coordinating beneficiary	Metsähallitus, Natural Heritage Services
Associated beneficiaries	None
Budget	6,726,614.00 € (3,363,307.00 € 50%)
Contacts	Jouni Penttinen jouni.penttinen@metsa.fi
	http://www.metsa.fi/borealpeatlandlife

Background

Peatlands are critical for biodiversity conservation. They support many specialised species and unique habitat types, and may provide a refuge for species that are suffering from climate change. Moreover, peatlands are the most efficient terrestrial ecosystems as carbon sinks. The greatest threats to the Natura 2000 peatlands of Finland are related to ecological degradation, habitat destruction and a lack of social appreciation of their importance. Drainage is the most common problem for the peatland habitat types in Finland: drainage for forestry has negatively affected almost two-thirds of the original peatland area. Peatland drainage fundamentally changes the hydrology, flow, peat accumulation, acidity and nutrient conditions. These changes have reduced both the overall numbers and species diversity of the Natura 2000 habitat types.

Objectives

The project aims to improve the habitat quality of 54 Natura 2000 sites in the Finnish peatland network. It will concentrate on the restoration of priority habitats including three of the most threatened priority habitat types (Aapa mires, bog woodlands, and active raised bogs), which together cover 77% of a total project area of 7 704 ha. Whilst project sites are scattered throughout the country, special emphasis will be given to the peatlands in the Suomenselkä ridge area of central Finland, where 84% of the original peatland area is drained. In this demonstration region, a variety of actions, including social ones, will be carried out to improve the quality and representativeness of the Natura 2000 areas.
A detailed restoration plan covers 2 478 ha, management plans for three areas cover 2 261 ha and six areas covering 359 ha have been identified as potential patches of land for state purchase, or for establishment of private nature reserves.
Restoration of drained peatlands is based on restoring their hydrology: works to fill in ditches and build peat dams will be carried out at 52 project sites. Trees and shrubs that have grown after drainage on originally open or half-open peatlands will be felled and removed from 43 sites covering 3 143 ha. Furthermore, dead wood will be created on 82 ha of bog woodlands and other forested mires.
Actions to increase public awareness are expected to generate people's interest in and appreciation of the conservation and restoration works and of the importance of the Natura 2000 network. The network of environmental educators, nature guides and other experts established during the project will be maintained beyond the duration of this project.

Project	LIFE08 NAT/UK/000202
Title	MoorLIFE: Active blanket bog restoration in the South Pennine Moors
Acronym	MoorLIFE
Country/ Region	Yorkshire and Humberside
Dates	01-APR-2010 to 30-APR -2015
Coordinating beneficiary	Peak District National Park Authority
Associated beneficiaries	None
Budget	6,690,856.00 € (5,018,142.00 €%)
Contacts	Laura King laura.king@peakdistrict.gov.uk
	http://www.moorsforthefuture.org.uk/moorlife

Background

The project is taking place on the South Pennine Moors SAC. This site is important for active blanket bog and represents the most south-easterly occurrence of the habitat in Europe. In addition, the project area forms part of two SPAs – whose Annex 1 species include golden plover, dunlin, short-eared owl and merlin – all of which are dependent on blanket bog for breeding and/or feeding. The conservation status of the site has been under threat due to almost two centuries of heavy sulphate and nitrate pollution leading to the destruction or severe depletion of the essential sphagnum moss cover. Consequently fire damage, of which there is a history of severe and repeated events, has led to more extreme levels of erosion than if the moorlands had remained sphagnum rich during this time. Today however, even with a much reduced pollution load, erosion is now so widespread that not only is it difficult for sphagnum to become re-established but even those areas which have managed to retain sphagnum cover remain under continued threat of further erosion and new fires. The restoration of the favourable condition of the site depends on the re-establishment of a sphagnum rich bog surface.

Objectives

The main purpose of the project is to protect the 1 600 ha of active blanket bog by reducing the erosion on adjacent degraded peatland. To achieve this, the project aims to restore 862 ha of active blanket bog through stabilisation, diversification and gully blocking. To ensure the future sustainability of the blanket bog, the project also aims to carry out wildfire mitigation actions while also raising public awareness of wildfire risk and restoration. The final objective is to develop knowledge and understanding by effective communication to practitioners and policy makers.

Project	LIFE09 INF/UK/000032
Title	RESTORE - Rivers: Engaging, Supporting and Transferring knOwledge for Restoration in Europe
Acronym	RESTORE
Country/ Region	Uusimaa, Veneto, Gelderland, Utrecht, East Midlands, East Anglia, North West (UK)
Dates	01-SEP-2010 to 31-DEC -2013
Coordinating beneficiary	Environment Agency for England & Wales
Associated beneficiaries	River Restoration Centre (UK), Finnish Environment Institute (FI), Italian River Restoration Centre, DLG Government Service for Land and Water Management (NL), Wetlands International (NL)
Budget	1,794,567.00 € (872,753.00 € =50%)
Contacts	Antonia Scarr antonia.scarr@environment-agency.gov.uk
Website	http://www.restorerivers.eu/

Background

River ecosystems throughout Europe have been severely impacted by engineering projects for flood protection, navigation, water supply and hydroelectricity. It is estimated that less than 20% of Europe's rivers and floodplains are in their natural state and many species have been lost. The role of river restoration, often promoting 'soft' engineering solutions, as a tool to reserve some of the problems associated with damage to these ecosystems has grown considerably in recent decades, particularly at the local level. The aim of river restoration is to re-establish self-sustaining environments and to restore complete ecosystems. Applying sustainable river restoration serves both the Habitats Directive and the Water Framework Directive at several levels. River restoration at the local level aims to create and improve habitat conditions for key species; at regional level supports the Natura 2000 network; and across Europe can improve the entire ecological status of river basins. River restoration can also assist with adaptation to climate change by strengthening ecological networks and providing climate space. River restoration activities also play a crucial role in developing best practice approaches for flood risk management, especially through flood storage, serving the interests of the EU Floods Risks Directive. The overall river restoration effort is hindered, however, not by a lack of expertise at the local level but by a lack of opportunities for sharing best practice and knowledge. Addressing this gap in knowledge transfer is the main aim of the 'RESTORE' project.

Objectives

The project will develop a network linking policymakers, river basin planners, practitioners and experts across Europe to share information and good practice on river restoration activities. The main objectives are:

- To support river restoration practices across Europe. A database of river restoration projects will be created, providing understanding of policy opportunities and constraints, the effectiveness of restoration methods, design issues and project costs/benefits;
- To build up existing river restoration network capacity. Several river restoration networks are already established. The project will provide a European forum to support existing and emerging networks and will help identify the needs of networks and the barriers to effective operation and co-operation; and
- To promote effective river restoration knowledge transfer. The project will support the work of existing networks in communicating best practice. Tools to promote knowledge transfer will also be developed and used to communicate key messages to target audiences.

Expected results:

- Development of RiverWiki of 500 river restoration case studies
- Communication plans at regional and European level;
- Reviews of EU policy drivers:
- Publication of a river restoration handbook

Project	LIFE11NAT/SI/880
Title	Natura 2000 management programme for Slovenia for the period 2014-2020
Acronym	SI Natura2000 Management
Country/ Region	Slovenia (all regions)
Dates	20/08/12 -30/03/15 (30 months)
Coordinating beneficiary	Ministry of Agriculture and the Environment
Associated beneficiaries	Institute of the Republic of Slovenia for Nature Conservation Slovenian Forest Service Fisheries Research Institute of Slovenia Institute for Water of the Republic of Slovenia Chamber of Agriculture and Forestry of Slovenia
Budget	1,706,914 € (853,457€ =50%)
Contacts	Mladen Berginc mladen.berginc@gov.si; Julijana Lebez-Lozej julijana.lebez-lozej@)gov.si ; Andrej Bibic andrej.bibic@gov.si

Objectives

The objective is to prepare the Natura 2000 Management Programme for Slovenia for the period 2014-2020, to be adopted by Government for the next multiannual financial framework. Further objectives are to:

- integrate measures/solutions from the Natura 2000 Management programme into operational programmes for drawing down EU funds (agricultural, structural and cohesion, fisheries, LIFE+);
- finalise and update the Prioritised Action Framework;
- assess the achievement of the Natura 2000 Management Programme 2007-2013;
- communicate measures for Natura 2000 to different stakeholders and target groups, raise their awareness and increase awareness of the general public on the importance of Natura 2000;
- identify opportunities of Natura 2000 sites for local /regional development, jobs and economic growth;
- adopt an act (the Natura 2000 Management Programme) harmonized with all competent sectors to properly manage the Natura 2000 sites in the country in the period 2014-2020;
- through direct involvement of main stakeholders to contribute to understanding that Natura 2000 is also a good opportunity for sustainable development.

Main actions and expected results

- Preparatory actions include i) an analysis of the Natura 2000 Management Programme 2007 – 2013 to prepare recommendations for the follow on programme ii) an overview of the use of funds for Natura 2000 with recommendations on the better use of funds in the next programming period. The PAF for Slovenia will be updated on the basis of the preparatory actions.
- Conservation actions include i) preparation of guidelines for financing measures to achieve detailed conservation objectives, ii) preparation of the objectives and measures for a draft Natura 2000 Management Programme, and iii) preparation of the financing and development part of the draft Natura 2000 Management Programme .
- The draft Natura 2000 Management Programme 2014-20 will be open to consultation with major stakeholders. The draft Programme is subject to intergovernmental consultation. Consultation concludes with adoption of the programme by Government.
- Measures will be integrated in national strategic plans and development programmes for drawing EU funds from 2014-20. This will include consultations with ministries responsible for these programmes including the revision of specific Natura 2000 agri-environment measures.
- After adoption information workshops will be held for key stakeholders and public servants responsible for implementation of measures from the programme.
- A webpage will be created, also used for an IT tool to guide potential project applicants through the process of preparation and approval of the projects.
- A communication campaign promoting Natura 2000 and its management will be developed

Project	LIFE11NAT/ES/700
Title	Elaboration of the Prioritized Action Framework for Natura 2000 in Spain
Acronym	PAF NATURA 2000SPAIN
Country/ Region	Spain: all regions
Dates	01/06/12-31/05/14 (24 months)
Coordinating beneficiary	Fundación Biodiversidad
Associated beneficiaries	None
Budget	551,750€ (275,874€ = 50%)
Contact	M G Perez MGPerez@mma.es

Objectives

The project aims at improving the capacity for financing and managing the Natura 2000 Network in Spain through the preparation and implementation of a Prioritized Action Framework. The project will i) establish priorities in relation to Natura 2000 management, identifying the potential role of EU funds to the national Natura 2000 network and setting out the prioritised actions to be taken, including monitoring and evaluation measures, and ii) demonstrate how to implement prioritized actions through the design of a selected set of measures involving the use of different financial instruments.

Main actions and expected results

- Setting up an ad-hoc group for the elaboration of the PAF with representatives of the regional authorities responsible for the management of the Natura 2000 Network in Spain and chaired by the Ministry of Environment, Rural and Marine Affairs.
- Setting up a consultative group with representatives of public administrations responsible for the management of EU funds (EAFRD, RDF, FP7, etc.).
- Setting strategic conservation objectives and priorities for Natura 2000 for 2014-2020.
- Identifying the prioritised actions to be taken in the Natura 2000 Network and the financing needs for the next Financial Perspective, and setting out a strategic multi-annual approach.
- Description of key measures to achieve the strategic objectives and priorities.
- Identification of other financial instruments, including innovative financial mechanisms and preparation of a system for the use of such mechanisms in the Natura 2000 Network
- Selection, design and planning of 5-7 priority pilot actions with high demonstration value, involving the use of different financial instruments.
- Preparation of the national Prioritized Action Framework for financing Natura 2000 in Spain, dissemination to all relevant authorities and stakeholders, and submission to the European Commission

Project	LIFE11NAT/UK/385
Title	Development of a programme for the management and restoration of Natura 2000 in Wales
Acronym	N2K Wales
Country/ Region	UK: Wales
Dates	01/09/12-31/12/14 (28 months)
Coordinating beneficiary	Natural Resources Wales
Associated beneficiaries	None
Budget	1,330,276€ (665,132 € =50%)
Contact	Kathryn Hewitt k.hewitt@naturalresourceswales.gov.uk

Objectives

The purpose is to develop a programme for Natura 2000 in Wales that will:

- address all of Wales' Natura 2000 sites (terrestrial and marine) and be a strategic, costed framework, focusing on Natura 2000 sites, for making progress towards the achievement of favourable conservation status of habitat types and species
- have a high level of sign-up from relevant stakeholders in the public, private and voluntary sectors
- include a 'Natura 2000 Management and Restoration Programme for Wales' which provides a platform for seeking funding for Natura 2000 related projects from all potential sources
- establish conservation management priorities for the period 2014 to 2020, and provide signposting for prioritising actions thereafter;
- include financing plans for site management and non-site based mechanisms, based on assessment of the opportunities provided by the range of financial instruments;
- provide the basis for review and elaboration of a Prioritised Action Framework for Wales;
- identify key gaps in the evidence base for managing Natura 2000 and identify projects to address these.

Main actions and expected results

- A matrix or database identifying the key threats and conservation issues at site level and wider environment level.
- An account of current mechanisms, and assessment of effectiveness, to address the issues and risks to Natura 2000
- An inventory of proposed new mechanisms, or enhancements to existing mechanisms, necessary to address weaknesses, identifying priorities for development.
- For each mechanism, or mechanism type, identification and appraisal of potential funding sources.
- Development of costed action plans at appropriate scales for achieving site conservation objectives and maintaining or improving the conservation status of habitats and species.
- A Natura 2000 Management and Restoration Programme for Wales including an appropriate all Wales steering/governance structure to oversee its implementation
- An account of the design, conduct and results of the project identifying lessons learnt and best practice in the development of a programmatic approach to Natura 2000 which will be of benefit to other regions of the EU considering a similar approach.
- Identify evidence gaps and undertake the necessary work to fill those gaps in the project, or include such work in the action plans.
- Implement a communication and advocacy plan for the project
- Scope, specify and develop a means of holding data which can update a Natura 2000 programme and enable flexibility in forecasting and planning scenarios.
- Develop and implement a publicity strategy

Project	LIFE12NAT/IT/000370
Title	SPIN Strategy for the implementation of Natura 2000 in Sicily
Acronym	SPIN4LIFE
Country/ Region	Italy/ Sicily
Dates	01/09/13 -30/11/16 (38 months)
Coordinating beneficiary	Regione Siciliana - Assessorato del Territorio e dell'Ambiente - Dipartimento Regionale dell'Ambiente (DRA)
Associated beneficiaries	Comunità Ambiente Srl Associazione Centro Turistico Studentesco e Giovanile Dipartimento Regionale degli Interventi Strutturali per l'Agricoltura
Budget	2,630,150€ (1,315,075€ =50%)
Contacts	Salvatore Seminara s.seminara@artasicilia.eu

Background

Sicily has 238 Natura 2000 sites, which are threatened by fire, grazing, erosion, logging, hunting and agriculture pressure, industrial activities, inappropriate water management, urbanisation and uncontrolled human access. Consequently, an integrated regional strategy needs to be developed to improve the management of conservation actions and the implementation of buffering measures.

Objectives

The project's overall objective is to contribute to achieving the goal set by the EU 2020 Biodiversity Strategy of halting the loss of biodiversity and the degradation of ecosystem services. Specific objectives include:

- Putting in place a programme to restore sites, habitats and species to a favourable conservation status, and to ensure their long-term management, taking account of all potential sources of EU, national and regional funding. This will include the establishment of a list of priority actions to be carried out in the next decade;
- Improving the resilience of sites and their capacity to cope with environmental change by applying a range of practical measures within and around sites;
- Improving the quality and condition of the island's Natura 2000 sites through management or restoration activities and the establishment of buffer zones;
- Increasing the participation of stakeholders, including private land owners and civil society organisations, in nature conservation (relating to agricultural, fisheries and forestry areas);
- Achieving nature conservation via an integrated approach to the mitigation of, and adaptation to, climate change, in line with European Commission objectives.

Expected results

- A realistic overview of the value of the Natura 2000 network in Sicily, from an environmental and a socio-economic perspective;
- Improved multi-sectoral management of the island's Natura 2000 network;
- Increased mitigation of, and adaptation to, climate change at regional level;
- Increased public awareness about the benefits of Natura 2000 and ecosystem services, as a result of the production of a strategic communication plan for the next decade;
- More green jobs opportunities.

Project	LIFE02 NAT/UK/008527
Title	Developing a strategic network of SPA reedbeds for Botaurus stellaris
Acronym	Bittern
Country/ Region	North,Yorkshire and Humberside,East Midlands,East Anglia,South East (UK),South West (UK),West Midlands,North West (UK)
Dates	01-FEB-2002 to 30-JUN -2006
Coordinating beneficiary	RSPB
Associated beneficiaries	English Nature, Broads Authority, Hertfordshire and Middlesex Wildlife Trust, Lancashire Wildlife Trust, Lee Valley Regional Park Authority, Yorkshire Wildlife Trust, Rye Harbour Nature Reserve
Budget	6,484,498.00 € (3,890,699.00 € =60%)
Contacts	Nick Folkard nick.folkard@rspb.org.uk
Website	http://www.bitterns.org.uk

Background

The bittern (*Botaurus stellaris*) is a secretive bird found most often in marshes and extensive stands of reedbed. The species has been in steady decline throughout Europe, principally due to the loss of suitably large reedbeds. The UK is no exception. The highest recorded levels this century were in the 1950s when 50 booming males were heard. This dropped down to just 11 by 1997, pushing the bird to the edge of extinction. A first LIFE-Nature project "Urgent action for the Bittern (*Botaurus stellaris*) in the UK" (LIFE96 NAT/UK/003057) did much to halt this decline, and numbers have gradually recovered since. But the species still remained highly vulnerable, with poor breeding success at some sites, sub-optimal habitat at others and, in particular, the lack of a suitable network of sites to allow fledged young to disperse and establish new breeding populations.

Objectives

The project intended to take the conservation measures one step further by expanding the range of breeding sites and increasing the number of areas suitable for dispersing young and over-wintering birds. The long-term aim was to establish a more extensive network of strategically located and self-sustaining sites across the UK. This would be achieved in two ways: by optimising the conservation potential within eight existing SPAs already harbouring bittern, and by creating the right conditions for re-colonisation at a further 11 sites (generally located away from the core population, in order to encourage expansion). The beneficiary expected that as a result of these measures the number of booming bitterns in the UK would more than double to 65 and the number of breeding meta-populations would increase from four to 13 within ten years.

Results

The project was very successful in terms of its outputs. The project comprised both restoration work at existing reedbed sites and the creation of new reedbeds. The project also carried out a comprehensive dissemination programme, raising public awareness of the important work being carried out.

The project developed a number of new methods for reedbed management for bitterns, which have been based on RSPB research and consultations with others working on bitterns in the UK and Europe. These have aimed to provide more efficient and sustainable methods of enhancing and maintaining the quality of reedbed habitats for bitterns.

Project	LIFE12 ENV/UK/000473
Title	NaturEtrade: creating a marketplace for ecosystem services
Acronym	LIFENaturEtrade
Country/ Region	North, Yorkshire and Humberside, East Midlands, East Anglia, South East (UK),South West (UK),West Midlands, North West (UK), Wales, Scotland, Northern Ireland, Gibraltar
Dates	01-JUL-2013 to 29-JUN -2018
Coordinating beneficiary	The Chancellor, Masters and Scholars of the University of Oxford
Associated beneficiaries	None
Budget	1,829,416.00 € (914,708.00 € = 50%)
Contacts	Katherine Willis kathy.willis@zoo.ox.ac.uk
Website	

Background

One of the biggest threats to the global environment is land-use change. It is estimated that some 1,500 ha of ecologically rich land is lost every day to development in the EU. The sale and subsequent development of such land – by private and public landowners – can have significant environmental costs. For example, there is particular concern with regard to the effects of deforestation and the loss of peatlands on levels of atmospheric CO_2. EU environmental policies to address the wider issue of land-use change are increasingly focused on ecosystem services and in developing financial incentives for conservation. This would effectively make ecosystem services a tradable commodity. However, although there are some models, there are no simple tools or mechanisms to assess the value of ecosystem services at the landscape scale. There is also a lack of any international, transparent, trading platforms where sellers and buyers can directly trade in ecosystem services. As a consequence, the conversion of ecologically rich land to other uses will continue to be the easiest and most profitable option for many landowners.

Objectives

- The project aims to bridge the gap between academic research and policy on ecosystem service provision by creating a novel suite of easy-to-use tools and mechanisms to identify, map and create a marketplace for ecosystem services in Europe. It thus hopes to demonstrate a successful approach for enabling EU landowners to quickly assess the ecological potential of their land - in terms of the ecosystem services that it provides - and then to trade the associated ecosystem services.
- The project aims to develop an automated web-based tool that can uploaded information on land parcels and determine their ecological potential, based on the following ecological services: i) pollination; ii) clean water provision; iii) soil erosion protection; iv) carbon storage; and v) cultural services. It will be developed using existing research outputs, including models, maps and GIS layers. The easy-to-use tools and technologies will automatically generate landscape-scale maps, indicating the key ecosystem services and their spatial configuration.
- The project will also establish a web-based trading platform - 'NaturEtrade' - with all the required templates and controls. This will provide a structure through which parcels of land, and the ecosystem services they provide, as assessed by the project tools, can be safely and securely traded. Marketing and awareness-raising will be undertaken to promote the use of this novel mechanism and the delivery of private and public-sector investment in the ecosystem services provided by EU land.
- The project will conduct a study of land-use change before and after the introduction of the above project tools and technologies in four case-study regions in the UK, Romania, Croatia and Spain. It will examine satellite imagery of parcels of private and publicly-owned land every three months throughout the project. This will attempt to show the impact of the project in helping to reduce the loss of ecologically diverse land in Europe.
- The development of an ecosystem services market place ultimately aims to enhance the provision of environmental public goods. It will also contribute to the achievement of a number of EU strategic objectives, including those relating to a resource-efficient economy; climate resilience, a low-carbon economy; innovation for green infrastructure; and the creation of business opportunities, especially in the green economy.

Project	LIFE12 ENV/FI/000150
Title	Quantification and valuation of ecosystem services to optimize sustainable re-use for low-productive drained peatlands

Acronym	LIFEPeatLandUse
Country/ Region	Uusimaa,Varsinais-Suomi,Satakunta,Häme,Pirkanmaa,Päijät-Häme,Kymenlaakso,Etelä-Karjala,Etelä-Savo,Pohjois-Savo,Pohjois-Karjala,Kainuu,Keski-Suomi,Etelä-Pohjanmaa,Vaasan rannikkoseutu,Keski-Pohjanmaa,Pohjois-Pohjanmaa,Lappi,Ahvenanmaa/Åland,Baltic Sea Suomi (SF)
Dates	01-JUL-2013 to 30-JUN -2018
Coordinating beneficiary	The Finnish Forest Research Institute (Metla)
Associated beneficiaries	Metsähallitus, Finnish Environment Institute (SYKE), University of Helsinki, University of Oulu, Vapo
Budget	2,863,405.00 € (1,431,702.00 € = 50%)
Contacts	Anne Tolvanen anne.tolvanen@metla.fi
Website	http://www.metla.fi/hanke/8547/index.htm

Background

The natural state of mires in Finland has deteriorated as a result of large-scale drainage, the consequent overgrowing of open mires and the isolation of pristine mires. Large-scale drainage has also significantly increased environmental loading (i.e. the leaching of nutrients, suspended solids and organic matter from peatlands to downstream watercourses) and widely weakened the state of these water bodies. Northern peatlands, the target ecosystem, play an important role in the global carbon cycle. In their pristine state, mires sequester large amounts of atmospheric carbon dioxide (CO_2), and peatlands have been major global carbon stores for millennia. Peatlands are also natural sources of another greenhouse gas (GHG), atmospheric methane (CH_4).
Appropriate peatland use can protect the carbon store, and suitable reuse options can decrease the GHG emissions and create conditions for carbon sequestration and peat formation in drained and degraded peatlands. Thus, there is a need to find solutions for the management of peatlands to minimise the emissions of GHG. Without proper knowledge landowners or policymakers may carry out actions which conflict with the objectives of water protection and conservation of natural habitats, wild fauna and flora. The challenge is to develop mechanisms that can balance the conflicting demands on the use of peatlands and to ensure their sustainable use.

Objectives

The main objective of the project is to quantify and evaluate ecosystem services in order to assist land-use planners and policymakers in making ecologically, economically and socio-culturally sustainable land-use decisions. This objective will be met by developing and demonstrating a decision-support system, where ecological and economic data is aggregated to numerically optimise cost-efficient land-use options so that benefits from ecosystem services are safeguarded. The system will be tested and demonstrated to optimise the reuse of low-productive drained peatlands, which is the key issue concerning peatland use in Finland. The decision-support system provides an innovative, quantitative approach to increase the sustainability of peatland and reduce conflicts concerning its use, and it is applicable to any land-use planning, where ecological, economic and socio-cultural values may be in trade-off.

The specific objectives of the project are:
- The development and demonstration of a decision-support system to quantify and value ecosystem services and ecologically, economically and socio-culturally optimise sustainable land use;
- To consolidate and increase the knowledge base on the impacts of peatland use on ecosystem services through the compilation of multiple datasets and state-of-the-art modelling;
- To enhance general awareness, reduce conflicts, and promote stakeholder cooperation concerning the use of peatlands; and
- To promote the sharing and use of long-term monitoring data and scientific information in land-use planning.

Project	LIFE11 ENV/FI/000911
Title	Keidas - Urban Oases: Shaping a Sustainable Future through Environmentally Functional Landscape Features
Acronym	Urban Oases
Country/ Region	Uusimaa

Dates	01-JUN-2012 to 30-JUN -2017
Coordinating beneficiary	University of Helsinki, Dept. of Forest Sciences
Associated beneficiaries	Municipality of Vihti, Water Protection Association of the River Vantaa and Helsinki Region, Uusimaa Centre for Economic Development, Transport and the Environment.
Budget	3,411,690.00 € (1,702,770.00 € = 50%)
Contacts	Outi Salminen outi.m.salminen@helsinki.fi
Website	http://www.helsinki.fi/taajamakeitaat/

Background

Watersheds in urban environments are largely invisible and altered from their natural state. Widespread impervious surfaces, such as concrete and asphalt, and underground stormwater sewer networks have adversely altered watershed boundaries and lead to the rapid flow of untreated stormwater and snowmelt water into receiving bodies of water. Because of these artificial constructions, the ecosystem services provided by watersheds, such as water cleaning and regulation, are lost, with consequent harmful impacts on receiving waters.
Innovative landscape structures and designs are needed to improve urban watersheds, and it is important to go beyond current standards and to develop prototypes for accurate and comparable monitoring. Wetlands, including peatlands, are known to have an important environmental role in cleaning water, as well as acting as carbon sinks, particularly in regions with colder climates because of their high primary production and slow degradation.
The Baltic Sea is one body of water that has been suffering from changes to urban watersheds. The beneficiary participates actively in the Baltic Sea Challenge, a voluntary initiative to protect the Baltic Sea from all stakeholder activities

Objectives

The project aims to study how alternative constructions in urban watersheds can improve the functioning of natural systems and ecosystem services, thereby helping to reduce run-off of polluting substances to receiving waters. It hopes to contribute to reducing contamination, algal blooms and eutrophication in receiving rivers and lakes, and ultimately to improve the water quality of the Baltic Sea.
The project will study pilots in order to assess the potential for innovative stormwater wetland types and snow management swale structures as pervious waterways in densely constructed urban environments. The project actions will include the designs of all the prototypes and the monitoring stations.
The beneficiary will assess the value of functional landscape elements in providing environmentally beneficial ecosystem services, covering impacts on:

- water quantity (flood control);
- water quality;
- greenhouse gases (sink or source);
- biodiversity.

Expected results:

- Improved know-how on developing urban water ecosystem services through functional landscapes;
- Information about the costs of developing ecosystem services;
- Guidelines for two scale stormwater wetland types, as well as for structural stormwater and snow management swales for built-up urban areas, including refined soil mixtures, dimensioning and maintenance guidelines.

Project	LIFE11 NAT/NL/000771
Title	Nature development in the Natura2000 upper floodplains of the river IJssel
Acronym	Floodplain development
Country/ Region	Gelderland
Dates	01-JUN-2012 to 31-DEC -2017
Coordinating beneficiary	Vereniging Natuurmonumenten
Associated beneficiaries	None
Budget	3,268,719.00 € (1,634,355.00 € = 50%)
Contacts	Andries Stoker a.stoker@natuurmonumenten.nl
Website	http://www.natuurmonumenten.nl/projectbeschrijving-20

Background

The project is located in an area known as IJsselpoort and consists of the two sub-areas of Koppenwaard and Velperwaarden. The area is formed by the upper floodplains of the river IJssel, which is included in the Natura 2000 network of protected sites because of the presence of large areas of several threatened habitats and species. The area is threatened by intensification and over-fertilisation leading towards a monotonous landscape with low nature values and high euthrophication. Furthermore populations of many plant and animal species are highly fragmented, as a result of the loss of their favoured habitats

Objectives

The main objectives of the project are:
- To enlarge the area of characteristic riverine Natura 2000-habitats along the river IJssel and to create biotopes for species associated with these habitats; and
- To improve water safety by buffering and preventing the effects of climate change (e.g. high flood risks, but also drying out). To restore these habitats and create a more robust ecosystem, land purchase is crucial.

Secondary objectives include:
- Improving public accessibility and recreational zoning and extending recreational facilities in the project areas; and
- Involving local farmers in the (future) habitat-oriented management. The project is part of a more extensive project, "Rivierklimaatpark IJsselpoort", which is developing a spatial development programme for the upper floodplains of the river IJssel, to help mitigate any future negative impacts from climate change.

Expected results

- An enlargement of the target habitats by a total of 118 ha
- Water safety improvement measures will increase the water storage capacity in the floodplains and thus reduce the risk of flooding elsewhere. Furthermore, the measures will prevent habitats from drying out during summer and improve spatial connection of habitats and populations of species that are susceptible to climate change.