

COSTING THE EARTH? – translating the ecosystem services concept into practical decision making

LIFE Platform meeting on Ecosystem Services

LIFE PROJECT SUMMARIES

This summary of project activity has been compiled by the organisers using data from the LIFE websites and our own monitoring records. The information has been targeted to the themes of this meeting and it is not intended as a comprehensive record of the project activities. For more details about a project you can click on the link to the website. We apologise in advance for any errors. Projects are organised alphabetically by country and then in year order. We hope that you find this resource useful!

LIFE Grote NeteWoud	LIFE 12 NAT/BE/438	Contact: Ewoud L'Amiral
Project: Wilderness on human scale		

About: The lowland river system 'Grote Nete' is very suited to develop a vast woodland with new habitat for very critical species such as otter, black stork and beaver. The main focus of this project is the large-scale restoration, development and sustainable management of alluvial forest (90%), mainly by means of natural forestation, and small pockets of the most valuable open habitats (10%). This increase of habitats will be sustainable, because of the acquisition of at least 120 ha. Furthermore, the project aims to restore the habitat of Annex II fish species by improving the structure of the river or smaller streams and by facilitating the migration of these species. The sites of former weekend houses will be reintegrated in the natural river valley.

The beneficiaries aim to offer unique adventurous nature experiences and create public awareness that will stick to peoples' minds forever. Stakeholders will be involved and win-win situations are sought by combining the strengths of different partners. The support of local authorities to the project is expected because of the benefits it brings to their communities in an ecological and financial perspective (e.g. biodiversity, ecosystem services, catering to visitors, lower cost for water management, higher property prices).

Website: https://www.natuurpunt.be/pagina/inleiding-life-grote-netewoud

The project "Integrated planning tool to ensure viability of grasslands" (LIFE Viva Grass) No. LIFE13 ENV/LT/000189 is co-financed by the EU LIFE+ Programme, Ministry of Environment of the Republic of Lithuania, Administration of Latvian Environmental Protection Fund, Estonian Environmental Investment Centre and the project partners.







LIFE Green4Grey	LIFE 13 ENV/BE/212	Contact: Pieter de Corte and Katia van Tichelen

Project: Innovative design and development of multifunctional green and blue infrastructure in Flanders grey peri-urban landscapes

About: The project will demonstrate the innovative development and design of multifunctional green and blue infrastructure (GI&BI) elements in peri-urban areas. These elements will deliver multiple ecosystem services and functions for many different interested parties. The seven densely populated pilot areas covered by the project are part of the peri-urban areas of Brussels and Hasselt-Genk. One specific objective is to develop and use innovative approaches and pilot actions of ecosystem based multi-functional land use targeting a multiple set of green and blue infrastructure functions (incl. biodiversity/habitat improvement, water quantity-quality, health & well-being, socio-cultural, "green" business environment, climate adaptation, sustainable food production, education) in 7 integrated project area plan of multi-functional land use thereby upgrading a whole set of ecosystem services and functions.

Website: http://www.green4grey.be/

LIFE in Quarries	LIFE 14 NAT/BE/364	Contact: Kathleen Mercken

Project: Life in Quarries

About: Prior to the 90', the extractive industry in Wallonia was not subject to rehabilitation plans. From 1990 to 2003, actions undertaken mainly consisted in afforestation measures with indigenous and exotic trees. For about a decade, there is a will to enhance the biodiversity value of such areas. In 2012, FEDIEX even signed a sectorial charter on "Quarries and Biodiversity", with another federation, recognizing the importance value and role of quarries in the conservation and development of patrimonial species and habitats during and after the operational phase. Quarries are indeed generating a large diversity of temporary habitats, sometimes evolving to more permanent ones. However, the biological role and ecosystem services provision are often neglected though they are playing a significant role as stepping-stone and regulating green infrastructure in landscape. Among the project objectives is to test and define methods to prepare physical quarry infrastructures during exploitation processes. This will facilitate the establishment of restoration measures and therefore increase ecosystem services.

Website: <u>www.lifeinquarries.eu</u>

LIFE Belini	LIFE 15 IPE/BE/014	Contact: Stevie Swenne
Project: Belgian initiative for m	aking a leap forward towards good	status in the river basin district of

the Scheldt

About: The overall objective of the LIFE Belini is to support the targeted and coordinated implementation of the RBMP measures that will achieve significant progress towards the good status of water bodies in line with the WFD. It will carry out a set of measures that have been identified as most effective for improving the Scheldt RBD, in particular the three selected catchment areas. Special focus will be on implementing the WFD and RBMPs in a multi-functional way, implementing the Floods Directive and Flood Risk Management Plans, and strengthening local, interregional and international cooperation. Actions include implementing concrete projects in rural and highly urbanised areas to show that the area can support an effective riverine ecosystem. The project will

develop an Ecosystems Services Approach (ESA) monitoring framework using a best practice to describe combined technical, social and economic benefits. Website: No website available at 25/04/2017

Wachtelkönig&Uferschnepfe	LIFE 10 NAT/D/011	Contact: Heinrich Belting		
Project: Waterlogging and grassland extensification in Lower Saxony to improve habitats of the Corncrake (<i>Crex crex</i>) and Black-tailed Godwit (<i>Limosa limosa</i>)				
· · · · ·		uffered from dramatic losses of adequate		
		s range, i.e. north-western Germany and		
Benelux. In many cases breeding sites are occupied by single males that are not paired. Only a few				
breeding sites remain but these have a high amount of annual breeding. Many of the remaining				
habitats are overlapping with those of the black-tailed godwit (<i>Limosa limosa</i>). Given the significantly				
high proportion of breeding animals on its territory, Lower Saxony has a great responsibility for both				
these species within Germany and the rest of Europe. More than 90% of the Western populations of				
the black-tailed godwit are found here and in the neighbouring Netherlands and its breeding stock				
occurs exclusively in Member States. The project is managing the re-wetting and use of wet				
grassland in cooperation with local farmers to increase breeding productivity in these and other				
species in the grasslands.				

Website: www.wiesenvoegel-life.de

LIFE Feuchtwälder	LIFE 13 NAT/DE/091	Contact: Inga Willecke
-------------------	--------------------	------------------------

Project: Conservation and restoration of alluvial forests and bog woodland in Brandenburg

About: The project aims to protect, stabilize and develop bog woodland and alluvial forests in their natural characteristic including typical animal and plant species in three riverine systems in Brandenburg. This requires the establishment of a near natural water regime within the alluvial areas and forests as well as the associated waterways. Particularly the moorlands of bog woodlands (*91D0) depend heavily upon the stabilization and reestablishment of natural hydrologic conditions. For the conservation and stabilization of habitat type *91E0 it is planned to stabilize and improve the interdependence between the water course and its floodplain. In the long run this will cause the raise of the river bed and a frequent overflow of the watercourse during flood waters. Silvicultural measures will improve the habitat structure of alluvial forests (*91E0). The project has made significant progress with defining indicators for the alluvial habitats which will be tested in two project sites.

Website: www.feuchtwaelder.de

LiLa	LIFE 14 IP/DE/022	Contact: Stephan von Keitz	
Project: Living Lahn River – one river, many interests			
About: The project aims to contribute to the implementation of the Water Framework Directive to			
achieve a "good" ecological status for surface waters in the catchment area of the Lahn River, an			
eastern tributary of the Rhine. LiLa will serve as a pilot for the recategorisation of inland waterways			
that previously gave priority to waterborne transport. It will demonstrate an integrated multi-			
stakeholder approach to managing the Lahn catchment, which crosses several administrative			

boundaries, improving the ecosystem services it provides. Restoration of near-natural conditions will improve the Lahn's ecological status and biodiversity. The project will also create water retention areas and identify pollution sources to improve water quality. The concept of the socio-economic monitoring is being developed together with the University of Hannover, which is currently involved in various similar research activities. The project recently produced a concept study concerning progress towards this action and is in contact with the authors of the TEEB DE study relating to the analysis of ecosystem services in Germany.

Website: http://www.lila-livinglahn.de

VinEcos LIFE 15/CCA/DE/103 Cont	tact: Cornelia Häfner/ Sabine Tischew
---------------------------------	---------------------------------------

Project: Optimizing ecosystem services in viniculture facing climate change

About: A main task of nature conservation is to maintain ecosystems that protect the climate by carbon sequestration. Ecosystem-based approaches, focussing on synergies between nature protection, climate protection and climate adaption are more cost efficient than technical solutions. In this respect, the LIFE VinEcoS project will analyse the kind of services provided by the ecosystem and related values. Though ecosystem services are currently investigated for various areas, no relevant surveys are known for vineyards, yet. The project will apply an eco-economic evaluation approach and sustainably optimize these ecosystem services in the face of climate change. The main objective of the project is to optimize ecosystem services in vineyards by testing climate- adapted methods in viniculture. Relevant methods will be implemented on demonstration areas of Kloster Pforta vineyard and beyond.

Website: not available as of 26/04/2017

LIFE Patches & Corridors	LIFE 15 NAT/DE/745	Contact: Bernhard Theisse	n.
	a habitat network for th	e Violet Copper to prom	ote a sustainable
metapopulation			
About: The LIFE-Patches 8	. ,	•	
copper butterfly and its supporting habitat types. The overall objective is to establish a habitat			
network within and betwee	en Natura 2000 sites in orde	r to sustain violet copper	(sub) -
populations. Corridors and	stepping stones will be esta	blished by removing	obstacles and
developing new habitats. T	he project is at an early stag	ge and is discussing method	dology.
Website: not available as o	f 25/04/2017		

LIFE Mires Estonia	LIFE 14 NAT/EE/126	Contact: Jüri-Ott Salm		
Project: Conservation and restoration of mire habitats				
	About: The priority habitat types - active raised bogs (7110*), bog woodlands (91D0*) and			
Fennoscandian deciduous swamp woods (9080*) have become very rare in the European Union. This				
is mainly due to the negative impacts caused by drainage. Based on biogeographical overall				
assessment on Estonia, the status of the habitat types targeted by the project is not favourable nor				
secure. Thus, the overall	aim is to avoid harmful activit	es and improve or maintain the status of the		
mire habitats and the sp	ecies by passive conservation	or active restoration. The overall objective of		

the project is to secure the favourable conservation status of wetlands, especially mires and priority habitats protected under EU Habitats Directive - Active raised bogs, Bog woodland, and Fennoscandian deciduous swamp woods through the restoration of the hydrological regime as well as the abandoned peat mining areas, the project additionally aims to target the conservation of other species affected by drainage.

Website: https://soo.elfond.ee/

AwaRaEst LIFE	LIFE 14 CAP/EE/0009	Contact: Tiina Pedak

Project: Awareness raising and application quality improvement of the LIFE programme in Estonia

About: Overall, the vision of the capacity building is, that Estonia will have the means to educate all parties involved in LIFE and provide them with the theoretical knowledge and technical support they need to leverage all the LIFE possibilities. The purpose of the project is to make the program more visible among potential Estonian applicants and public sector officials. Secondly, the project aims to educate potential applicants in drawing up good quality applications. Moreover, in the education process and networking, potential applicants will learn about the possibilities of LIFE, LIFE project management, see best practices, learn about how and where to find co-funding, etc. Also, a support platform with all relevant LIFE information will be created in the form of a new website.

Website: <u>http://life.envir.ee/</u>

LIFE+ Ordunte Sostenible	LIFE11 NAT/ES/704	Contact: José María Fernández-
		García

Project: Sustainable management of the Ordunte SCI for the natural conservation of the area and use of its resources

About: The Ordunte Mountains in the Basque Autonomous Region have been designated a Natura 2000 protected area because it is the only active blanket bog and largest peat enclave in the Basque region, it also has a matrix of pastures formed by mountain grasslands and natural woodlands. The main project aim is to maintain and/or restore the 'favourable' conservation status of habitats and species of Community importance through long term sustainable management of the area and by promoting the socio-economic development of the area by boosting public use of the area in ways compatible with conservation. One specific action deals with the assessment of socio-economic impact of the project actions on the population, local economies and ecosystem functions. The project has adopted the TESSA methodology (for rapid assessment of ecosystem services at sites of biodiversity conservation importance) to determine the impact on ecosystem functions. **Website:** www.bizkaia.net/lifeorduntesostenible

LIFE+Tremedal	LIFE 11 NAT/ES/707	Contact: José María Fernández-
		García
Project: Inland wetlands of the Northern Iberian Peninsula: management and restoration of mires and		
wet environments		
About: This project has successfully completed the actions to improve the conservation status and		

About: This project has successfully completed the actions to improve the conservation status and resilience of the peaty and wet habitat types in the project locations. It conducted restoration actions and implemented good management measures to reduce the threats that negatively impact on the habitats. This project pioneered the use of the TESSA tool in LIFE projects to assess the impact of the project actions on ecosystem functions. The project registered an improvement of regulating

services and cultural services as well as benefits to supporting services such as biodiversity and soil maintenance.

Website: www.lifetremedal.eu

LIFE BioDehesa	LIFE 11 BIO/ES/726	Contact: Maria Luisa Sillero Almazan

Project: Dehesa Ecosystems: development of policies and tools for biodiversity conservation and management

About: *Dehesas* are holm-oak man-transformed landscapes based on management of pasture for livestock. These *dehesas* form part of the natural heritage in Spain but have been declining in surface and status of conservation over the past decades, sometimes due to abandonment and sometimes to agricultural intensification or unsuitable agricultural practices. This is leading to a decrease in the biodiversity value of these ecosystems, which must be urgently reverted. The project is currently classifying and collecting data relevant to the 22 ecosystem services provided by the *deheasas*. Collecting economic information has proved difficult as owners are initially reluctant to provide financial data for their plots. The project is currently collecting monthly data and in 2018 will analyse the data and compare with the Millennium Ecosystems (EMA) methodology.

Website: www.biodehesa.es

REAGRITECH	LIFE 11 ENV/ES/579	Contact: Jordi Morato

Project: Regeneration and re-use of runoff and drainage water in agriculture plots by combined natural water treatment systems.

About: The project will try to demonstrate the feasibility to regenerate and reuse the irrigation waters (runoff and infiltration) as well as decreasing its pollutant charge and nutrients and pesticides in the soil using appropriate technologies such as natural treatment systems. The aim of this project is to demonstrate that the REAGRITECH system is valid to reuse the water resources without any risk for the environment. It also aims at demonstrating the capacity to collect the runoff and infiltration waters originally coming from irrigation, and re-inject them into the system. In this sense, the experimental system will serve to save water resources. As well, the efficiency of natural water treatment technologies for nutrient and pollutants (such as pesticides) reduction from drainage water will be tested during the project. To this end, two constructed subsurface wetlands and buffer strips will be used, to improve the water collected quality and to achieve a reuse of such water for irrigation purposes. The main goal for buffer strip systems will be to ensure the sanitation process on treated waters that will be lead to the infiltration point to feed the aquifer and the river. The project has assessed the ecosystem services provided by the green infrastructure.

Website: http://www.unescosost.org/project/reagritech

LIFE Blue Natura	LIFE 14 CCM/ES/957	Contact: Soledad Vivas
Project: Andalusian blu mechanisms	e carbon for climate change	e mitigation: quantification and valorization
sequestration rates of m on what is accumulated u from the carbon loss	About: The LIFE Blue Natura project's main aim is to quantify the carbon deposits and the sequestration rates of marsh and seagrass meadow habitats in Andalusia. An emphasis will be placed on what is accumulated under the ground or sea, as well as analysing predicted future developments, from the carbon loss rate, to potential carbon fixation and accumulation rates, and the emission/sequestration ratio of carbon from damaged meadow zones into the atmosphere.	

This information will enable an approximate evaluation of the environmental services created by these habitats to be made. It should also encourage existing initiatives to finance conservation and restoration projects of blue carbon sink-habitats and the development of key policies for mitigating and adapting to climate change, with special attention to carbon emissions trading or carbon markets.

Website: http://www.life-bluenatura.eu/

LIFE Adaptamed LIFE 14 CCA/ES/612	Contact: Rut Aspizua
-----------------------------------	----------------------

Project: Protection of key ecosystem services by adaptive management of climate change endangered Mediterranean socio-ecosystems

About: The link between the provision of key ecosystem services (e.g. soil retention, temperature regulation, pollination) and socio-ecosystems (e.g. mountain Mediterranean scrub, coastal dune forests) in three Mediterranean Natural Protected Areas (NPAs) is well established on the basis of long-term management experience and scientific knowledge. However, habitats in these NPAs are being increasingly and negatively affected by climate change, and these impacts can provoke changes in their capacity to provide ecosystem services. The LIFE ADAPTAMED project aims to mitigate the negative effects of climate change on key ecosystem services in three representative Mediterranean NPAs of socio-economic importance. The project will focus on developing, implementing, monitoring, evaluating and disseminating adaptive management measures. It will use an ecosystem approach and address socio-ecosystems identified as key for the provision of, among other things, soil retention, pollination, pastures (net primary production), temperature regulation, water provision, prevention of forest fires, and desertification.

Website: http://rediam-dev.lter-spain.net

Project: Olive Alive: towards the design and certification of biodiversity friendly olive groves

About: The project is aimed at halting the loss of biodiversity in olive groves of Andalusia (Spain). The intensification of olive cultures has been increasing since 1980s, with the elimination of any kind of natural vegetation within the olive groves and in the surrounding of the properties (path and plot edges, banks and slopes, riverine vegetation, etc.), causing loss of flora and fauna species but also soil erosion. The loss of biodiversity is currently affecting the 65% of the olive groves in Andalusia, but also in Italy, France and Greece and then, the potential replicability of project results is very high. The project objectives include:

- To define, on scientific grounds, an innovative model of olive growing with high demonstration value and agriculturally, economically and socially viable.
- To establish profitability formulas based on an added value appreciated by consumers (biodiversity) to help curb the abandonment of traditional olive farming or culture intensification, avoiding also indirect environmental costs (erosion, carbon footprint, pollution, hydric over exploitation and loss of biodiversity).
- To improve the ecosystem services provided by olive farming through restoration actions and creation of green infrastructure in demonstration plots and define restoration strategies that are technically, environmentally and economically viable and effective.

Website: <u>www.olivaresvivos.com</u>

LIFE Baccata	LIFE 15 NAT/ES/790	Contact: Javier Ferreiro da Costa
Project: Conservation and restoration of Mediterranean <i>Taxus baccata</i> woods (9580*) in the Cantabrian Mountains		
About: The overall objective of the project is to improve the conservation status of the habitat 9580* in 15 SACs in the Cantabrian Mountains, by acting on the following habitat conservation status indicators: Area of occupancy, Structure and functions and Future prospects. The project has not yet started the assessment of the impact of the project actions on ecosystem services.		
Website: not available as of 25/04/2017		

Urban Oases - Keidas	LIFE 11 ENV/FI/ 0911	Contact: Outi Wahlroos

Project: Shaping a Sustainable Future through Environmentally Functional Landscape Features

About: The beneficiaries have demonstrated the need for managing urban landscapes in a sustainable and holistic manner. These urban wetlands and swales are still quite new in Finland and that so the project has a national pilot value. In parallel, the project has identified innovative new functional landscape structure types as well as designed prototypes for accurate and comparable monitoring. One of the main results was to demonstrate and clarify what ecosystem services can be achieved through functional landscapes and at what cost. Ecosystems of fluctuating water level landscapes are becoming scarce and the project demonstrated the value and integrated costs involved in their restoration.

Website: http://www.helsinki.fi/taajamakeitaat/

LIFE MONIMET	LIFE 12 ENV/FI/409	Contact: Ali Nadir Arslan

Project: Climate change indicators and vulnerability of boreal zone applying innovative observation and modelling techniques

About: The future development of carbon and water balances and their relationship to climate change in boreal zone are currently poorly known. As also the indications of vulnerability of the region are not comprehended, there are handicaps in the evaluation of anthropogenic influences to climate change. The project is concerned with this issue by implementing a new innovative approach to in situ monitoring and mapping of climate change indicators that have an influence on the mitigation potential and vulnerability estimates of boreal forests and peatlands. The approach is based on a combination of different information sources describing phenology, CO₂ and CH₄ exchange, land cover, snow evolution and albedo. The information sources include in situ observations and Earth Observation (EO) (satellite) data, as well as ancillary data supporting vulnerability assessments. Dedicated high resolution regional models are applied to describe climate and land surface fluxes of carbon and water by different ecosystems. Among the project objectives are:

- To create links and add value to existing monitoring mechanisms such as ICOS and EO systems (GMES) and make use of data acquired in previous EU Life+ funded, and other projects related to ecosystem monitoring
- To create new webcam monitoring system to facilitate Earth Observation systems by providing time-series of field observation for calibration and validation, as well as to improve the assessment of forest ecosystem services
- To synthesize modelling and observation approaches to identify climate indicators.

Website: http://monimet.fmi.fi

LIFEPeatLandUse	LIFE 12 ENV/FI/150	Contact: Miia Parviainen

Project: Quantification and valuation of ecosystem services to optimise sustainable re-use for low-productive drained peatlands

About: Ecosystem service concept and the valuation efforts of ecosystem services are changing the discussion concerning land use policy and natural resource management. Increasing knowledge on the importance of healthy ecosystems for human well-being is leading to situations, where multifunctional and ecologically sustainable land use is an option to simultaneously generate ecological, economic and social benefits. The main objective of the project is to quantify and valuate ecosystem services to assist land use planners and policy makers in making ecologically, economically and socio-culturally sustainable land use decisions. Detailed objectives:

1) To develop and demonstrate a decision support system to quantify and value ecosystem services and optimize ecologically, economically and socio-culturally sustainable land use.

2) 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.

3) To enhance general awareness, reduce conflicts, and promote stakeholder cooperation concerning the use of peatlands.

4) To promote the sharing and utilisation of long-term monitoring data and scientific information in the land use planning.

Website: http://www.metla.fi/hanke/8547/index.htm

FRESHABIT	LIFE 14 IP /FI/023	Contact: Teppo Vehanen and Katri Rankinen
Project: Freshabit -	- towards integrated management of	reshwater Natura 2000 sites and habitats
About: The project	t aims to improve the ecological st	atus, management and sustainable use of
freshwater Natura	2000 sites in Finland, by tackling the	problems they face at catchment level. The
project is working	n eight regional Natura 2000 network	s to develop and demonstrate (among other
things) the following	0 0	
0,	6	to assessment, modelling and monitoring of
•	bitats, ecosystem services and cultur	
		at mentage,

- to develop biodiversity and ecosystem service indicators serving both national and international monitoring and policy needs;
- to enhance sustainable use of freshwater resources by integrating conservation approaches in ecosystem-based entrepreneurship and to improve environmental awareness.

Website: www.metsa.fi/freshabit

Oliveclima	LIFE 11 ENV/GR/942	Contact: Georgios Koubouris	
Project: Introduction of n	ew olive crop practices focusse	d on climate change mitigation and adaptation	
About: Human activitie	About: Human activities increase the level of greenhouse gases (GHG) in the atmosphere by		
introducing new sources	introducing new sources or removing natural sinks. Sources are processes or activities that release		
greenhouse gases; sinks are processes, activities or mechanisms that remove greenhouse gases. A			
balance between sources and sinks determines the levels of greenhouse gases in the atmosphere.			
Agriculture is often referred to as a 'source'. The introduction of human activities, including			

appropriate farming practices, which enhance the capability of plants to capture GHG and remove them from the atmosphere is essential in reversing this situation for agriculture, turning it into a 'sink'. Project OLIVE-CLIMA aims to reverse the situation of agricultural being a GHG source by introducing human activities that enhance the capability of plants to capture GHG.

Website: http://www.oliveclima.eu/

LIFE Natura2000Value Crete LIFE 13 INF/GR/188	Contact: Michalis Probonas
---	----------------------------

Project: The ecological services, social benefits and economic value of ecosystem services in Natura 2000 sites in Crete

About: The project seeks to address the main environmental problems that derive from lack of proper information on the NATURA 2000 network and the misconceptions of the EU environmental policy in Crete. The project aims to support conservation efforts targeting NATURA 2000 Sites in Crete, to motivate the public to participate into relevant decision-making, and to illuminate the socio-economic damage which will result from biodiversity loss in Crete. Specific objectives include:

- To inform and change negative attitudes of stakeholders who see NATURA 2000 Network as an inhibitive factor for economic development.
- To inform stakeholders, targeted audiences and the layman public in local societies on the ecological significance of NATURA 2000 Sites and on funding opportunities for "green" development in rural areas.
- To provide guidance to other NATURA 2000 site managing bodies in Greece on ways to develop information and communication strategy to highlight the ecological, social and economic value of ecosystem services.

Website: <u>http://www.ecovalue-crete.eu</u>

LIFE CLIMATREE	LIFE 14 CCM/GR/635	Contact: Antonios Kolimenakis

Project: A novel approach for accounting and monitoring carbon sequestration of tree crops and their potential as carbon sink areas

About: Agriculture is a significant factor for the capture of carbon dioxide since all vegetable production is based on photosynthesis, depended almost exclusively on sunlight, atmospheric carbon, water and minerals. The problem for the assessment of this capture and the consequent storage of carbon in the form of plant tissues has two aspects. The first aspect is originated to the production of GHG during the cultivation and the second to the annual life cycle of most of the crops, which translate to a cascading effect. This problem has driven to the neglect of a significant factor in the carbon life cycle analysis and therefore to a diminished amount of carbon storage calculated and utilized in the carbon trading system. Amongst the primary objectives of the project are:

- to improve and update the estimated carbon sink accounting within EU through the inclusion of the calculated tree-crop capacity (CO2 t/y);
- to estimate the socioeconomic benefit of tree crops' carbon storage and to evaluate the economic dimensions under different climatic and economic scenarios;
- to provide a more accurate and increased baseline for carbon sink, and to improve this way the knowledge base for the monitoring and evaluation of effective climate change mitigation actions and measures.

Website: http://www.lifeclimatree.eu/

LIFE GHOST LIFE 11 BIO/IT/55	56 Contact: Luisa Da Ros
------------------------------	--------------------------

Project: Techniques to reduce the impacts of ghost fishing gears and to improve biodiversity in north Adriatic coastal areas

About: The increasing frequency of abandoned, lost or otherwise discarded fishing gear (ALDFG) at sea is having an increasing impact on coastal habitats (UNEP/FAO 2009). Nevertheless, estimates of the impact of ALDFG on biodiversity and the economy are scarce and very little has been done to reduce this problem. Concrete measures are necessary to recover and improve biodiversity, especially in habitats affected by fishing activities (e.g. trawling). The rocky habitats of the northern Adriatic are rich in biodiversity, making them an appropriate area for demonstrating restoration measures. Project objectives include assessing the impact of ALDFG on biodiversity in the rocky habitats and estimating the economic value of the ecosystem benefits resulting from the removal and/or reduction of ALDFG. The project will produce a report on the economic value of ecosystem services that provides useful insights for identifying and quantifying the economic benefits of removing ALDFG.

Website: www.life-ghost.eu

Making Good Natura	LIFE 11 ENV/IT/168	Contact: Giampiero Mazzocchi

Project: Making Public Goods Provision the Core Business of Natura 2000

About: The project aimed at developing and testing a governance model for the management and financing of Natura 2000 sites through Payment for Ecosystem Services (PES) and self-financing tools. After a state-of-the-art analysis and a general study of Ecosystem Services in different environments, detailed analysis and demonstrations were carried out in 21 pilot sites distributed in several Italian Natura 2000 areas (located in 6 Italian Regions). The different nature of the selected pilot sites allowed the development of a general method applicable to similar contexts. A handbook and an IT tool were also produced to guide and help in the application of the developed MAKING GOOD NATURA (MGN) governance model.

To reach this objective the beneficiaries carried out the following main activities:

- Identification of the main local stakeholders and key actors to be involved in the definition of Ecosystem Services (ES) and PES schemes through participative approaches.
- Analysis of the ES provided by the pilot sites and identification of the most relevant ones (2-3 per site).
- Evaluation of the economic value of the ES identified.
- Identification of PES-like and self-financing schemes related to the identified ES.
- Development of a Governance Model for the Natura 2000 network
- Application of the developed model to the 21 pilot sites.
- Actual signing of part of the developed PES schemes
- Production of supporting tools facilitating the replication of the proposed methodology

Website: <u>www.lifemgn-serviziecosistemici.eu</u>

11

LIFE SeResto	LIFE 12 NAT/IT/331	Contact: Andrea Bonometto

Project: Habitat 1150* (Coastal Lagoon) recovery Seagrass RESTOration. Anew strategic approach to meet HD and WFD objectives.

About: The project aims to restore a large area of the Venetian Lagoon, which is the biggest transitional environment in Europe. Seagrass meadows in the lagoon have receded significantly in the past few decades due to human activities. The project aims to quantify and highlight the value of ecosystem services provided by the lagoon environment and particularly the angiosperm meadows.

Website: http://www.lifeseresto.eu/

E Xero-Grazing	LIFE 12 NAT/IT/818
----------------	--------------------

Contact: Luca Giunti

Project: Semi-natural dry grassland conservation and restoration in Valle Susa through grazing management

About: The project aims to conserve and restore the dry grasslands with orchids priority habitat within a representative area of a Natura 2000 site. The project will define a restoration methodology (guidelines) and will implement actions that will lead to the conservation and restoration of significant portions of this habitat. As a result, the project will be able to produce technical guidance that could be applied in the Cottian Alps (Alpi Cozie) Natural Park (and other SCIs) to ensure sustainable and long-term management of the habitat. In particular, the project aims to:

- Restore shrub and tree-encroached areas;
- Define a methodology and guidance for sustainable grazing;
- Develop the tourist potential of the area.

The project is testing the model developed by the Making Good Natura (LIFE 11 ENV/IT/1168) project to assess the impact of the project actions on socio-economics and ecosystem services.

Website: http://www.lifexerograzing.eu/it/

LIFE SAM4CP	LIFE 13 ENV/IT/1218	Contact:	Simonetta	Alberico	and	Andrea
		Ballocca				

Project: Soil administration models for community profit

About: The LIFE SAM4CP project aims to create an easy-to-use simulator that will allow territorial decision makers to include the ecological functions of soil within the assessment of the environmental and economic costs and benefits associated with possible urban planning and land use measures and choices. The simulator will allow different territorial transformation scenarios to be assessed according to the seven main ecological functions provided by soil to integrate these functions – and their potential gain or loss – into the decision-making process. The tool aims to help avoid land use decisions that disproportionately reduce soil functions. It also aims to enable a proper evaluation of the potential costs and benefits of specific measures aimed at reducing soil sealing. It will be used to help draft a municipal land-use plan to preserve the ecosystem services provided by soils. The project is developing an urban planning tool that simulates territorial transformation scenarios and calculates the effects of soil consumption/sealing in terms of reduction of ecosystem services provided. They will assess the costs and benefits of planning policies and land use choices that aim to reduce soil sealing and preserve the associated ecosystems functions and services.

Website: www.sam4cp.eu

PAN LIFE	LIFE 13 NAT/IT/1075	Contact: Mayera	Claudio	Marciano	and	Nicola
Project: Natura 2000 Action Programme						
objectives of the EU stra and the degradation of ev while stepping up the EU include a financial plan the management of the Nat over the next decade. It objectives into regional of	ective is to provide an effe itegy for biodiversity and its cosystem services in the EU contribution to averting glo nat considers all sources of fu ura 2000 network and an u t will also look at integratin development and employm services of the regional Natu nlife.eu/	headline targ by 2020, and r bal biodiversi unding (Europ pdated list of ng biodiversit ent. As part c	get to half restoring ty loss". 1 pean, nation priority a ry conserv of the pro	t "the loss c them in so f The project' onal and reg actions to b vation and cess the so	of biod ar as f s strat gional) e carr manag cio-ec	iversity easible, egy will for the ied out gement onomic

SOS4LIFE	LIFE15 ENV/IT/000225	Contact: Francesca Ugolini
Project: Save our Soil for LIFE		

About: SOS4LIFE is a demonstration project that aims to implement at municipal level the European regulations on soil protection. The main objective of the project is the implementation a viable regulation framework and planning tool to achieve, at municipal level, the "no net-land take" target and promote de-sealing interventions to compensate newly urbanized areas and improve the urban resilience to climate change. The project is developing a benchmarking method, at Italian and European level, for the evaluation of ecosystem services (ES) provided by urban soils and for the assessment of economic/environmental impacts caused by land take and soil sealing. They plan to define some guidelines for the management of urban soils and best practices to improve their ES. **Website:** www.sos4life.it

Soil4Wine LIFE15 ENV/IT/000641 Contact: Giulio Mela	
---	--

Project: Innovative approach to soil management in viniculture landscapes

About: The vineyard landscapes of North Apennines areas are affected by various soil threats, such as erosion, decline of organic matter, local and diffuse contamination, sealing, compaction, decline in biodiversity and landslides. All these are generated by environmental factors (such as geomorphology and slopes, climate change and soil types) and behavioural factors (such as vineyard and soil management practices). These soil management practices stem from radical changes in farming practices and cultivation techniques in recent decades. The abandoning of these areas and the gradual introduction of mechanisation has led to profound changes in land use and management. The project aims to address these threats through a series of management measures to prevent erosion and increase the organic content of the soils. In addition, the project will define the social, economic and environmental constraints of the proposed viniculture practices and of the soil ecosystem services in the pilot areas. The information will be used to design innovative soil conservation policies based on PES (Payment for Ecosystem Services).

Website: not available on 28/04/2017

Viva Grass (Host Project)	LIFE 13 ENV/LT/189	Contact: Heidrun Fammler and Zymantas Morkvenas
Project: Integrated planning tool to onsure viability of grasslands		

Project: Integrated planning tool to ensure viability of grasslands

About: Marginal agricultural areas in Europe, remote from geographical perspective or not suitable for intensive agriculture, are still hosting high biodiversity of natural and semi-natural grassland that has formed through interaction between various ecosystems and extensive farming practices. However, due to change in rural lifestyle, such regions are experiencing depopulation and land abandonment, which results in overgrowing of the fields by shrubs and consequent loss of grassland biodiversity. This is also the case in the Baltic States where high rate of land abandonment was experienced since beginning of 1990ies.

With EU accession and availability of agricultural subsidies the share of managed agricultural land has increased. However, measures within the Rural Development Programmes are more tending to promote agricultural production and intensive use of land, instead of continuing extensive, nature-friendly management practices. Although agri-environmental measures of RDP contribute to maintenance of valuable ecosystems, they have to be more area specific, since efficiency of grassland management depends on natural and socio-economic conditions of the particular area. Furthermore, only economically viable management practices can be long lasting.

The Project aims to support maintenance of biodiversity and ecosystem services provided by grasslands, through encouraging ecosystem based approach to planning and economically viable grassland management. The project shall demonstrate opportunities for multifunctional use of grasslands as basis for sustainability of rural areas and stimulus for local economies.

Specific objectives are:

- To scrutinise synergy potentials & shortcomings in land use & nature conservation policy as well as best practice examples in relation to sustainable grassland management and come up with proposals for improvement of the policy and legal framework
- To offer integrated, ecosystem based planning solutions based on economically viable grassland management scenarios
- To encourage implementation of economically viable grassland management models within areas of different natural and socioeconomic contexts
- To raise awareness and capacity of planners and local stakeholders on economically viable approaches to management of grassland ecosystems and services they provide.

Website: <u>www.vivagrass.eu</u>

WETLIFE2	LIFE 13 NAT/LT/084	Contact: Simonas Valatka		
Project: Restoration of proper hydrological conditions in Amalva and Kamanos bogs				
wetlands in Lithuar restoration of prope	nia. Its primary approach for er hydrological conditions. This	portant habitats within the Amalva and Kamanos rehabilitating the targeted habitats will be the hopes to benefit rare and endangered species as		
implement direct re	estoration activities to restore	es provided by the mire habitats. The project will the hydrology of targeted areas of bog habitat,		
, ,	0 0	vene to improve the quality of degraded bog and prestore wetland habitats. It will also re-establish		

fennoscandian deciduous swamp woods. The project aims to restore the conditions for the natural regeneration of features typical of active raised bogs. To further support this aim, the project will work to develop more sustainable agricultural practices in the areas surrounding the core area of Amalva wetland. It aims to agree and sign land management contracts with farmers of surrounding land to facilitate significant expansion of the bog habitats. Finally, the project will raise awareness among local stakeholders on the importance of peatland ecosystem services and their intrinsic and economic value to improve public co-operation and support for the aims of the project.

website.	www.wethez.gpi.it/

LIFE LT	LIFE 14 CAP/LT/008	Contact: Aušra Šmitienė
Project: Building LIFE ca	pacities in Lithuania	
offered by the LIFE prog and implement LIFE pro through raising Lithuania	ramme, to improve their kno jects, and know where to lo a's capacity to submit quality jects to ensure sustainability	nuanian NGOs and SMEs about opportunities owledge and skills to prepare LIFE applications ok for help, if necessary. This will be achieved applications and by providing opportunities for of the project outcomes.

LIFE Ecosystem Services	
-------------------------	--

LIFE 13 ENV/LV/839

Contact: Inga Hoņavko

Project: Assessment of ecosystems and their services for nature biodiversity, conservation and management

About: As the policies for environmental protection and management are developing in the EU, the necessity for economic evaluation of the ecosystems is increasing. The approach of ecosystem assessment and their services has been incorporated into various EU and EC planning documents. However, the practice of valuing ES has not yet been introduced to Latvia. Some of the key objectives of this project are to:

- adopt the international practices and experiences in economic valuation of ecosystems and their services for the situation and conditions of Latvia, creating a clearly comprehensive assessment system,
- perform the pilot implementation of the developed assessment system in two chosen Pilot Implementation Areas,
- promote the new methodology for the economic evaluation of ecosystems and their services by information and communication of the long-term benefits of the economically, environmentally and socially responsible decision making to improve the overall welfare of the region.

Website: http://ekosistemas.daba.gov.lv

LIFE REstore	LIFE 14 CCM/LV/1103	Contact: Kaspars Pabērzs
Project: Sustainable and responsible management and re-use of degraded peatlands in Latvia		

About: Peatland drainage was carried out in Latvia throughout the Soviet era, up to the 1990s. This contributed to the degradation of natural ecosystems and resulted in greenhouse gas (GHG) emissions from areas that previously stored large amounts of carbon (carbon sinks). According to

unofficial studies, in 1991, there were about 55 000 ha of peat extraction fields in various stages of exploitation in Latvia. Currently, peat extraction licences are issued for about 25 000 ha, with areas where activities have not been carried out for at least 20 years forming an additional 20 000 ha. A general lowering of the water table prevents the natural re-vegetation of these areas. Appropriate, sustainable, and integrated management of these peatlands is therefore required to protect ecosystem services and to reduce further GHG emissions. Among the project objectives is to develop a decision support tool for lands re-use planning in degraded peatland areas, which achieves an optimal balance between ecological restoration for biodiversity, economic benefits and GHG emission reductions. The project will conduct an ecosystems services impact assessment for degraded peatlands.

Website: www.restore.daba.gov.lv

CAP LIFE LAT

LIFE 14 CAP/LV/002

Contact: Zane Pūpola and Jānis Vēbers

Project: Capacity building for LIFE programme implementation in Latvia

About: The strategic vision of CAP LIFE LAT is to increase the number of Latvian LIFE projects applied, to increase their success rate at the European LIFE competitions and support a high-level implementation quality leading to new proposals.

Website: <u>http://www.lvafa.gov.lv/life</u>

Amsterdam Dunes	LIFE 11 NAT/NL/776	Contact: Luc Geelen

Project: Amsterdam Dunes – source for nature – dune habitat restoration project

About: Since 1850 the habitats of the Natura 2000 pSCI 'Kennemerland-Zuid' deteriorated notably in size and quality by desiccation due to water extraction, from air pollution, acidification and eutrophication through nitrogen deposition. This has led to wide-spread grass and shrub encroachments and accumulation of nitrogen rich organic matter in the topsoil. This caused even further deterioration of the habitats. From 1957, the water extraction was reduced and replaced by infiltration of purified water of the Rhine. This restored the hydrological balance of the site. The main objective of the project is to rehabilitate the priority dune habitat types. As part of the project they produced a 'Quick Scan' assessment of the ecosystem services provided by the dune systems featuring water extraction, nature conservation, recreation & coastal protection.

Website: <u>www.waternet.nl/life</u>

LIFE+ Laurissilva Sustentável LIFE 07 NAT/P/630 Contact: Azucena de la Cruz

Project: Recovery, conservation and sustainable management of the priority habitats of Serra da Tonqueira/Graminhais Plateau

About: This project objective was to enable the future management of native habitats and control of alien invasive species by establishing the basic needs: a nursery dedicated to the production of native plants for conservation purposes and a team of qualified people that can launch a programme for alien species control for the management of natural sites. This will also be ensured in a sustainable way due to the creation of the network of protected areas. This was made possible through the promotion of economic activities that depend of the maintenance of the rich local natural heritage and that could contribute to the continuity of the conservation efforts after the end

of the LIFE project. Also helping local producers developing products or services that could benefit the conservation of the area or economically support these efforts (like handcraft, gastronomy, tourism, etc).

Website: http://life-laurissilva.spea.pt

LIFE Rich Waters	LIFE 15 IPE/SE/015	Contact: Gerda Kinell and Sara Bergek
Project: Integrated approach to mobilise resources for resilient ecosystems and rich waters in the Northern Baltic Sea River Basin District		
2021, and achieve the EU which requires good sta measures listed in the RB to the achievement of th and capacity building n practices, as well as inr	l environmental objectives of tus of all waters. These air MP's programme of measur ne objectives in the RBMP. I neasures that support the	ost the full implementation of the RBMP 2016- of the Water Framework Directive (2000/60/EC), ms will be achieved through policy instrument es that have the greatest potential to contribute t will also be achieved by carrying out concrete e adoption of common approaches and best ain areas addressed by the project are water mental pollutants.

CSP	LIFE 11 ENV/UK/392	Contact: Travis O'Doherty

Project: Celtic Seas Partnership: Stakeholder driven integrated management of the Celtic Seas marine region

About: This project will support the implementation of EU environmental and maritime policy, using a stakeholder-led approach to contribute to the development of marine strategies, particularly under the Marine Strategy Framework Directive (MSFD) for the achievement of Good Environmental Status (GES) of marine waters. This is a favoured action under the 'Water' theme of EC LIFE+ Environment Policy and Governance. Under the Water priority, the project will also contribute to the implementation of the principles of the EU Recommendation on Integrated Coastal Zone Management. In amongst other important initiatives the project has one action dedicated to developing a way forward for assessing ecosystem services in the Celtic Seas Region. The final product and recommendations can be downloaded from the website.

Website: www.celticseaspartnership.eu

NaturEtrade	LIFE 12 ENV/UK/473	Contact: Peter Long	
Project: Creating a market place for accounter convices			

Project: Creating a market place for ecosystem services

About: In the EU, around 1500 ha of biodiverse land are lost every day to changes in infrastructure and urbanisation. The implications of this land conversion are serious; it directly affects key ecosystem services supporting climate change, natural infrastructure and sustainable use of natural resources (EEA, 2010). This project aims to demonstrate a novel approach to enable EU landowners to quickly assess the ecological potential of their land in terms of the ecosystem services that it provides, and then trade these services. There are five interlinked project objectives:

1. Creation of a web-based tool that can assess the uploaded parcels of land anywhere in the EU and determine the ecological potential /ecosystem services that they contain;

2. Establishment of a web-based trading platform, where parcels of land and the ecosystem services they provide can be traded;

3. Development of standard contracts/a land verification system and an economic structure of the trading platform;

4. Dissemination of the ecosystem service tool and marketplace to sellers and buyers in order to make this approach sustainable and raise awareness amongst landowners and businesses of environmental concerns and policies;

5. Determination of whether innovative techniques and tools for measurement and trading of ecosystems services can reduce loss of ecologically diverse land in Europe by monitoring four casestudy regions and comparing the amount of land-use change in these regions before and after the tools and technologies have been introduced.

Website: www.naturetrade.ox.ac.uk

Cumbrian Bogs LIFE+	LIFE 13 NAT/UK/443	Contact: Chris Kaighin and Jane Lusardi
Project Destantion of described by device during the second have Constraint CCI/CACs		

Project: Restoration of degraded lowland raised bogs on three Cumbria SCI/SACs

About: Lowland raised bogs are a threatened habitat in England and all the sites have been damaged by past operations such as local peat winning, landscape-scale peat extraction via surface milling and land drainage to facilitate agricultural conversion. This project proposes to tackle areas where the restoration process of Habitat 7120- Degraded raised bog capable of natural regeneration needs to be started in order to achieve Favourable SAC conservation status within the expected 30 year period. The project has made excellent progress with the assessment of the socio-economic impact of the project and its contribution to ecosystem function restoration. The project worked with NE specialists in ecosystem services, economics and hydrology to develop a brief for external consultants to complete.

Website: www.gov.uk/government/publications/cumbrian-bogs-life-project

EcoCo LIFE	LIFE 13 BIO/UK/428	Contact: Paul Sizeland
Project: Implementatic CSGN	n of integrated habitat networl	s to improve ecological coherence across the
About: Habitat fragme of habitats and specie improved provision of through identifying so restoration, creation a conservation activities functionality across la resilience of habitats ecological coherence, the project's ecologic implement habitat m improve the ecologica	es in a changing climate, whic ecosystem goods and services. ome of the most beneficial pla nd improvement opportunities, to make habitats better connect ndscapes. This will improve the and species in a changing cli the project will seek to deliver ral coherence protocol will ta anagement restoration to im- al status of water bodies (thro	the major challenges facing the conservation h is also fundamental to the continued and The project will address habitat fragmentation aces within the CSGN to implement habitat Management will include a suite of concrete ted, more diverse, and improved in quality and e CSGN area's ecological coherence, and the mate. In the targeting of improvements to multifunctional benefits. The development of ke account of these directives and aim to prove ecological coherence which will also ugh, for example, reducing diffuse pollution arian zones to retain more water run off). The

project has developed a monitoring framework for assessing ecosystem function impacts in the management zones, this includes a set of indicators.

Website: <u>www.ecocolife.org.uk</u>

BureLIFE	LIFE 14 NAT/UK/054	Contact: Cordelia Spalding	

Project: Bringing the Bure back to LIFE: Hoverton wetland restoration project

About: The main aim of this project is to restore the naturally eutrophic lake habitat (H3150) to a biodiverse, clear-water state whilst minimising the carbon footprint of the project. The restoration work will also benefit priority Calcareous fens with *Cladium mariscus* habitat (H7210*), species such as otter (S1355) as well as its SPA condition and in particular its assemblage of water fowl including wigeon (A050), gadwall (A051) and shoveler (A051). Project is currently carrying out baseline surveys to inform the assessment and act as a comparison once the interventions are completed. **Website:** http://hovetongreatbroad.org.uk/

	1	
MoorLIFE 2020	LIFE 14 NAT/UK/070	Contact: Matt Buckler
Project: MoorLIFE 2020		
About: The aim of this	project is to conserve and pro	tect of the EU priority habitat Active Blanket
Bog (ABB) within the Sou	uth Pennine Moors SAC and th	e ecosystem services it provides. Among the
objectives are to safeg	uard ABB through promotion	n of land management appropriate to the
protection of ABB; respo	nsible enjoyment of ABB and re	educing the threat of wildfire to ABB. This will
be done through:		
• Creating a land ma	anagement advisor role and	programme of events and communication
materials to engage	with the full range of land owr	ers and managers on managing the SPM SAC
with regard for the p	protection of the ABB and its eq	cosystem services.
• Delivery of an inno	vative and diverse programm	e of communication events, materials and
campaigns to engage	e with the public, local commu	nities, and visitors to the SAC about the value
and importance of A	BB and the role they can play i	n looking after this habitat.
The ecosystem services a	and socio-economic assessmer	ts will be carried out by external consultants.

Website: http://www.moorsforthefuture.org.uk/moorlife2020