

INFORMATION NETWORK



GRAHAM BENNETT

The GreenInfraNet project's main goal is to strengthen the development and implementation of green infrastructure in EU regions, and one of the most important project

outputs is the European Network for Green Infrastructure Knowledge and Experience (ENGINE). The network will promote the further development of green infrastructure at local and regional levels throughout Europe by facilitating the collection and dissemination of information and experience, including successful examples of green infrastructure, lessons learned and best practices.

The objectives, structure and modalities of the network have been discussed with the EC in order to ensure that it complements the EC's new digital platform, which will focus on the European dimension of green infrastructure. It is hoped to link the network to the EC's platform and also to the European biodiversity, forest and water information systems.

At the recent project workshop in Valencia (see report on page 2), the GreenInfraNet partners agreed that ENGINE will be hosted by the Nicosia Development Agency. It will be established by the end of 2014 and membership will be open to organisations from across Europe that are active in developing or implementing green infrastructure.

Graham Bennett, external expert to the Green Infrastructure Network project

Maximising ecosystem services

According to the definition used by the global initiative The Economics of Ecosystem and Biodiversity (TEEB), ecosystem services are the direct and indirect contributions of ecosystems to human wellbeing. Most studies on this subject identify four categories of ecosystem services:

- **Habitat** — Ecological functions underlying the production of ecosystem services (habitats for species, preservation of biological diversity).
- **Provisioning** — Goods obtained from ecosystems, such as food, water, wood, fuel and medicines.
- **Regulating** — Benefits obtained from ecosystem processes, such as climate regulation, water purification, erosion control and flood prevention.
- **Cultural** — Intangible benefits from ecosystems in terms of recreation, tourism, spirituality.



RAISING SIGHTS: The EC has set targets aimed at protecting the ecosystem services that contribute to human wellbeing

In May 2011, the EC adopted the communication "Our life insurance, our natural capital: An EU biodiversity strategy to 2020" (COM[2011] 244), in which the 2020 target includes halting the degradation of ecosystem services and restoring them as far as is feasible.

Target 2 is to ensure that: "By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 percent of degraded ecosystems." This would include mapping and assessing the state of ecosystems and their services by 2014. The European Parliament followed up the communication in the form of a resolution adopted in April 2012.

In May 2013, the EC adopted the communication "Green Infrastructure (GI) – Enhancing Europe's Natural Capital", which was approved by the European Parliament in December 2013. It defines green infrastructure as a "strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services".

The emphasis of the green infrastructure concept is on maximising ecosystem services based on the integration of natural solutions into spatial planning and territorial development. Knowledge of ecosystem services thus needs to be improved, and concrete examples provided of how to promote their multiple benefits. The GreenInfraNet project contributes to meeting these challenges by showcasing innovative examples and best practices.

Carles Castell Puig, Planning Officer, Barcelona Province Council

Second Knowledge Network Workshop, Valencia

The second workshop on the establishment of the European Network for Green Infrastructure Knowledge and Experience (ENGINE) took place in Valencia on April 10, 2014, to inform partners about developments to date and to decide on the next steps.

Mr. Eleftherios Loizou from the Nicosia Development Agency (ANEL), the partner responsible for the establishment of the knowledge network, and external expert Dr. Graham Bennett informed participants about a meeting with the EC's Directorate-General for the Environment, which took place in December 2013. Valuable outcomes of that meeting were the high level of interest on the part of the EC in the network; a framework for cooperation between the network and the EC's platform for green infrastructure that is currently under preparation; and potential sources of funding.



GETTING ON THE SAME PAGE: Partners agree on steps in the creation of a knowledge network

During the Valencia workshop, Dr. Bennett gave a presentation on the design of the knowledge network, its relationship with the future EC platform, and the framework for cooperation with other EU networks. Mr. Loizou described the establishment of the network in Cyprus, including suggestions for potential funding.

Discussions among participants led to the following conclusions:

- The network should focus on the development and implementation of green infrastructure at local and regional level.

- Data shared within the knowledge network should be accessible to all.
- A minimum annual budget for the network was presented and agreed.
- All partners should participate in the knowledge network.
- The process should be finalised by October 2014, and the network officially announced at the project's final conference in Flevoland, the Netherlands, in November 2014.

Eleftherios Loizou, Managing Director, Nicosia Development Agency (ANEL), Cyprus

STUDY VISIT TO THE LIFE RENAIX EL BOSCO PROJECT



FOREST HEALTH: The restoration of ecosystems has benefits for society

Forests are fundamental elements of European green infrastructure: they usually occupy large areas and are home to Europe's richest biodiversity. At the

same time, they deliver multiple benefits and environmental services to society, which is why the GreenInfraNet project has devoted much of its energy to sustainable forest management. One example is a workshop for the transfer of best practices, held in Valencia, Spain, focusing on the EC-funded project LIFE Renaix el Bosc (Rebirthing the Forest). The main goal of the project is the conservation and restoration of the Tilio-Acerion forests of northern Valencia, a priority habitat in the Natura 2000 network. Partners visited the project area in the highlands of Castellon to learn about the habitat restoration methodology being applied. The project aims to recover forestland that has lost its natural values due to long-term silvicultural and agricultural management. The project plots comprise nearly monospecific pine forests, in

which the tree density often limits natural ecological succession. Through pine thinning and the reintroduction of broad-leaved species characteristic of the habitat, such as the large-leaved linden and wych elm, the project aims to recover the natural values of these forests. Many of the reintroduced species are fruit producers that improve ecosystem interactions and dynamics. The benefits of improving the ecological integrity of forests become evident over time in the form of more stable green infrastructure due to improved ecosystem resilience and resistance capacities. Forest ecosystems with high ecological dynamics are also better able to withstand the increasingly evident impacts of climate change.

Daniel Arizpe Ochoa (LIFE Renaix el Bosc Project Manager, CIEF-VAERSA)



BEST PRACTICE IMPORTS TO HUNGARY

The SITxell GIS-based method for assessing natural and socioeconomic land values is being transferred from Barcelona to two pilot sites in Central Hungary in order to improve the GIS methodologies used by the Hungarian authorities for spatial planning. The transfer is taking place between January and July 2014, and results will be presented in September.

Planning for the transfer began in October 2013 during a study visit for experts from Barcelona Province Council and Hungarian stakeholders, at which participants examined the applicability in Hungary of the indicators used in Barcelona's SITxell methodology.

Assisting the REC in the best practice transfer to Hungary are the Lechner Lajos Knowledge Center (formerly the National Spatial Planning Agency); and the Institute of Geodesy, Cartography and Remote Sensing.

Several consultation meetings have been organised, with the participation of Hungarian stakeholders, including ministries, national park directorates, universities, academies and monitoring centres. These consultations have provided an opportunity to discuss the main functions of different open areas and to encourage decision makers to rethink planning objectives based on an integrated land-use assessment. The first discussions served as a good starting point for transfer activities in Hungary. The contribution of the different stakeholders to the transfer activities is essential, as they need to provide access to the necessary data and to assist in the harmonisation of the indicators.

Reka Prokaj, Transfer coordinator in Hungary, REC



FINER POINTS OF PLANNING: Consultations have focused on methodological issues related to the best practice transfer

HANDS-ON ACTIVITY: Partners have a go at testing the quality of water samples

GREEN INFRASTRUCTURE CONNECTIONS

On April 10, 2014, the Centre of Applied Forest Research (CIEF) in Valencia, Spain, organised a field trip as part of a GreenInfraNet project event. After several intense sessions, including a dissemination event, the fifth meeting of the Steering Committee, the fourth best practice workshop and the second workshop on the European Network for Green Infrastructure Knowledge and Experience (ENGINE), partners enjoyed a study visit to the Turia River Natural Park to view green infrastructure in practice.

The Turia River Park features examples of the few remaining riparian Mediterranean forests and a wide range of native species of flora and fauna. Its location close to the city of Valencia represents both an opportunity and a challenge for its conservation. Existing problems and threats include waste left behind by thoughtless visitors and cyclists riding at high speeds along the paths.

The visit was organised in collaboration with the Limne Foundation, a local NGO that deals with land stewardship and environmental volunteering. The latter is a key tool for improving the Natura 2000 network, especially with respect to rivers and other aquatic ecosystems, which can be regarded as ecological corridors or stepping stones that connect Natura 2000 sites. The director of the foundation and a volunteer guided the group through the recreational area along the river, explaining some of the recent restoration activities carried out to combat the alien invasive species *Arundo donax*, a tall bamboo-like grass that very rapidly replaces native plant communities, degrading quality habitats and altering the functioning of ecosystems. The group visited one of the plots where *A. donax* canes and rhizomes are removed periodically. The Limne Foundation also carries out activities to raise environmental awareness and connect local populations with nature in collaboration with public authorities and private enterprises. At the end of the visit, partners took part in a very effective demonstration activity: water samples were taken from the river and checked against a biotic index based on the presence of macro-invertebrates, as well as on dissolved oxygen, nitrates and pH, using a simple field kit.

David Campos-Such, Limne Foundation/**Gloria Ortiz**, Coordinator of Component 3, VAERSA/Centre of Applied Forest Research (CIEF), Regional Ministry for Territory, Infrastructure and Environment, Valencia, Spain



RIGHT DIRECTION: A study tour in Latvia provided an opportunity to witness sustainable forest management in practice

Green infrastructure and forest management

Forests cover about one-third of the territory of the EU and can be considered one of the most important components of European natural landscapes, with a crucial role in mitigating the impacts of climate change and preserving biodiversity. Nearly a quarter of the EU's forested area is protected under the Natura 2000 network, and much of the rest is home to species protected under EU legislation. Forests also offer wide-ranging benefits for society, including human health, recreation and tourism and employment for nearly 2 million people.

According to the EC's 2013 communication "A new EU Forest Strategy: for forests and the forest-based sector", protection efforts should be aimed at maintaining, enhancing and restoring the resilience and multifunctionality of forest ecosystems as a core element of the EU's green infrastructure that provides key environmental services as well as raw materials.

Sustainable forest management was defined in 1993 at the pan-European Ministerial Conference on the Protection of Forests in Europe as the "use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national and global levels, and that does not cause damage to other ecosystems."

There were plenty of opportunities for the exchange of experience on sustainable forest management during a two-day study visit for project partners in Latvia, where forests cover almost 48 percent of the territory and play an important role in the national economy.

On the first day of the workshop, participants visited Gauja National Park to learn more about forest habitat restoration measures aimed at biodiversity conservation. On the second day, a study visit was organised to a farmstead in Vidzeme region, where participants were introduced to sustainable forest management in practice and its important aspects in privately owned forests.

Bearing in mind the vital role of forests for society and nature, as well as the economic and recreational functions of forest land and its value as a habitat for plant and animal species, it is clear that green infrastructure is an important tool for harmonising the wide variety of interests in sustainable forest use.

Elina Lice, Ministry of Environmental Protection and Regional Development, Latvia

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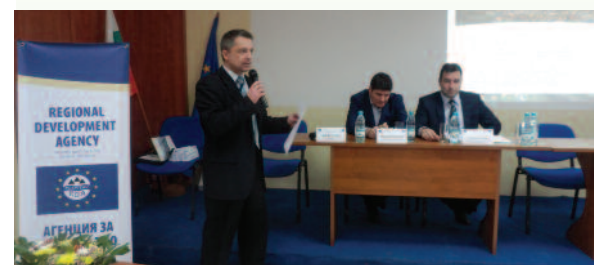
LIVELY DISCUSSIONS IN PLOVDIV, BULGARIA

Under the patronage of the governor of Plovdiv District, Mr. Vencislav Kaymakanov, a national conference was held on December 12, 2013, organised by GreenInfraNet partner Plovdiv Regional Development Agency. The 120 participants at the conference included representatives of the Central Information and Coordination Unit of the Council of Ministers, the Ministry of Environment and Water, the Ministry of Regional Development, Plovdiv Regional Administration, Smolyan District Administration, Bulgarian municipalities, the Bulgarian Network of District Information Points, non-profit organisations and the business sector.

The conference focused on how green infrastructure is reflected in regional development strategies and in the development of the Natura 2000 network. The topics discussed by participants included the GreenInfraNet project; green infrastructure in the regional development strategy for Plovdiv in the next programming period; the South Central Planning Region's support for the concept of green infrastructure; the conservation of globally significant biodiversity in the landscape of Bulgaria's Rhodope Mountain; and the Operational Programme "Environment" during the new programming period, with a focus on Natura 2000.

All the presentations attracted great interest and led to lively and lengthy discussions. The feedback questionnaires indicate overall satisfaction with the conference programme and with the GreenInfraNet project.

Alexander Tonkov, Plovdiv Regional Development Agency with the Business Support Centre for SMEs



PACKED AGENDA: Leading the discussions in Plovdiv

To establish the European Network for Green Infrastructure Knowledge and Experience (ENGINE), we are keen to find out about similar initiatives, individual regions with good practice, as well as companies/ organisations carrying out research on the topic. If you have experience to share, please get in touch!