

ELN-FAB NEWSLETTER

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ELN-FAB and soil functional biodiversity

The SUSTAIN project team held its second meeting together with ECOSOM, hosted by the University of Wageningen, the Netherlands, on 26 and 27 February 2013. SUSTAIN (Soil Functional Biodiversity and Ecosystem Services, a Transdisciplinary Approach) is a research project funded by the ERA-NET SNOWMAN under the EU 6th Framework Programme.

ECNC, host of the secretariat of the European Learning Network on Functional AgroBiodiversity (ELN-FAB), is a project partner and plays a role in disseminating the project results.

The main objectives of SUSTAIN are to understand how reduced tillage systems, as compared to conventional tillage systems,



Photo: Károly Róbert Föiskola

impact soil functional biodiversity and soil functions such as soil structural maintenance, organic matter and nutrient cycling, water regulation, filtering and pest regulation. SUSTAIN aims to quantify the consequences of reduced tillage systems on the soil ecosystem services of food production and greenhouse gas mitigation, and investigate the socio-economic sustainability of reduced tillage systems.

The involvement of ELN-FAB will ensure Europe-wide dissemination of the results

to the various stakeholder groups. The SUSTAIN project runs for three years (2011-2014).

For more information see:

<http://www.snowmannetwork.com/main.asp?id=110>

Quantification of ecological services for sustainable agriculture

The kick-off meeting of a new EU research project called QUESSA: 'Quantification of ecological services for sustainable agriculture', was held from 6 to 8 February 2013 in Wageningen, the Netherlands. ELN-FAB is participating in the project's Stakeholders Advisory Board.

The objectives of the project are:

- to determine which characteristics (traits) of semi-natural habitats determine the ecosystem services provided to agro-ecosystems;
- to determine how ecological services are affected by farm and landscape management;

- to quantify actual delivery of ecosystem services provided by semi-natural habitats and particular field management for the major European cropping systems across agro-climatic zones;
- to predict, scale up and synthesize the effect of semi-natural habitats on ecosystem service delivery in crop systems at farm, landscape and European levels;
- to provide a novel web-based tool for farmers to calculate their own levels of ecosystem service provision;
- to provide recommendations for policymaking at national and European levels for the management of semi-natural habitats.

Pollination and pest control have been identified as focal areas of the project, but soil fertility, weed control and social services will also be considered. The project will run until 2016 under the lead of the Game & Wildlife Conservation

Trust (UK) and with the involvement of research partners from all over Europe.

More information:

Dr John Holland (Game & Wildlife Conservation Trust) <http://www.gwct.org.uk/>

Biodiversity indicators for European agriculture

Cultural landscapes in Europe are the result of cultivation by farmers over centuries. In order to quantify effects of intensification, specialization and abandonment on biodiversity, indicators are needed which allow changes to be tracked.



The European FP7 project BioBio proposes a set of 23 indicators, which have been tested in 12 European and 3 non-European case study regions. The indicators measure the three levels of agricultural biodiversity at farm level as well as the influence of farm management.

- Genetic diversity: Based on interviews with farmers three indicators have been selected (number and amount of different breeds and varieties and origin of crops).

- Species diversity: The indicators cover four ecological functions relevant to agriculture: plants as primary producers, earthworms as decomposers, wild bees and bumblebees as pollinators and spiders as predators.
- Habitat diversity: Four general indicators describe the composition of agricultural habitats on a farm, four indicators relate to specific habitats like field crops, hedges and trees. A further indicator measures the percentage of semi-natural habitats.
- Farm management: The indicators relate to energy input, fertilizer and pesticide input, field operations and grazing, all of which have been shown to influence biodiversity.

The BioBio indicator set can be applied to monitoring and evaluation programmes in order to measure the impact of agricultural policy on biodiversity at farm level. A sampling scheme, which would allow monitoring of the effects of the European Common Agricultural Policy (CAP), would require 0.25% of the CAP subsidies to be invested in biodiversity monitoring.



Further information on each indicator and all project publications are available from: www.biobio-indicator.org

New tool to map pollinator exposure to pesticides

As bee populations decline, exposure of pollinators to pesticides is of increasing concern. Italian research has now demonstrated that an index of exposure which accounts for insect behaviour, as well as pesticide application, provides a valuable tool for assessing the realistic risk of pesticides to pollinators.

For more information:

<http://ec.europa.eu/environment/integration/research/newsalert/pdf/318na2.pdf>

Source: Science for Environment Policy, European Commission DG Environment News Alert Service.

ELN-FAB at BioVak 2013

ECNC had a stand at BioVak 2013, a trade fair for sustainable organic agriculture, nature, food quality, corporate responsibility and entrepreneurs. The event was held in the IJsselhallencomplex in Zwolle, the Netherlands, on 23 and 24 January 2013. More than 330 exhibitors presented their products and services to the public. The trade fair reflected the developments in the entire organic sector and beyond, from farmer to retailer. Just like last year, the event provided a great opportunity for knowledge transfer and networking. This year it attracted more than 15,000 visitors, mainly from the Netherlands, Belgium and Germany.

Biodiversity was a new theme for the BioVak fair. Several interesting workshops were organized on the topic, for instance about the greening of the Common Agricultural Policy and the protection of farmland birds and biodiversity. ELN-FAB's presence also contributed to

awareness-raising on biodiversity for a more sustainable agriculture in Europe.



Photo: Veronika Mikos

For more information visit: www.biovak.nl

Knowledge transfer on natural pest control

Exchanging knowledge is an essential component in advancing the uptake of practices that are effective. This general principle applies strongly to the topic of natural pest control and how this can be supported by habitat management practices. Traditional knowledge holders, such as local farmers, are still too often underrepresented in international knowledge platforms. An evidence-based approach, including the recognition of uncertainty and that much is still unknown, provides a useful way forward for increasing the implementation of natural pest control interventions. ELN-FAB is an example of a targeted knowledge transfer platform at a European level.

These are some of the take-home messages of the workshop on natural pest control that was held in the framework of the Biodiversity-Knowledge project. Some 50 participants from all over Europe shared their experience on 17 and 18 January 2013 at a meeting in Paris. A number of presentations covered the BiodiversityKnowledge project, methods for synthesizing and assessing knowledge, involving traditional knowledge holders, dealing with uncertainty and non-knowledge (the type of knowledge of which one is so far unaware).

Smaller groups dealt in an interactive way with prioritization of natural pest control interventions, how to deal with knowledge gaps, and evidence on effectiveness of interventions.



Photo: Marie Vandewalle

Natural pest control is one of the topics covered by 'functional agrobiodiversity'. Therefore, ELN-FAB was invited to join the workshop and share experience about knowledge transfer with the participants. ELN-FAB has a lot to offer and possibilities for closer cooperation with the BiodiversityKnowledge project were identified.

Pollinator-dependence an underestimated risk?

Researchers have found that crops which rely heavily on pollinators have lower yields compared to less pollinator-dependent crops. They also have slower growth in yields and less stable yields from year to year. The results highlight the importance of managing biodiversity to support ecosystem services, such as pollination, on which much modern agriculture depends.

For more information:

<http://ec.europa.eu/environment/integration/research/newsalert/pdf/36si8.pdf>

Source: Science for Environment Policy, European Commission DG Environment News Alert Service.



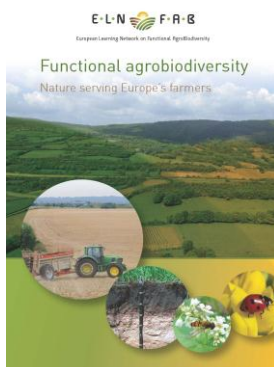
Photo: Veronika Mikos

Publications

Functional agrobiodiversity: Nature serving Europe's farmers

A guidance book has been prepared by the European Learning Network on Functional AgroBiodiversity (ELN-FAB) on how to integrate FAB into farming practices.

The aim of this publication is to provide insight into the concept of FAB, its links to agricultural and biodiversity policy and the opportunities offered for a more sustainable agriculture and country-



side in Europe. Special attention is given to natural pest control, pollination, soil fertility, and disease control. It is hoped that this insight will stimulate a wider uptake of FAB measures across Europe.

The book will also be available in a printed format.

[Download publication](#)

Online publication in Environmental Science & Policy

Bianchi, F.J.J.A., V. Mikos, L. Brussaard, B. Delbaere and M.M. Pulleman (2013) Opportunities and limitations for functional agrobiodiversity in the European context. *Environmental Science & Policy*. <http://www.sciencedirect.com/science/article/pii/S1462901112002523>

To counteract the negative effects of intensive agriculture there is increasing interest in approaches that reconcile agricultural production

with the conservation and sustainable use of biodiversity and associated ecosystem services. Integration of functional agrobiodiversity (FAB) in agricultural systems holds promise to meet these challenging objectives, but requires the generation, transfer and implementation of tailor-made knowledge, and policy development.

This article is available free of charge. Read [online](#).

Upcoming events

International Day for Biological Diversity (World Biodiversity Day, 22 May 2013)

The United Nations proclaimed May 22 the International Day for Biological Diversity (IDB) to increase understanding and awareness of biodiversity issues. The theme Water and Biodiversity was chosen to coincide with the United Nations designation of 2013 as the International Year of Water Cooperation. Water is essential for life. No living being on planet Earth can survive without it. It is a prerequisite for human health and well-being as well as for the preservation of the environment.

For more information visit:

<http://www.cbd.int/idb/2013/>

<http://www.unwater.org/water-cooperation-2013/home/en/>



EFCF conference (20-24 June 2013, Bodø , Norway)

The conference, organized by the European Federation of City Farms, will take place in the city of Bodø, Norway from 20-24 June 2013. The main issue of the conference will be how we work to give our children **roots and wings**; learning about history and finding their future. You will visit a 4H-farm, a sami cultural centre for children and some coastal centres. You will

also be given the possibility to go fishing and rowing, prepare food, listen to storytelling, work with wool and knives, catch and prepare your own food from the sea and celebrate the Norwegian midsummer eve.

For more information visit:

<http://www.cityfarms.org/events/view/23>

Summer of Soil (7 July–9 August 2013, Järna, Sweden)

Summer of Soil is a five-week, multidisciplinary accelerator programme designed to awaken and inspire a collaborative movement to rebuild and maintain living soils. The programme will include a series of hands-on soil-related [Courses](#), an exhibition of regenerative growing practices and

the five-day [Living Soil Forum](#) for bringing conversation to action.

For more information visit:

<http://www.summerofsoil.se/>

The ELN-FAB project is currently financially supported by the European Commission LIFE programme; Ministry of Infrastructure and Environment, the Netherlands and Flemish Land Agency (VLM), Belgium. Fundraising continues in order to expand the Network in the long term.

This newsletter aims to inform the partners, intermediaries and interested stakeholders of the ELN-FAB initiative. For more information visit: www.eln-fab.eu, or contact the ELN-FAB Secretariat:

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