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Environment (including Climate Change)**

Collaborative project



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***First stakeholders meeting report
on stakeholders needs***

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Report from the EcoFINDERS Stakeholder Forum

On December 5th 2011, the 1st Stakeholder Forum Meeting of the EU-FP7- EcoFINDERS project was held at the University of Coimbra, Portugal. The Stakeholder Forum consisted of the following members:

Dr. Jose Luis Rubio, vice-president of the European Society of Soil Conservation

Prof. dr. Helena Freitas, Vice-Rector of the University of Coimbra

Dr. Ben Delbaere, Deputy Executive Director of the European Centre for Nature Conservation

Dr. Antonio Bispo, French Environment and Energy Management Agency

Prof. dr. Bram Brouwer, Executive Director of the BE-Basic consortium/ CEO of BioDetection Systems

It was agreed that Prof. Brouwer would serve as rapporteur of the Stakeholder Forum.

The members of the Stakeholder Forum represent academic, International policy and SME & Industrial parties. The Stakeholder meeting started with an overview of the EcoFINDERS project presented by coordinator Prof. Dr. Phillipe Lemanceau, followed by presentations of the various Work Packages by the WP leaders. Thereafter, the members of the Stakeholder Forum were invited to present which stakeholder needs and requirements they can envision with respect to the EcoFINDERS project outcome. For written information on the EcoFINDERS Programme the Stakeholder Panel was referred to the project website: www.ecofinders.eu.

Overall impression of the project:

The EcoFINDERS project is of very high relevance because it:

- addresses an issue (soil biodiversity) that is until now underrepresented in the policy and public debate
- integrates and expands data, information, research and knowledge on soil biodiversity at the European scale, filling a gap in biodiversity research in Europe
- visualizes and aims at quantifying the connection between soil biodiversity, ecosystem function and ecosystem services, including an attempt to value (economically and otherwise) the services provided by healthy soils
- is expected to result in knowledge and message that can be of benefit in communicating to policymakers at EU and other levels on the importance of soil biodiversity and the need to take protective and restoring action
- has a high potential to deliver novel solutions for improvement of biodiversity and environmental monitoring & quality assessment of e.g. soil, as well as products (e.g., novel microorganisms, enzymes & antibiotics) for improvement of solutions in the biobased economy.

On the basis of the information presented on the EcoFINDERS website and during the stakeholder meeting it can be stated that the project and the partnership is very impressive, the tasks and objectives very ambitious, and the layout and connection of the work packages seems fit for purpose and built up in a logical sequence and division.

Stakeholder needs

1) ECNC-European Centre for Nature Conservation (www.ecnc.org) as a stakeholder represents biodiversity conservation in Europe, with a focus on the interaction between science, society and policy at all geographic levels. In order to carry out its activities in support of its mission, ECNC needs reliable, up to date and scientifically correct information and knowledge. Such knowledge is then used and digested for policy purposes, for example in communicating to the European Commission.

ECNC holds the secretariat of the European Learning Network on Functional Agrobiodiversity (ELN-FAB, www.eln-fab.eu), which represents a group of stakeholders. This network provides a facility for information and knowledge exchange in Europe on functional agrobiodiversity (FAB) and brings together practitioners, land managers, academics, policymakers, businesses, farm advisory bodies, and civil society. Soil biodiversity forms an essential component of FAB.

Therefore, the specific needs of ECNC and ELN-FAB from EcoFINDERS are:

- summarized information and knowledge on soil biodiversity in Europe (status, pressures, importance for above-ground biodiversity, for agriculture and for other land use) for use in communication with policymakers at all geographic levels;
- summarized and where possible quantified information on the ecosystem services provided by soil biodiversity in varying soil types across Europe, in connection to selected land use sectors and practices. The ecosystem services covered by EcoFINDERS cover a good range, especially in relation to agriculture. There is a specific need to also consider ecosystem services that are not directly of relevance to agriculture or forestry, such as in relation to combating desertification, soil erosion or land degradation;
- overview of and access to the pool of experts on soil biodiversity and related matters as included in the EcoFINDERS team as an essential contribution to filling a knowledge gap in other European networks on biodiversity (research);
- regular information updates on progress and outcomes of EcoFINDERS in order to allow us to act as multipliers and provide input when needed.

2) BE-Basic consortium for Industrial and Environmental Biotechnology (www.bebasic.org) represents 27 Parties, consisting of leading Industrial Biotechnology several SMEs, Universities and knowledge Institutes. BE-Basic is a public-private Partnership which originated from a merger of B-Basic (industrial Biotechnology consortium) and Ecogenomics (environmental & ecological genomics consortium). The main focal point of the BE-Basic consortium is to foster and promote the development of biobased, ecologically balanced, sustainable industrial chemicals. The starting materials is biomass, instead of fossile sources for production of chemical building blocks, and energy carriers in a sustainable manner, i.e., taking care of aspects of nutrient recycling, soil quality, environmental safety, and minimizing ecological impact.

The specific needs of the BE-Basic consortium are:

- Basic information to support selection of indicators for determining ecological status & functioning of e.g. soils as well as biodiversity assessment
- Knowhow on which soil factors determine microbial community composition & function
- How can we assess soil health/stress using microbial community based indicators?
- What are normal operating ranges of microbial community & functional indicators ?
- What is the predictability of microbial indicator species for ecosystem services & biodiversity?
- Methods capable of measuring aspects of soil health, ecosystem functioning
- Microorganisms encoding novel bioactive compounds, such as enzymes, antibiotics

3) The ESSC is an important European scientific network founded on November 1988 to promote soundly based policies of soil conservation in its broadest sense throughout the countries of Europe. The ESSC is an interdisciplinary, non political association with more than 500 members in 46 countries. The ESSC pursues its aims by: Supporting investigations of soil degradation, soil erosion and soil conservation; Providing a network for the exchange of knowledge about soil degradation processes and soil conservation practices; Informing the public about major questions of soil conservation; Collaborating with institutions and persons involved in practical conservation work.

Our vision for the outcomes from the EcoFinders project are:

--1. Increase the knowledge on the interactions between soil degradation processes and soil biota and biodiversity levels at various scales.

-- 2. Improve the knowledge on the biodiversity components of soil in its role of mitigating climate change by regulating CO₂ cycle

-- 3. Elaborate appropriate awareness-raising practices for a greater appreciation of the soil biodiversity, its contribution to providing goods and benefits to society and the need to protect this vital natural resource

-- 4. Provide basis information and criteria for the development of a pan European monitoring system for soil biodiversity

-- 5. Increase the knowledge of the role of soil biodiversity on soil fertility and agricultural production in view to contribute to overcome food security problems

4) The French Environment and Energy Management Agency (ADEME) in charge of soil protection deeply involved in the following research issues : (i) soil monitoring and development of indicators based on soil biodiversity, (ii) characterisation of soil contamination and redevelopment of brownfield, (iii) links between soil and climate change and (iv) use of soils to recycle waste. Based on the experience gained on a National programme on the development of soil bioindicators, Antonio Bispo presented the results of a survey made on 40 French stakeholders dealing with soil issues (including regulators, farmers, laboratories, soil remediation) about their use (or no use) of soil bioindicators. The following questions were included in the questionnaire :

- Do you matter about "soil quality" and is your definition?
- Do you matter about soil bioindicators ?
- Do you already use soil bioindicators in your « current » evaluation ? If yes, which ones ?
- What are your needs ? What do they expect to use better soil bioindicators ?
- If matter on soil biodiversity, why didn't you use soil bioindicators ?

Two kind of answers were obtained depending on the main domain of activity:

- stakeholders dealing with the management of contaminated land were looking for indicators able to detect the effects of contaminants on ecosystems but also to address the potential bioaccumulation of contaminants in the food webs. Indicators to forecast the success of vegetation redevelopment on contaminated lands were also needed.

- stakeholders giving advice to farmers need to have a clear link between food production and the chosen indicators. Indicators were needed mainly to describe soil fertility, pathogen control and water availability.

For both, the selected indicators should be easy to communicate and as much as possible standardized including the access to reference values to interpret the results.

Based on the output of the survey and also on the main issues managed by ADEME, it was recommended to EcoFinders to

1. Link soil bioindicators with functions and ecosystem services, preferably biomass production, carbon storage and natural attenuation. The valuation of the contribution of soil organisms activity to such services will be of great help to communicate with many stakeholders.
2. Standardize protocols and provide guidelines but with reference values to help the interpretation of results (scoring / index methods should also be considered). If possible, sampling and analysis protocols should be as much as possible simplified to be used by laboratories and/or even farmers in order to further reduce costs.

5) University of Coimbra, Portugal: more research is needed on soil biodiversity and soil ecosystem services

2. A wide European approach, including case studies under different land uses and climate regimes, such as the one proposed in the EcoFinders project is essential and should be emphasized to support the scientific agenda for soil preservation and soil sustainability.
3. The involvement of different countries, universities, and industries, is an excellent platform to promote the scientific qualification of graduate students across Europe. Scientific and technical workshops, as well as summer schools should be promoted.
4. The results of the EcoFinders project should be regularly acknowledged by the EU technical commissions involved in the EU soil protection Directive.

Conclusions & Recommendations

- The project's aims and goals are very ambitious, but feasible and cover a large number of different aspects
- The Stakeholder Forum suggests to the management of the EcoFINDERS project to measure progress on a selected number of key aspects, .i.e. key performance indicators
- The Stakeholder Forum recommends to select a few topics that can generate so-called "quick wins"
- It is recommended to keep the Stakeholder Forum informed about progress of the project via teleconferences, new letters, dissemination of papers, etcetera
- It is suggested to the management of EcoFINDERS to host at least two more meetings of the Stakeholder Forum, i.e. one mid-term and one at the end of the project.

Amsterdam, 07 March 2012