

Supplementary material 1:

Work-Package 9 description as it was submitted with the EcoStack-proposal at the second stage. The WP description was completely written by the WP coordinator, Ingeborg Menzler-Hokkanen.

WP number	9				Start Date or Starting Event				1				
WP title	Policy options and dissemination of project results												
Participant number	1	2	3	4	5	6	7	8	9	10	11	12	13
Short name of participant	UH	S-LU	AU	R-Res	U-NE	ISA-RA	JKI	U-KA	U-NA	Lu-ke	AU-PL	FB-UB	U-BL
Person-months per participant:	24	16	10	6.9	4	11	3	4	5	0.5	9	8	12
Participant number	14	15	16	17	18	19	20	21	22	23	24	25	
Short name of participant	UJA	UC	UB	Pro-Ag	U-VA	K-ÖN	For	AT	LL-H	Kop	U-TU	CPI	
Person-months per participant:	9	6	8	8	3	3	3	0	2	5	1	0	

Objectives

The **overall objective** is to ensure the uptake and widespread implementation of ECOSTACK results to achieve productivity gains by the farming sector in Europe.

The objective will be reached in collaboration with WP1, WP8, and a range of Actor Groups, as well as by knowledge sharing and collaboration with the biodiversity and ecosystem services community in Europe. These interactions are key elements in the process. Furthermore, preparation of policy-oriented documents and presentation of policy options to decision-makers at all levels is crucial for enabling the project results to be widely adopted in agricultural practise.

This WP has the following **specific objectives**:

- Preparation and presentation of policy options to decision-makers concerning the exploitation of functional biodiversity to achieve productivity gains in agriculture
- Support acceptance and uptake of ECOSTACK results by early and continuous engagement with Actor Groups
- Facilitate enhanced uptake of ECOSTACK in Europe through the co-design and development of an on-line resource hub and a range of within-country dissemination and training activities.
- Continually assess impacts and embed a long term legacy to exploit functional biodiversity within the farming sector in Europe

These objectives will be achieved by the following structure and tasks:

Description of work and the role of partners

Coordinator: Ingeborg Menzler-Hokkanen (UH), deputies: Ingvar Sundh (SLU), Carolin Grieshop (KOEN)

The general approach is to use an explicit multi-actor methodology, the Learning Platform, to reach the specific objectives. The Learning Platform includes 3 key activities:

- 1) joint scientist and Actor Group participation workshops, in collaboration with WP1 and WP8, where the focus is on communication and joint learning to assist in the co-design and development of socially acceptable technologies;
- 2) research on Actor Group perspectives, practices and potential economic impacts;
- 3) support learning within and between WPs to create a lasting legacy by tailoring dissemination materials and adaptation guides for EcoStack implementation for different Actor Group groups across Europe.

Task 1 Policy options for exploitation of functional biodiversity

Lead: Ingvar Sundh (SLU)

Subtask 1.1 Policy options for regulatory systems

The aim is to provide policy options for the current regulatory frameworks dealing with microbial products used for enhancing microbial functional biodiversity to the benefit of plant production and protection. The current situation is very complicated and non-intuitive, with very different policies depending on, particularly, the main aim/mechanism of the intervention and whether live organisms are actively added to the system or not. EcoStack will investigate more efficient and cheaper implementation of microbial interventions that enhance the functional biodiversity and which are expected to strengthen the societal impacts of EcoStack:

(i) We will perform an inventory of the current policies that may apply to interventions with plant beneficial microorganisms. The inventory will form the basis for a critical, comparative analysis of potential (realistic) risks the interventions may have for the cropping systems' functionality. This analysis will feed into new policy options for a more uniform and balanced system for regulatory policy for plant beneficial microorganisms. These policies will be based on the ecological traits of the organisms, rather than on the perceived type of use/application.

(ii) Arrangement of a regulatory workshop. The collective experience of EcoStack scientists plus the new results from EcoStack can form highly important inputs for regulators, policy makers, industry, and interest organisations within the plant beneficial microorganisms sector. At this workshop towards the end of the experimental phase of EcoStack (year 4), results and policy options will be disseminated to and discussed with relevant stakeholders (e.g. European Commission, EFSA, IBMA, EBIC, OECD Biopesticides Steering Group, regulators from outside EU).

Subtask 1.2. Policy options to support the role of functional biodiversity in agriculture

EcoStack will produce a Guidance handbook and policy briefs aimed to provide options for policy makers in the area of functional biodiversity. These are based on the key outputs from three workshops concerning the science and the Actor Group responses regarding uptake of EcoStack results (WP1). These are framed in terms of the potential for industry competitiveness and environmental impacts, as well as barriers to implementation and policies that can increase implementation of ECOSTACK (from WP1, WP8). The first policy briefs will include policy options and recommendations to the midterm assessment in 2020 and the CAP negotiations in 2019/20 for the next CAP period.

Task 2 Enhancing uptake of EcoStack in Europe

Leads: Ingeborg Menzler-Hokkanen (UH) and Vili Harizanova (AUPL)

This task will:

- Develop a resource hub through co-design to promote information sharing and interaction between Actor Groups, including blogging, video and Twitter as appropriate
- Deliver a series of farmer field days where EcoStack can be seen in practice.
- Provide capacity development for researchers in information sharing

Sub-task 2.1 Resource Hub: An externally facing project website will be developed and form a portal for the Resource Hub which will provide up to date information on findings from the project as well as blogs, event information and videos. Involvement of the MA partners is key given their close interaction with Actor Groups, range of current mechanisms and knowledge of best practice in on-farm knowledge exchange. The resource hub will be designed in the first 6 months of the project and beta tested within the project team to ensure that it will become a well utilised focal point for a number of activities.

The Resource Hub will provide links to other relevant research and events as well as actively seeking feedback on content from interested Actor Groups. There will also be input from all WPs and the EcoStack farm networks, including Twitter, blogs and videos (accessible on YouTube); up to 10 videos will be developed to help practical information and good farmers' practices from the project reach a wider range of farmers. They will be released via the website. The timing of their release will reflect a story arc and time line of the research, showing details of the locally adapted EcoStack rationale for implementation and the benefits they can bring to practitioners and the wider society. We plan to have versions in all project languages.

Sub-task 2.2 Farmer Field Days: Farmer field days provide the opportunity to relay complex information alongside seeing techniques and technology in practice; this is known to be an effective route for dissemination. Seeing the outcomes and benefits of EcoStack in action is an important part of enabling behaviour change – the field days will take place at both EcoStack research and farm network sites as appropriate. It is planned to hold 2 farmer field days in each of years 2, 3, 4 and 5, in each partner country (8 countries x 2 events x 4 years = 64). These will be organised by the MA partners with input from all the WP research partners.

Sub-task 2.3 Speak Out training and Summer Schools: To cascade this further and ensure consistent messages we will develop a capacity building programme in information-sharing for researchers in Year 1. It is proposed that the training be based on the Speak Out approach developed originally by LEAF (Linking Environment and Farming, <http://www.leafuk.org/leaf/home.eb>) in the UK. This will be run initially at the Annual meeting and targeted at the early-career researchers associated with the project. This will create ‘ambassadors’ and other individuals within groups or organisations who will form the core team to communicate on behalf of the project and be able to embed reflection on the communication and learning process in all future project work. For academic competence building, EcoStack will organize two Summer Schools during the project.

Task 3 Pan-European legacy and impacts

Leads: Ingeborg Menzler-Hokkanen (UH) and F. Xavier Sans Serra (UB)

The task will produce material for a wide group of Actor Groups that clearly illustrates the benefits of EcoStack and factors affecting effective implementation; it will also evaluate the Learning Platform concept and outline the pros and cons of adopting a principle of co-development with Actor Groups.

Subtask 3.1 Manual of ECOSTACK techniques will be produced for advisors and farmers for decision making on adapting EcoStack to local conditions (for use across European regions). This will be largely based on the outcomes of WPs 1, 7 and 8 on innovative strategies to implement EcoStack in European conditions.

Subtask 3.2 Learning Platform Evaluation report: A final output from this task will be a separate evaluation report on the contribution of the learning platform approach within the project and how such approaches could be adapted to most effectively support future research. It will draw together the information from the engagement protocols from scientists and Actor Groups involved.

Subtask 3.3 Linking with pan-European Actor Groups. Efforts will be made throughout the project to link project findings with the wider European community. Farmer Organisations will be invited to send a representative to all the annual LP meetings. Scientists in the project will be encouraged to present their results at European conferences, such as Society for Environmental Toxicology and Chemistry, IOBC working group meetings, Agroecology Europe Forum, Ecological Society of Germany, Austria and Switzerland, Apimondia, and EurBee. Likely venues for presenting EcoStack results will be events such as the International Congress of Entomology in Helsinki in 2020, the European Society of Agronomy meeting in 2022, and other similar congresses. The final EcoStack conference will be held in mid 2023.

Deliverables (month of delivery)

9.1 First version of project dissemination website available online (4)

9.2 Videos 1-3 uploaded to Resource Hub (12)

9.3 Videos 4-6 uploaded to Resource Hub (24)

9.4 Videos 7-10 uploaded to Resource Hub (36)

9.5 Policy options for regulatory systems (42)

9.6 Handbook on Policy options for exploitation of functional biodiversity (48)

9.7 Policy briefs on options for exploitation of functional biodiversity (18, 48)

9.8 User manual for EcoStack practitioners (48)

9.9 Monitoring and evaluation report on how the learning platform and the communication and learning activities have contributed to effective method deployment (54)