



Synergy report and action plan

Deliverable 8.3 – D37 – WP8

DATE OF PUBLICATION: 02.02.2020

RESPONSIBLE PARTNER: EP

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OPTIMISING BIO-BASED FERTILISERS IN AGRICULTURE – PROVIDING A KNOWLEDGE BASIS FOR NEW POLICIES

Project funded by the European Commission within the Horizon 2020 programme (2014-2020)

Deliverable 8.3 – D37 – Version 2 Work-package n°8

Version history			
V0	Initial version of the deliverable	Manon Ballester, EP	23.01.2020
V1	Revised document by the coordinator	Kari Ylivainio, Luke	29.01.2020
V2	Final version	Manon Ballester, EP	29.01.2020

Nature of the deliverable		
R	Report	X
Dec	Websites, patents, filling etc.	
Dem	Demonstrator	
O	Other	

Dissemination Level		
PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	



Acknowledgement

This report forms part of the deliverables from the LEX4BIO project which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 818309. The Community is not responsible for any use that might be made of the content of this publication.

LEX4BIO aims to reduce the dependence upon mineral/fossil fertilisers, benefiting the environment and the EU's economy. The project will focus on collecting and processing regional nutrient stock, flow, surplus and deficiency data, and reviewing and assessing the required technological solutions. Furthermore, socioeconomic benefits and limitations to increase substitution of mineral fertiliser for BBFs will be analysed. A key result of LEX4BIO will be a universal, science-based toolkit for optimising the use of BBFs in agriculture and to assess their environmental impact in terms of non-renewable energy use, greenhouse gas emissions and other LCA impact categories. LEX4BIO provides for the first-time connection between production technologies of BBFs and regional requirements for the safe use of BBFs.

The project runs from June 2019 to May 2023. It involves 21 partners and is coordinated by Luke (Luonnonvarakeskus - Natural Resources Institute Finland).

More information on the project can be found at: <http://www.lex4bio.eu>



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PROJECT PARTNERS ACRONYMS TO BE USED IN THIS REPORT

Partner short name	Partner full name	Partner short name	Partner full name
Luke	NATURAL RESOURCES INSTITUTE FINLAND	NGI	NORWEGIAN GEOTECHNICAL INSTITUTE
PM	PROMAN MANAGEMENT	UG	GHENT UNIVERSITY
JKI	JULIUS KÜHN-INSTITUT	UH	UNIVERSITY OF HELSINKI
UCPH	UNIVERSITY OF COPENHAGEN	ECP	ECOPLANT
BOKU	UNIVERSITY OF NATURAL RESOURCES AND LIFE SCIENCES VIENNA	Aii-RG	AGRO INNOVATION INTERNATIONAL
UvA	UNIVERSITY OF AMSTERDAM	RUOKAVIRASTO	FINISH FOOD AUTHORITY RUOKAVIRASTO
UHOH	UNIVERSITY OF HOHENHEIM	EP	EUROPROJECT OOD
FiBL	RESEARCH INSTITUTE OF ORGANIC AGRICULTURE	PAS	MINERAL AND ENERGY ECONOMY RESEARCH INSTITUTE OF THE POLISH ACADEMY OF SCIENCES
US	UNIVERSITY OF SEVILLA	FS	FIELDSENSE A/S
UP	UNIVERSITY OF PANNONIA	AG	AGRANA RESEARCH & INNOVATION CENTER



D8.3: SYNERGY REPORT AND ACTION PLAN

I. INTRODUCTION

LEX4BIO aims to support the decrease of dependence upon mineral/fossil fertilisers, benefiting the environment and the EU's economy by collecting and processing regional nutrient stock, flow, surplus and deficiency data, and reviewing and assessing the required technological solutions. Socioeconomic benefits and limitations to increase substitution of mineral fertiliser for BBFs will be analysed to achieve a knowledge and science-based toolkit for optimising the use of BBFs in agriculture and to assess their environmental impact in terms of non-renewable energy use, greenhouse gas emissions and LCA impact. Within LEX4BIO project, a networking and clustering plan is highly crucial for:

- O1: Developing the knowledge-based toolkit by identifying the latest research and innovation outcomes from EU projects in terms of BBFs' development
- O2: Bringing cooperation for organizing field trials activities
- O3: Improving the scale of dissemination activities by developing cross-communication strategies to reach larger audience.

This Synergy report and action plan summarizes the planning and monitoring of activities related to the task **T8.2** that will take place during the entire duration of the project. The task is part of Work Package 8 and aims at developing synergies and clustering with relevant projects on nutrient recycling. This first version of the Synergy Report and Action Plan will be regularly revised to integrate the evolvement of the proposed activities during every year of the project implementation to identify if the objectives have been reached and undertake if needed corrective measures.

Networking with relevant project will support the achievement of project objectives, especially regarding the identification of novel BBFs (minimum TRL 6) that meet jointly stipulated quality requirements and have a measurable effect on crop growth. Cooperation will hence include knowledge exchange for evaluating **available data of manure** (e.g. Manure Standards), **fertilisation value of BBFs** (e.g. SUSFERT), **nutrient recycling** (e.g. NUTRI2CYCLE, SYSTEMIC, ReNu2Farm), **soil quality** (e.g. iSQAPER), **sustainable management of P sources** (e.g. InPhos) and **providing fertilisers for organic farming** (e.g. RELACS). Regarding this strategic vision of the synergy activities, the LEX4BIO consortium will also devote this task to initiating and maintaining links to relevant European Innovation Partnership (EIP-AGRI) focus groups for enhancing the circular economy around BBFs.

Eventually, the networking and clustering activities will support the project in improving its communication and information campaign thanks to the following commitments:

- Identification of national and European projects, funded under various programs and initiatives, or other kind of initiatives working on the project's themes and create a network and ensure cooperation, in order to share problems and visions,
- Organisation of joint-discussions and dissemination of results among a larger audience,
- Invitation to joint-events, consortium meetings, coordinators' days in Brussels or through the External Advisory Board,
- Brainstorming on the potential of BBFs.

The purpose of this strategic plan developed hereunder is then to provide the description of the activities to be performed, and to review it regularly to record every new cooperation performed.



II. LEX4BIO COOPERATION NETWORK

This section aims at identifying the linked initiative map linked to the objectives of the LEX4BIO. This overview is continuously updated and expanded depending on the network growth and communication activities. The network has been divided regarding the type of initiatives and the outcomes to be reached based on potential synergies.



Figure 1 - Overview of the targeted actors in the synergy strategy

Section 2.01 EU projects developed on similar calls

Several calls and projects with similar scope have been identified to ensure cross-promotion and maximise the impact of the EU funding by joining communication potential and forces. Several exchanges will be made based on either coordinators' discussions (during dedicated events organized by the EC in Brussels such as Coordinators' Days for instance) or through the WP Communication & Dissemination leaders. These calls include the following:

- **RUR-08-2019-2020**: The RUR-08 call is the topic under which LEX4BIO has been funded. However, different scopes are foreseen under this call including:
 - [2019] Bio-based fertilisers from animal manure (IA)
 - [2020] Bio-based fertilisers from by-products of the agri-food, fisheries, aquaculture or forestry sectors (IA)
 - [2020] Bio-based fertilisers from wastewater and sewage sludge (RIA)

If the scope of LEX4BIO is hence to provide a knowledge-based approach of understanding BBFs impacts, the current and future projects to be funded will target the direct development of BBFs. Hence synergies are relevant for LEX4BIO to provide assets regarding a comprehensive approach to BBFs to be used as a basis for product development. Cross cooperation and promotion will ease the development of market innovations, especially in the framework of the "Innovation Actions" project. As for today, the only targeted project under this call is the following:

FERTIMANURE - Innovative nutrient recovery from secondary sources – Production of high-added value FERTIlisers from animal MANURE: FERTIMANURE will develop, integrate, test and validate innovative Nutrient Management Strategies to efficiently recover mineral nutrients and other



products with agronomic value from manure, to finally obtain reliable and safe fertilisers that can compete in the EU fertilizers market. FERTIMANURE focuses on “How to improve the agronomic use of recycled nutrients from livestock manure” to reconnect nutrient flows between plant and livestock production. The project is coordinated by the FUNDACIO UNIVERSITARIA BALMES (Spain), it includes 20 additional partners (including UG, member of both projects) and has started in January 2020.

- **SFS-39-2019:** this call is focusing on the development of treatment technologies to convert digestate into a suitable fertiliser or soil amender. The TRL expected regarding the treatments to be developed under this call is TRL6/7 consistent with the products that LEX4BIO is willing to study and test. **Under SFS-39, one project has been funded in 2019:**

NOMAD - Novel Organic recovery using Mobile ADvanced technology: NOMAD gathers partners from China, Greece, the UK, Italy, Romania, Malta and the Netherlands to develop an innovative, small-scale tech solution designed to recover fibre and specific nutrients from digestate for formulation into high performance bio-fertiliser products. It addresses key digestate issues including environmental and health risks, handling, variable composition and the increasing volume being produced. The project is coordinated by the Centre for Research and Technology-Hellas (Greece), it includes 14 additional partners and has started in October 2019.

- **CE-RUR-10-2019:** This call “Circular bio-based business models for rural communities” is aiming at considering a variety of additional bio-based processes and end products that could be integrated into established agro-food systems, and that are viable on a small scale (farm to rural community level). The TRL of the technologies considered can vary at the start with the integrated system shall achieve a TRL 6-7. Under RUR-10, projects funded targeted fodder and aquaponic solutions that are not directly linked to the LEX4BIO scope and hence will not be primary targeted by synergies. However, it is important to highlight that all the projects that are working towards a better integration of circular economy practices in the agri-food systems will be enhanced by joint-communication, to raise the awareness of the farmers regarding the potential of these solutions, being linked to BBFs or to other tools. For this strategic reason, LEX4BIO communication activities will include the dissemination of these projects results (GO-GRASS, AQUACOMBINE).
- **CE-SC5-07-2018-2019-2020:** The call “Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery schemes” aims at developing and demonstrating innovative pilots for the clean and sustainable production of non-energy, non-agricultural raw materials in the EU from primary and/or secondary sources finishing at Technology Readiness Levels (TRL) 6-7. Following objectives have been defined:
 - [2018, 2019] Sustainable processing and refining of primary and/or secondary raw materials
 - [2018, 2019] Recycling of raw materials from end-of-life products
 - [2018, 2019] Recycling of raw materials from buildings
 - [2018, 2019] Advanced sorting systems for high-performance recycling of complex end-of-life products.

Under this call, following projects have been funded and will be targeted by the synergy action plan of the LEX4BIO projects:

- **WOOL2LOOP :** Mineral wool waste back to loop with advanced sorting, pre-treatment, and alkali activation.
- **SUSMAGPRO:** Sustainable Recovery, Reprocessing and Reuse of Rare-Earth Magnets in a Circular Economy.



Section 2.02 Other EU-funded projects

Several other EU-funded projects have been identified that specifically address the BBFs issues or related scope. These projects offer opportunities for synergy exploitation with regard to the project outcomes. A complete list of projects is available in annex 1 however, the following projects have been specifically identified, with under-going activities of discussions and brainstorming:

- **Manure Standards (Advanced manure standards for sustainable nutrient management and reduced emissions):** Manure Standards is two-year (10/2017–09/2019) EUSBSR Flagship project aiming to provide farmers, advisors, authorities and policy-makers enhanced capacity to govern and to turn manure use towards improved sustainability and resource-efficiency. In this project, policymakers, authorities, advisors, farmers and researchers cooperate to create, pilot and implement jointly developed, accepted and equal tools to determine manure quantity and quality, i.e. manure standards, into farming practices and into policy instruments. In a unified opinion, these tools will be based on scientific methodologies. <https://www.luke.fi/manurestandards/en/frontpage/>
- **SUSFERT (Developing multifunctional fertilisers for phosphorus and iron supply):** SUSFERT develops more sustainable, multifunctional fertilisers for phosphorus and iron supply fitting into existing production processes and EU agricultural practice. It combines bio-based and biodegradable coatings for controlled release, probiotics to increase nutrient availability and the renewable phosphorous source struvite. SUSFERT demonstrates fertiliser efficacy for major crops, evaluates the economic potential and sustainability of the tested products, ensures regulatory compliance and finally prepares market entry. <https://www.susfert.eu/>
- **NUTRI2CYCLE (Transition towards a more carbon and nutrient efficient agriculture in Europe):** The Nutri2Cycle project will be running from 2018 to 2022. It will provide an essential contribution to the circular economy by closing nutrient loops. The Nutri2Cycle project will assess the current Nitrogen (N), Phosphorus (P) and Carbon (C) flows looking into existing management techniques in different farms across Europe and analysing their related environmental problems. <https://www.nutri2cycle.eu/>
- **SYSTEMIC (Creation of a roadmap to facilitate solutions for biowaste in the EU):** SYSTEMIC is a project funded under the EU Framework Programme for Research and Innovation H2020 for the period 2017-2021. SYSTEMIC recognises Europe’s challenge to tackle the increasing resources constraint and to facilitate the transition towards a more circular economy (COM,2015-614). SYSTEMIC addresses these needs by identifying systemic innovation approaches to recover and recycle valuable mineral components from organic waste streams into new products and to integrate them optimally into a local or regional circular economy. SYSTEMIC will demonstrate the effective combination of anaerobic digestion with nutrient recovery and recycling technologies (TRL 7-8) for producing valuable fertilisers and soil amendments from EU’s most abundant bio waste streams (manure, sewage sludge and food waste) at five demonstration plants working in a different legal, commercial and agricultural context in five European countries. <https://systemicproject.eu/>
- **ReNu2Farm (Nutrient Recycling – from pilot production to farms and fields):** ReNu2Farm aims at increasing recycling rates of the plant nutrients Nitrogen (N), Phosphorus (P) and Potassium (K). P and K are limited and finite resources, and the production of N fertilizers is energy intensive. Despite recovery technologies having been developed, the use of recycling-derived fertiliser



products by farmers is limited until now. The project will tackle the barriers limiting recycling-derived fertiliser use. <https://www.nweurope.eu/projects/project-search/renu2farm-nutrient-recycling-from-pilot-production-to-farms-and-fields/>

- **iSQAPER (Interactive Soil Quality Assessment in Europe and China for Agricultural Productivity and Environmental Resilience)**: The main aim of iSQAPER is to develop an interactive soil quality assessment tool (SQAPP) for agricultural land users that integrates newly derived process understanding and accounts for the impact of agricultural land use and management on soil properties and functions, and related ecosystem services. This model will be very interesting for the assessments to be performed under LEX4BIO. As the project is coming to an end, major outcomes can already be reached to be integrated in the LEX4BIO research activities. <http://www.isqaper-project.eu/>
- **RELACS (Replacement of Contentious Inputs in Organic Farming Systems)**: RELACS seeks to promote the development and adoption of environmentally safe and economically viable tools and technologies to reduce the use of external inputs in organic farming systems, namely: copper and mineral oil for plant protection, recycled fertilisers and conventional manure in plant production, antibiotics and anti-worm drugs (anthelmintics) in animal production, synthetic vitamins in animal production. The project covers all major sectors of organic farming, including horticulture, arable cropping as well as cattle, sheep, pig and chicken production. The diverse needs in the different European countries and regions are considered. A multi-actor approach will be the core of the project, as RELACS was developed by involving actors and stakeholders from research and industry, organic farmers and advisors from the start. <https://relacs-project.eu/>

Section 2.03 BBI-JU, EIT and EIP

During the last decade, the European Commission (EC) has put significant effort in sustaining an active ecosystem of public-private partnerships for the development and implementation of the EU strategy for research and innovation. Several supporting structures (European Technology Platforms (ETP), Joint Undertaking (JU) and European Innovation Partnerships (EIP)) have been created attending to specific policy-relevant topics with the aim of coordinating and maximizing the impact of public investments in the consecutive Framework Programs. Several of these initiatives relate to circular economy, and bio-based products, in general and for agricultural practices. In addition, several initiatives are also in charge of funding programmes, having developed projects that will be relevant for additional cross-communication activities. These actors are identified hereunder:

(a) BBI JU

The Bio-Based Industries Joint Undertaking (BBI JU) is a €3.7 billion Public-Private Partnership between the EU and the Bio-based Industries Consortium. Operating under Horizon 2020, this EU body is driven by the Vision and Strategic Innovation and Research Agenda (SIRA) developed by the industry. The Bio-Based Industries Joint Undertaking (BBI JU) launches annual Calls for Proposals. These calls are operated under Horizon 2020 rules. Among all the objectives of the BBI JU, highly relevant with LEX4BIO projects, three of them are clearly reached by the development of LEX4BIO, i.e.:



- Develop the potential of waste as well as agriculture and forestry residues.
- Deliver bio-based products that are comparable and/or superior to fossil-based products in terms of price, performance, availability and environmental benefits.
- The new bio-based products resulting from the BBI JU will on average reduce CO₂ emissions by at least 50% compared to their fossil alternatives.

From this shared vision, LEX4BIO has identified projects to organise synergy and cross-cooperation, especially B-FERST, where common activities (especially cross-promotion of the results on social networks) have started:

B-FERST - Farmers and fertiliser industry together for a sustainable agriculture: B-FERST aims at integrating the valorisation of bio-waste in agriculture by creating new circular and bio-based value chains. The project improves the sustainability of arable land by developing eight innovative bio-based fertilisers. Our ultimate goal is to enhance the relationships between farmers and bio-based industries. B-FERST will change the market uptake of fertilisers in intensive agriculture by demonstrating and introducing three new integrated and sustainable value chains whereby bio-waste will guarantee a secure and sustainable supply of biomass feedstock. This approach will contribute to decarbonise the fertiliser sector by replacing fossil-based products with bio-based by-products. B-FERST's expects to reduce at least by 10% the carbon footprint of the fertilisers' production and thus their environmental impact. <https://bferst.eu/>

(b) EIP AGRI

EIP AGRI focusses on innovation challenges for a sustainable agriculture in Europe and around the world. This platform is very active and provides regular up-to-date information on relevant events and initiatives in the form of a newsletter. There are 38 focus groups, two of them are directly in line with the project objectives (and several can be relays for the project results):

- 1. Fertiliser efficiency:** This focus group brings to LEX4BIO project insights from the diverse papers published on diverse subjects linked to BBFs (and fertilisers as a whole) regarding for instance costs and benefits of technologies for increasing N efficiency in vegetable production, fertiliser planning and simple recommendation systems and opportunities and bottlenecks in the utilisation of new kinds of organic fertilisers that will give orientation to the work of research performed within the consortium. In addition, the members of this focus group will be great target for disseminating the project outcomes.
- 2. Nutrient recycling:** The results of this focus group are highly interesting for the LEX4BIO project as they tackle available technologies for nutrient recovery, from animal manures, on-farm tools for accurate fertilisation, increase of the mineral fertiliser replacement value of BBFs, end-users' requirements regarding BBFs, regulatory framework and environmental impacts.

(c) EIT Raw materials

EIT RawMaterials, initiated and funded by the EIT (European Institute of Innovation and Technology), a body of the European Union, is the largest innovation community in the raw materials sector worldwide. Its vision is to develop raw materials into a major strength for Europe. Its mission is to enable sustainable competitiveness of the European minerals, metals and materials sector along the value chain by driving innovation, education and entrepreneurship. EIT RawMaterials unites more than 120 core and associate partners and 180+ project partners from leading industry, universities and research institutions from more than 20 EU countries. Partners of EIT RawMaterials are active across the entire raw materials value chain; from exploration, mining and mineral processing to substitution, recycling and circular economy. They collaborate on finding new, innovative solutions to secure the



supplies and improve the raw materials sector in Europe. Within the EIT RawMaterials, interesting projects have been funded linked to the LEX4BIO objectives, especially:

InPhos: Sustainable Management of Phosphorus in Baltic countries: The main goal of the InPhos project is to develop a Phosphorus Strategy for the Baltic Region, laying out a solid foundation and developing long-term solutions for the sustainable management of this critical raw material. In the InPhos project, the Phosphorus Strategy for the Baltic region will be developed by a working group of experts from developed countries (Germany, Sweden, Finland) and the Baltic regions (Poland, Latvia, Lithuania, Estonia) and Italy, who will transfer of knowledge and design of solutions for the sustainable use of phosphorus. The project is coordinated by PAS (also member of the LEX4BIO consortium).

<http://inphos.info/>

Section 2.04 Members of the External Advisory Board

In addition to projects and EU focus groups, 5 advisory board members have been identified for their relevance to the project topic. The Synergy strategy should include their active participation in brainstorming on the project content and providing access to additional dissemination targets. Their profiles are the following:

- **Dr. Arwyn Jones**, EC, Directorate-General JRC, Land Resource Management. Research to support policies for sustainable soil management in the European Commission. With a background in quaternary geology and a PhD in remote sensing of semi-arid soils, he has spent almost the last thirty years in land surface research and since 1998, specifically dealing with soil related issues at EU and global levels.
- **Mr. Laurent Largent**, General Delegate of AfaïA and Chairman of CEN/TC 223 (soil improvers and growing media). AFAÏA is a professional union, created in its current form in 1986, representing agricultural manufacturers. AFAÏA's field of action covers all growing solutions (potting soils, substrates), organic fertilizers (organic fertilizers, organic amendments), mulch products, as well as additives and biostimulants.
- **Dr. Juha Nousiainen**, Valio, Director. Valio is a brand leader and the biggest dairy business in Finland and a major player in the international dairy ingredients market.
- **Mr. Erwin Pfundtner**, AGES, a member of the fertiliser working group of the EC and a member of the STRUBIAS expert group within the JRC in Seville,
- Representative of The Baltic Marine Environment Protection Commission (**HELCOM**): HELCOM (Baltic Marine Environment Protection Commission – Helsinki Commission) is the governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, known as the Helsinki Convention. The Contracting Parties are Denmark, Estonia, the European Union, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden. HELCOM's vision for the future is a healthy Baltic Sea environment with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable economic and social activities.

Section 2.05 Specialised clusters in Europe

Eventually, the final target of this synergy action plan is composed by two clusters identified at EU level, providing support and promotion for projects, and hence offering a great platform to network with circular economy and recycling-based approaches. Memberships have already been taken, and joint-communication activities have been launched, especially through contributions to the clusters' newsletters and diffusion on the LEX4BIO social networks, of specific information regarding their mission. These clusters are the following:



(a) Biorefine Cluster Europe

The Biorefine Cluster Europe interconnects projects and people within the domain of biobased resource recovery, striving to contribute to a more sustainable resource management in the framework of circular economy systems. The competence focus lies within the biorefinery sector: the refinement of chemicals, materials, energy and products from biobased waste streams. It can be subdivided in four categories:

- Biobased (waste)streams as an input for the circular economy
- Bioprocesses
- Sustainable bio-energy production in its various shapes and forms
- Resource Recovery: extracting minerals, chemicals, water and materials from biomass

The Biorefine Cluster Europe publishes every month a dedicated newsletter where LEX4BIO has the possibility to share the latest project news.

(b) European Sustainable Phosphorus Platform

The European Sustainable Phosphorus Platform (ESPP) has been formed in March 2013 through a declaration, signed by over 150 organisations after the first European Sustainable Phosphorus Conference. ESPP ensures knowledge sharing, experience transfer and networking for opportunities in the field of phosphorus management, facilitates discussion between the market, stakeholders and regulators, addresses regulatory obstacles, contributes to policy proposals, circulates information by newsletters, website, conferences and publications, promotes Platform Members' activities, and contributes to define a long-term vision for phosphorus sustainability in Europe. The Members of ESPP cover a wide range of actors across the whole value chain of phosphorus stewardship: phosphorus mining and processing, water and waste treatment, food, feed and agriculture, phosphorus reuse and recycling, innovation and technology providers, knowledge institutions, NGOs and governmental organizations. See the full list of current ESPP-Members.

The ESPP gives a great forum of exchanges for all project related to P treatment and use, and hence increase the audience LEX4BIO can reach through its communication activities.



III. ACTION PLAN

The Synergy Action Plan summarizes the planning and monitoring of the synergies to be developed with the partners and projects identified above and in annex 1. These synergies include regular exchange of information, joint participation in relevant conferences and policy events, alignment of dissemination activities and social media campaigns, joint preparation of policy briefs or exchange and consolidation of results for related case studies. Synergy activities also seek to contribute to the identification of relevant BBFs products and practices, to be integrated in the knowledge-based toolkit of LEX4BIO.

Section 3.01 Overview of the Action Plan

The Synergy Action Plan is based on 5 specific activities to be developed during the project. Additional opportunities might emerge from the development of these actions.

(a) Exchange of information on project progress and results

Several projects have been identified as stated above for developing exchange of information on project outcomes. Especially, all the projects aiming at i) developing and testing new BBFs, ii) providing accurate knowledge and test on efficient nutrient recycling process and iii) developing sustainable management strategies of P sources will be targeted for aligning objectives and performing strong brainstorming sessions to understand how to reciprocally benefit from the projects' results. Projects providing novel BBFs at TRL6 to TRL7 will be specifically targeted as potential products for field trials under LEX4BIO. If cross-activities of this kind, including co-development of field trials and co-generation of results would happened during the projects lifetime or beyond, discussions will be opened on the possibility to develop joint-papers in scientific journals or joint-presentation of the results during specific symposium and scientific conferences. Such activities will highly prove the efficiency of the synergy strategies at EU level.

(b) Participation to Project Meetings and/or External Advisory Board meetings of other projects

Whenever feasible, attending Project Progress meetings of the above-mentioned consortia (and potentially new ones to be funded during the LEX4BIO lifetime) will be organised. This will enable active and regular follow-up of each projects' evolution. In addition, each partner will inform the coordinator and WP8 leader in case they are invited to join a new project External Advisory Board to identify potential synergies with LEX4BIO. Eventually, regular skype meetings with specific projects (especially the ones identified above) will be organised either by WP leaders to discuss respectively about the technical results, or by Luke and EP to exchange about the overall synergy actions.

(c) Automatic invitation to participate to the National Dissemination Fora

Extract from D8.1: "National Dissemination Fora: Partners from research institutes/universities from EU countries (Finland, Denmark, Germany, Poland, Austria, Hungary, Switzerland, Netherland, Belgium and Spain) have the goal to set up NDF once a year for knowledge-exchange among relevant stakeholders. Participants in NDF represents ministries of agriculture and environment, advisory services, farmers union and representatives from industry and NGOs (e.g. fertiliser industries, research institutes, nutrient platforms, universities, associations of organic farmers), securing dissemination at large to all relevant stakeholders and establishing strong communication channels for dialogue and



mutual inspiration. The minutes of the NDF in 2019 will be the basis for drafting the Policy Roadmap due in M9 by Luke.”

The NDF will be the stronger tool of LEX4BIO to launch and enhance synergies at National scale as they will target a large community that will enable to bring into the project accurate and diverse recommendations from various stakeholders’ points of view. This richness will increase the knowledge and practices gathered by the LEX4BIO partners. In addition, the NDF will be the perfect moment to network and cluster with less visible projects i.e. funded through national / local programmes. These projects are numerous and can bring very relevant results with specific development operated at farm level to LEX4BIO. They can also connect the project with the final end-users more easily than the EU projects that have a stronger impact on the research community. Hence, a specific focus will be put on each NDF to invite automatically: i) representatives from the EU projects identified above but also ii) local project coordinators and iii) end-users.

The first NDF in Germany, has been organised on November 15th, 2019 and in line with this synergy strategy, the **Nutri2Cycle** project has been presented. It was agreed that there will be a number of synergies that shall be further explored between **JKI** and **Thuenen Institute** that will be regularly reported in this deliverable.

(d) Joint participation in workshops, conferences, and other events to promote the visibility and outputs of the projects

EP as WP8 leader is regularly communicating with the Communication WP leader of the identified projects quoted above. Exchanges on the 6 months to come action plan in terms of events participation will be regularly shared to identify common conferences and workshops to meet, discuss and promote each other results. Other local opportunities may present themselves and, depending on available projects results, will be explored in due time. In addition, Luke as coordinator will regularly participate to Coordinators’ Days organized in Brussels. A first meeting has been held in June 2019 allowing to meet with other project leaders and start building a cooperation framework. At this stage, the following events have been identified with high potential of synergies and cross-cooperation on increasing visibility of projects’ results:

1. **4th European Sustainable Phosphorus Conference (Vienna – June 2020):** The European Sustainable Phosphorus Conference is a unique event bringing together companies, stakeholders, regional and national authorities, innovation and researchers, to discuss phosphorus and nutrients sustainability actions and policies. ESPC4 is jointly organised by the European Sustainable Phosphorus Platform (ESPP) and **Proman**, active partner of the LEX4BIO consortium. All the members of the ESPP are planning to participate to this event, especially the SYSTEMIC consortium, with a very relevant scope of activities compared to LEX4BIO. Specific joint-activities between the projects will be discussed prior to the event. **Luke** as coordinator will participate to this meeting and has planned to present a poster and abstract of the LEX4BIO project.
<https://phosphorusplatform.eu/espc4/1865-4th-european-sustainable-phosphorus>
2. **RAMIRAN Conference (September 2020 – UK):** The conference will focus on developing strategies to maximise the efficiency of organic materials against a background of changing regulation, policy and market forces, as well as increasing pressure on the environment, soil quality and food production. Our LEX4BIO partner **UHOH** will propose an abstract and poster presentation to



introduce our work during this internationally recognize event. RAMIRAN will be the core event of the year to reach synergies with research centers, projects and other relevant stakeholders.

<https://www.ramiran2020.org/>

- 3. Eurosoil (August 2020):** The objective of Eurosoil 2020 is to bring together leading research scientists working on soil related topics and stakeholders dealing with issues of public concern, such as soil degradation and consequences of climatic changes. The important bridging role of soil practitioners to translate scientific knowledge into practice will be emphasized during Eurosoil 2020. **FiBL** and **UCPH** will participate to Eurosoil to cluster with additional projects and will report here results of their participation.

<https://eurosoil2020.com/>

(e) Alignment of other communication and dissemination activities

In addition to the specific activities identified above, EP as WP8 leader has started to take direct contacts with the Communication WP leader of diverse projects. These contacts have the aim to identify day-to-day joint-communication activities especially:

- **Joint twitter and social-media campaigns** – Most of the identified projects are active on Twitter, Facebook and/or LinkedIn. Specific joint campaigns around key project results or events, such as to improve their visibility will be organised regularly.
- **Specific page on the website dedicated to the LEX4BIO network projects**
- **Organisation of a joint event** can be foreseen if the opportunity is identified.

Section 3.02 Action Plan per actor

The following table shows the proposed strategies to exploit synergies with the different identified stakeholder.

Table 1 - Action Plan per actor

Actor	Activities
EU projects developed on similar calls	<ul style="list-style-type: none"> – Exchange of knowledge produced – Participation to physical and skype meetings to brainstorm on the development of technical co-activities – Regular exchange of information with regard to project results and events – Participation, where possible and relevant, in partner events – Invitation to participate to LEX4BIO meetings and events – Potential joint publication, organisation and participation to joint event, joint presentation – Dissemination of LEX4BIO events, newsletter and other materials, and vice versa – Cross-dissemination on social networks
Other EU-funded projects	<ul style="list-style-type: none"> – Regular exchange of information with regard to project results and events – Dissemination of LEX4BIO events, newsletter and other materials, and vice versa – Cross-dissemination on social networks
BBI-JU, EIT and EIP	<ul style="list-style-type: none"> – Regularly update information on the LEX4BIO project during EIT and EIP events, brokerage sessions and workshops – Specific communication towards the members of the focus groups identified as relevant to the LEX4BIO project – Participation in BBI events, cooperation with BBI and EIT projects



Members of the External Advisory Board	<ul style="list-style-type: none"> – Exchange of knowledge produced by LEX4BIO – Participation to physical and skype meetings to brainstorm on the LEX4BIO activities and provide additional inputs – Regular exchange of information with regard to project results and events – Invitation to participate to LEX4BIO meetings and events
Specialised clusters in Europe	<ul style="list-style-type: none"> – Subscription to the Biorefine Cluster Europe and ESPP newsletters – Contribution to the content of the newsletters – Dissemination of LEX4BIO newsletter, publications, workshop/conference announcements, etc. – Support social media campaigns – Publication of LEX4BIO outputs in relevant resources sites – Mutual exchange of information (research projects) – Access to network of projects – Invitation to participate to the LEX4BIO meetings – Participation in events organized by these clusters – Dissemination of LEX4BIO events, newsletter and other materials, and vice versa – Cross-dissemination on social networks
National projects	<ul style="list-style-type: none"> – Exchange of knowledge produced – Regular exchange of information with regard to project results and events – Invitation to participate to LEX4BIO National Dissemination Fora – Dissemination of LEX4BIO events, newsletter and other materials, and vice versa – Cross-dissemination on social networks

Section 3.03 Monitoring of the Synergy Action Plan outcomes

Synergy exploitation will be monitored and evaluated against the criteria listed in the table below by the project coordinator (Luke) and WP8 leader (EP). The adopted metrics and the periodicity will vary according to specific synergy and actors identified.

Table 2 - Monitoring of synergy outcomes

Synergy outcomes	Stakeholders	Indicators	Key actions for success
KNOWLEDGE CO CREATION <i>Exchange of knowledge produced</i> <i>Participation to physical and skype meetings to brainstorm on the development of technical co-activities</i> <i>Regular exchange of information with regard to project results and events</i> <i>Participation in working groups</i>	EU project with similar scope EIT, EIP, BBI JU EAB members	Number of effective contacts established; Number and types of information exchange channels implemented Number of brainstorming sessions organised Number of contacts taken in the focus groups of the diverse initiatives Number of participations to EIP and EIT events	Early identification of key partners and key people in the different initiatives Early first contacts to be taken from all the partners Remind the partners to provide information regarding the other projects they are involved in



		Number of meetings attended and diversity of working groups	
PROJECT OFFICIAL MEETINGS <i>Participation, where possible and relevant, in partner meetings</i> <i>Invitation to participate to LEX4BIO meetings and events</i>	EU project with similar scope	Number of attended meetings	Remind the coordinator to save travel budget to participate to consortium meetings of related projects
JOINT PUBLICATION AND OTHER JOINT ACTIVITIES <i>Potential joint publication, organisation and participation to joint event, joint presentation</i>	EU project with similar scope	Joint papers contrasting methods and results; Number of papers published and relevance; Joint presentations of results Number of events	Ensuring IP rules are respected
CROSS-DISEMINATION CAMPAIGN <i>Regular updates of the LEX4BIO results within the communication materials of linked initiatives, clusters and projects</i>	All stakeholders with a special focus on the Biorefine Cluster Europe and ESPP pre-existing materials bringing additional visibility	View, visits and/or downloads of LEX4BIO information on these diverse platforms Number of articles published on LEX4BIO in the clusters' newsletters Number of participations to events	Reminding the partners to actively participate in the clusters and attend the relevant meetings Send accurate and relevant publications of the project outcome, on time to be published on the clusters' newsletters
PARTICIPATION TO EVENTS <i>Coordinators' day, international conferences, events of the EC ...</i>	EIP, EIT, BBI, Clusters	Number of events	Early identification of key events (e.g., through EIP AGRI newsletter); Coordinate participation of the LEX4BIO partners
CROSS-DISEMINATION ON SOCIAL NETWORKS	All stakeholders	Analysis of the impacts of the campaigns (users reached, shares, new follows, etc.) of the posts published by LEX4BIO and the posts published on LEX4BIO by the network	Regularly remind partners to actively participate in the campaigns with their official accounts as provider of content or relay for the information created by the WP8 leader (EP)



IV. CONCLUSION

Updates version of this Synergy Report and Action Plan will be produced on an annual basis in order to report all the networking activities performed.

It is important to highlight that this plan is completed by the following deliverables, and that the activities undertaken related to these strategies will impact or be impacted by the choices highlighted in these reports including:

- D8.1 “Dissemination, Exploitation and Communication plan” that has been published in M6
- D8.2 “Porfolio of communication materials and the general project website” published in M6
- D8.4 “Project newsletters compiled” to be published in M48 based on regular release (every 6 months) of the project newsletter
- D8.5 “Policy roadmap” to be published in M9

Annex 1 – Database of identified linked projects

Table 3 - Linked projects

Name of the project	Coordinator	Short description
<u>Systemic</u>	Wageningen University systemic@wur.nl	Creation of a roadmap to facilitate solutions for biowaste in the EU
<u>Agrocycle</u>	UCD School of Biosystems and Food Engineering, Agriculture & Food Science Centre Belfield agrocycle@ucd.ie	AgroCycle is a ca. €8 million (ca. €7 million from the European Commission, ca. €1 million from the Government of The People's Republic of China) Horizon 2020 research and innovation project addressing the recycling and valorisation of waste from the agri-food sector.
<u>Agrimax</u>	Georgios Chalkias – IRIS gchalkias@iris.cat	Agrimax is an EU-funded project that is developing and demonstrating the production of multiple, high-value products from crop and food-processing waste. The project is also developing economically competitive routes to the commercialisation of these products, using flexible, and possibly cooperatively run processing facilities.
<u>B-FERST</u>	Fertiberia SA (Spain)	Bio-based FERTilising products as the best practice for agricultural management SusTainability. The B-FERST project seeks to make a significant contribution to addressing the challenges of delivering on the EU's ambitions for sustainable agriculture. This shift will require the more-efficient use of existing resources in the farming and fertiliser sectors, improved sourcing, logistics and biochemical characterisation of biomass feedstocks and improvements to the quality and fertility of soils.
<u>SUSFERT</u>	Austrian Institute of Technology (AIT) - Günter Brader Guenter.Brader@ait.ac.at	SUSFERT – DEVELOPING MULTIFUNCTIONAL FERTILISERS FOR PHOSPHORUS AND IRON SUPPLY
<u>Agriplus Hohenlohe</u>	Steinbeis Europa Zentrum / Agroenergie Hohenlohe billbao@steinbeis-europa.de huettnner@steinbeis-europa.de t.karle@t-online.de	EU-funded (EIP-agri) national project with the aim of increasing the efficiency of arable farming in the Hohenlohe region by nutrient recovery from farmyard manure; validation of the efficiency of the fertilization strategy in practical crop production (UHOH is a partner)
<u>BonaRes</u>	Ute Wollschläger, UFZ, Germany ute.wollschlaeger@ufz.de	"BonaRes" is short for "Soil as a sustainable resource for the bioeconomy". In this funding initiative of the German Federal Ministry for Education and Research (BMBF) the focus is on the sustainable use of soils as a limited resource. The ultimate goal of BonaRes is to extend the scientific understanding of soil ecosystems and to improve the productivity of soils and other soil functions while developing new strategies for a sustainable use and management of soils.
<u>KTI PyroPhos</u>	Anders Nättorp, FHNW, Switzerland anders.naettorp@fhnw.ch	Development of alkali pyrolysis for removal of heavy metals and production of a market-grade P-K fertilizer from sewage sludge
<u>Organic+</u>	Ulrich Schmutz, Coventry University ab6217@coventry.ac.uk	WP5 of Organic+ aims to reduce the current dependency of organic agriculture on manure from non-organic farms and other animal derived fertilisers, on peat for horticulture and on fossil-fuel derived plastic mulch
<u>Recycle4Bio</u>	Else Bünemann, FiBL, Switzerland else.buenemann@fibl.org	Recycle4Bio investigates the impact of recycled fertilizers on yields, nitrogen efficiency and soil quality in organic farming in a field experiment.

<p>FertiCycle</p>	<p>University of Copenhagen Lars Stoumann Jensen lsj@plen.ku.dk</p>	<p>The FertiCycle project is an EU-funded Marie S. Curie European Training Network aiming to train 15 early stage researchers (PhDs) to develop new processes for production of bio-based fertilisers, recycling wasted resources and to estimate the market potential and sustainability challenges of their production and use. This is relevant because the EU currently relies heavily on imports and fossil energy for supply of essential nutrients in synthetic fertilisers, at large economic cost (€15 billion/y) and with huge negative environmental impacts from fertiliser production and use. The FertiCycle project is a consolidated effort to improve nutrient use efficiency across all sectors simultaneously provide the foundation for a greener and more circular economy, by training a cohort of young and entrepreneurial scientists capable of meeting these future needs.</p>
<p>Nutri2Cycle</p>	<p>University of Ghent Erik Meers Erik.Meers@UGent.be</p>	<p>NUTRI2CYCLE will use an integrated approach to enable the transition from the current (suboptimal) nutrient household in European agriculture to the next-generation of agronomic practices, characterized by an improved upcycling of nutrients and organic carbon. The underlying principle is that Nutrient Use Efficiency can be significantly improved by integrating on-farm techniques and systems that allow better reconnection between 1) animal husbandry provided flows and 2) plant production requirements. At the same time this reconnection itself will serve a better C-return to soil and GHG-reduction by avoided emissions optionally combined with energy production for self-consumption on-farm. NUTRI2CYCLE aims to (i) benchmark mass flows of nutrients, organic carbon and GHG-footprint, (ii) provide an assessment frame (toolbox) for evaluating potential impact of proposed innovations, (iii) actively support concepts, techniques and scenarios put forward in EIP-Operational Groups, (iv) optimize these (+ in-consortium developed) scenarios using the toolbox, (v) showcase the most promising developments via prototypes and demos. Finally, using the experience gained at a local/regional scale, NUTRI2CYCLE will elaborate strategic scenarios to identify the effect of these innovations at European scale.</p>
<p>SoildiverAgro</p>	<p>Universidad de Vigo - David Fernández Calviño davidfc@uvigo.es</p>	<p>Soil biodiversity enhancement in European agroecosystems to promote their stability and resilience by external inputs reduction and crop performance increase</p>
<p>ReNu2Farm</p>	<p>Katharina Laub - IZES gGmbH Laub@izes.de</p>	<p>The ReNu2Farm project is designed to increase the recycling rates for the plant nutrients nitrogen (N), phosphorus (P) and potassium (K) in the primary food production chain in Northwest Europe (NWE). Up to now, farmers have essentially been using artificial fertilisers, for which the EU is heavily dependent on imports. Moreover, the production of artificial fertiliser requires large amounts of energy. Paradoxically, however, there are several regions with a nutrient surplus in NWE. There are also technologies for recovering those nutrients, but until now they have remained little-used by farmers.</p>
<p>VALUEWASTE</p>	<p>Gemma Castejón Martínez gemma.castejon@cetenma.es</p>	<p>On average, each European citizen produces approximately 200 kg of municipal biowaste per year, representing between 118 and 138 million tonnes of biowaste annually arising in the EU. The main municipal biowaste management systems currently existing in Europe represent one-way flow systems in which materials and resources are underused, limiting its potential recovery into high-value products. VALUEWASTE proposes an integrated approach in urban biowaste upcycling for the production of high-value biobased products, developing the first complete solution to fully valorise biowaste that can be replicated across Europe. We will implement</p>



		three new value chains that will use urban biowaste as raw material for its valorisation into high-value end products in a cascading process, generating economic, social and environmental benefits: food & feed proteins and other ingredients, and biobased fertiliser. VALUEWASTE will be developed at two very different European locations, Murcia (ES) and Kalundborg (DK) with the purpose of finding a solution both technical and socially adapted to the different socio-economic contexts existing across Europe. Social initiatives will be created to increase consumer awareness and acceptance of urban biowaste-derived products. End-user products applications and new market opportunities will be demonstrated. Outcomes of the project will contribute to new standardisation, and will be useful information for EU policy makers in terms of waste management and in the adoption of new policies.
<u>FERTIMANURE</u>	FUNDACIO UNIVERSITARIA BALMES	Innovative nutrient recovery from secondary sources – Production of high-added value FERTIlisers from animal MANURE: FERTIMANURE will develop, integrate, test and validate innovative Nutrient Management Strategies to efficiently recover mineral nutrients and other products with agronomic value from manure, to finally obtain reliable and safe fertilisers that can compete in the EU fertilizers market. FERTIMANURE focuses on “How to improve the agronomic use of recycled nutrients from livestock manure” to reconnect nutrient flows between plant and livestock production.
<u>NOMAD</u>	CERTH/CPERI	Novel Organic recovery using Mobile ADvanced technology: NOMAD gathers partners from China, Greece, the UK, Italy, Romania, Malta and the Netherlands to develop an innovative, small-scale tech solution designed to recover fibre and specific nutrients from digestate for formulation into high performance bio-fertiliser products. It addresses key digestate issues including environmental and health risks, handling, variable composition and the increasing volume being produced.
<u>Manure Standards</u>	Sari Luostarinen Natural Resources Institute Finland (Luke) sari.luostarinen[at]luke.fi +358 295326346	Advanced manure standards for sustainable nutrient management and reduced emissions: Manure Standards is two-year (10/2017–09/2019) EUSBSR Flagship project aiming to provide farmers, advisors, authorities and policy-makers enhanced capacity to govern and to turn manure use towards improved sustainability and resource-efficiency. In this project, policymakers, authorities, advisors, farmers and researchers cooperate to create, pilot and implement jointly developed, accepted and equal tools to determine manure quantity and quality, i.e. manure standards, into farming practices and into policy instruments. In a unified opinion, these tools will be based on scientific methodologies
<u>iSQAPER</u>	Wageningen University (WU) Violette Geisen, Luuk Fleskens	Interactive Soil Quality Assessment in Europe and China for Agricultural Productivity and Environmental Resilience): The main aim of iSQAPER is to develop an interactive soil quality assessment tool (SQAPP) for agricultural land users that integrates newly derived process understanding and accounts for the impact of agricultural land use and management on soil properties and functions, and related ecosystem services.



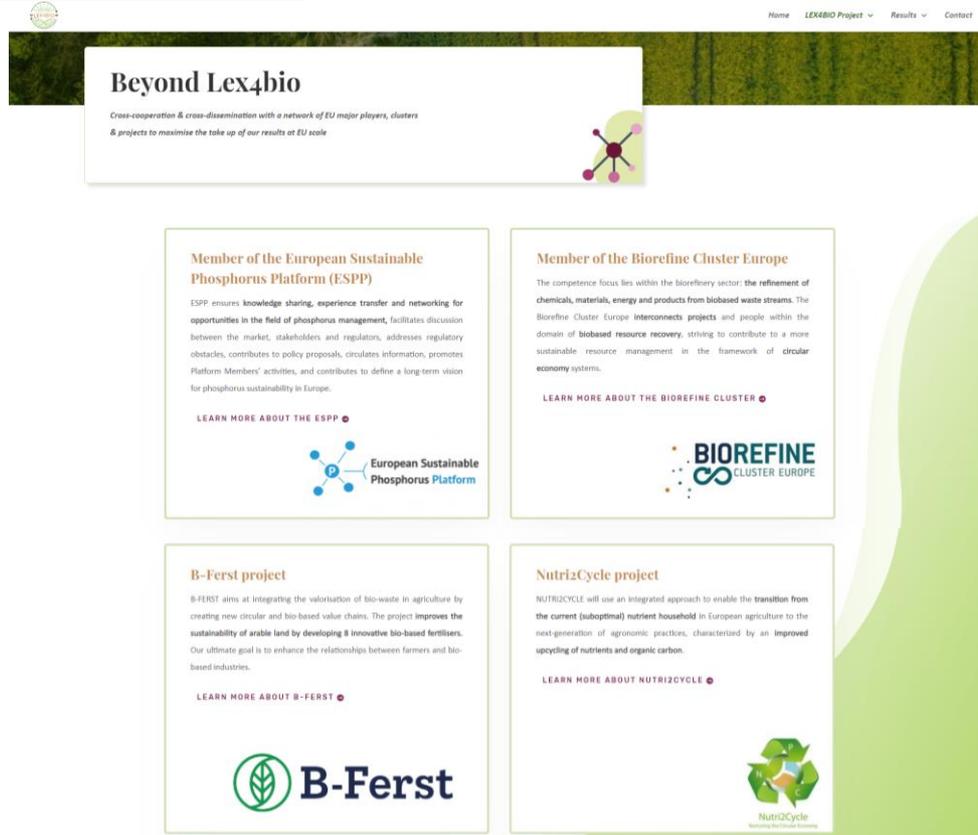
<p><u>RELACS</u></p>	<p>Research Institute of Organic Agriculture (FiBL) Lucius Tamm RELACS Coordinator lucius.tamm@fibl.org</p>	<p>Replacement of Contentious Inputs in Organic Farming Systems: RELACS seeks to promote the development and adoption of environmentally safe and economically viable tools and technologies to reduce the use of external inputs in organic farming systems, namely: copper and mineral oil for plant protection, recycled fertilizers and conventional manure in plant production, antibiotics and anti-worm drugs (anthelmintics) in animal production, synthetic vitamins in animal production. The project covers all major sectors of organic farming, including horticulture, arable cropping as well as cattle, sheep, pig and chicken production. The diverse needs in the different European countries and regions are considered. A multi-actor approach will be the core of the project, as RELACS was developed by involving actors and stakeholders from research and industry, organic farmers and advisors from the start.</p>
<p><u>InPhos</u></p>	<p>PAS - Marzena Smol smol@meeri.pl</p>	<p>Sustainable Management of Phosphorus in Baltic countries: The main goal of the InPhos project is to develop a Phosphorus Strategy for the Baltic Region, laying out a solid foundation and developing long-term solutions for the sustainable management of this critical raw material. In the InPhos project, the Phosphorus Strategy for the Baltic region will be developed by a working group of experts from developed countries (Germany, Sweden, Finland) and the Baltic regions (Poland, Latvia, Lithuania, Estonia) and Italy, who will transfer of knowledge and design of solutions for the sustainable use of phosphorus.</p>



Annex 2 – Example of activities performed since June 2019

Publication of a webpage dedicated to the network of the LEX4BIO projects

<https://www.lex4bio.eu/network/>



Organisation of the first NDF in Germany in November 2019 where the Nutri2Cycle project has been presented and cooperation discussed



Publication on the project website of a news regarding these discussions with the German NDF

<https://www.lex4bio.eu/2019/12/03/ndf/>



Publication of a dedicated article on the LEX4BIO blog regarding networking activities, relayed in the first project newsletter

<https://www.lex4bio.eu/2019/12/18/networking-as-a-key-to-maximise-lex4bio-impacts/>

Networking as a key to maximise LEX4BIO impacts

by admin_lex4bio | Dec 18, 2019 | News & Event | 0 comments

Since the beginning of the LEX4BIO project, networking activities have been undertaken to ensure cross-cooperation with relevant projects and clusters at EU scale. Several joint-activities and joint-promotion have already started. We are introducing here our current partners outside the LEX4BIO consortium:

European Sustainable Phosphorus Platform (ESPP): ESPP ensures knowledge sharing, experience transfer and networking for opportunities in the field of phosphorus management, facilitates discussion between the market, stakeholders and regulators, addresses regulatory obstacles, and contributes to policy proposals. <https://phosphorusplatform.eu>

Biorefine Cluster Europe: The Biorefine Cluster Europe interconnects projects and people within the domain of biobased resource recovery, striving to contribute to a more sustainable resource management in the framework of circular economy systems. [www.biorefine.eu](https://biorefine.eu)

B-FERST BBI project: B-FERST aims at integrating the valorisation of bio-waste in agriculture by creating new circular and bio-based value chains. The project improves the sustainability of arable land by **developing 8 innovative bio-based fertilisers**. <https://bferst.eu>

Nutri2Cycle: The Nutri2Cycle project will assess the current Nitrogen (N), Phosphorus (P) and Carbon (C) flows looking into existing management techniques in different farms across Europe and analyzing their related environmental problems. It was agreed that there will be several synergies that shall be further explored between JKI and **Thuenen Institute**. www.nutri2cycle.eu



Tweet



NEWSLETTER #1

Discover our **#network** of **#EUfunded** projects and **#clusters** ensuring joint-promotion of our results!

Thanks **@BFERSTproject**, **#Nutri2Cycle**, **@phosphorusfacts** and **@Bioref_Cluster** to support and enrich our project!

ow.ly/QZiu50xMogW

#cooperation #EUfunded



Networking as a key to maximise LEX4BIO impacts

Since the beginning of the LEX4BIO project, networking activities have been undertaken to ensure cross-cooperation with relevant projects and clusters at EU scale. Several joint-activities and joint-promotion have already started. [Learn more](#)



Examples of cross-communication on Twitter

B-FERST @BFERSTproject

Cooperation is always vital to enhance your project and boost your ideas. A lot can grow from good cooperation. Thanks, **@Lex4Bio** for being part of our network!

Discover more on their website 📌

LEX4BIO @Lex4Bio · Jan 9

NEWSLETTER #1 📧

Discover our **#network** of **#EUfunded** projects and **#clusters** ensuring joint-promotion of our results!

Thanks **@BFERSTproject**, **#Nutri2Cycle**, **@phosphorusfacts** and **@Bioref_Cluster** to support and enrich our project!

ow.ly/QZiu50xMogW

#cooperation #EUfunded



LEX4BIO @Lex4Bio

Lex4bio is very pleased to start discussing with the **#EUfunded @BFERSTproject**, aiming at developing innovative BBFs!

Certainly very nice synergy potential thanks to the support of the **@EU_H2020** and **@BBI2020** programmes!

#circulareconomy #sustainable #agriculture

B-FERST @BFERSTproject · Oct 1, 2019

We are proud to announce you the new bferst.eu website! **#bferstEU** aims at

- developing new **#biobased** fertilisers for a **#SustainableAgriculture**
- connecting farmers and industry
- creating new circular value chains

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