



Nutri2Cycle

D.7.7 Broad outreach

Deliverable:	Broad Outreach to stakeholders and the general public
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Abbreviations

BIP:	Biomethane Industrial Partnership
CAP:	Common Agricultural Policy
CBA:	Cost Benefit Analysis
D:	Deliverable
EC:	European Commission
NTF:	National Task Force
SME:	Small and Medium-Sized Enterprises



Glossary

Cost benefit analysis: A cost-benefit analysis is the process of comparing the projected or estimated costs and benefits (or opportunities) associated with a project decision to determine whether it makes sense from a business perspective.

Focus group: A qualitative research method that brings together participants for a discussion in which opinions on specific topics such as products or services are debated.

Lighthouse demo: Illustration and demonstration of the move from theory to practice to experiment innovative solutions.

National task force: A network of stakeholders at national/regional level interested in nutrient recovery and recycling, which percolates information in the local languages of the 12 participating member states of Nutri2Cycle.

Operational group: Operational groups are intended to bring together multiple actors such as farmers, researchers, advisers, businesses, environmental groups, consumer interest groups or other NGOs to advance innovation in the agricultural and forestry sectors.

Practice abstract: short summaries of around 1500 characters according to a fixed format, describing a main information/recommendation/practice that can serve the end-users in their daily practice.

Solution: A Nutri2Cycle solution is a proposed optimized farming system, aimed at closing nutrient loops and efficient mitigation measures.

Stakeholder: A party that has an interest in a company and can either affect or be affected by the business. The primary stakeholders in a typical corporation are its investors, employees, customers, and suppliers.

Value chain: The system and resources required to move a product or service from supplier to customer. An agricultural value chain is defined as the people and activities that bring a basic agricultural product from obtaining inputs and production in the field to the consumer through stages such as processing, packaging, and distribution.

Executive Summary

Nutri2Cycle (Transition towards a more carbon and nutrient efficient agriculture in Europe) is a Horizon 2020 funded project which aims to 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.

To ensure the impact of its results, the consortium committed to communication and dissemination activities to ensure visibility of the project, increase the knowledge of farmers, intermediaries and SME's on the possibilities and opportunities of nutrient recycling, provide input to policy makers to remove barriers hampering the development of the biobased economy and provide scientific output for further knowledge build-up.

The present Deliverable D7.7 provides a comprehensive overview of the principal communication and dissemination activities for stakeholders and broad outreach, excluding scientific outreach. The dedicated information on scientific outreach is available in Deliverable D7.8.



Introduction

The Nutri2Cycle concept was to evaluate, showcase and implement optimized closed loop solutions at the local scale and evaluate their potential roll out. Through the WP7 – Communication and community management – we strived to maximally spread the results from the project to all different stakeholders by the development of a joint communication strategy for the different target groups as described in the previous deliverables D7.1, D7.2 and D7.3. Important to note is that all communication and dissemination activities have been disrupted due to the COVID-19 crisis and several activities have been cancelled, replaced, or transferred online. Nevertheless, partners adapted to the evolving situation and reached the set goals.

Throughout the project different communication, dissemination (and exploitation) actions were performed. The major outcomes are depicted in Figure 1 and are in detail discussed in the individual deliverables D7.6, D7.7 and D7.8. The current deliverable D7.7 will focus on the left and right part of the figure and aims to provide a final overview at M60 of the **broad outreach** of the Nutri2Cycle project towards a broader range of stakeholders beyond a scientific audience, predominantly farmers, agro-industrial end-users, fertilizer producers, agro-consultants, public agencies and policy makers.

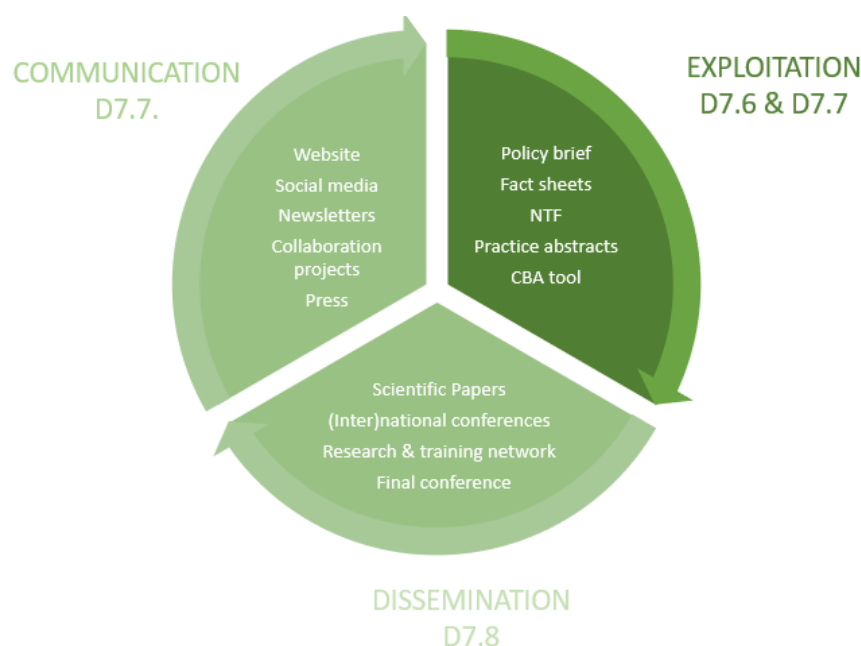


Figure 1 Major Nutri2Cycle communication outcomes and their categorisation into project deliverables

1. Farmers, farmer organisations and operational groups

Since the beginning, Nutri2Cycle identified farmers, farmer organisations and operational groups as key stakeholders for dissemination of project activities as well as the major actors to demonstrate the lighthouse demos and ensure the uptake of the proposed solutions. Therefore these stakeholders were approached in different ways through dedicated National Task Forces, through Light House Network demo’s, practice abstracts and a dedicated cost benefit tool.

1.1. National Task Forces

To facilitate the interaction with farmers, farmers organisations and operational groups, a unique, **integrated network of National Task Forces** have been set up and coordinated by the project partners in 12 countries, with the aim to cross-pollinate the relevant research made by Nutri2Cycle at local level, involving local Operational Groups, local farmers/farmers organizations, representative of the bio-based sector and other stakeholders, who might take up solutions proposed by the project. This “local translation” ensures adequate percolation of the project results at the local level.

By M18, NTFs were active and started implementing a broad dissemination strategy at regional level to ensure the stakeholder engagement and a higher impact of the project outcomes.

During the entire project, NTFs coordinators organised the following meetings:

Table 1 Overview of the NTFs workshops

Country	Date and place	Stakeholder groups	Number of participants
Netherlands	21.01.2019 National Contact Point, Utrecht	Farmers and farmers’ associations, consultancy & company advisors, project leaders, scientists, policy makers	120
	25.11.2020 kennisuitwisseling nutriëntenkringlopen	farmers, advisors, manure intermediaries	7
	25.11.2020 webinar Leerreis Nutriëntenkringloop, online-Teams	farmers, advisors, manure intermediaries	35
	8 workshops in 2022 <ul style="list-style-type: none"> • 15.02.2022 community reststromen, Wagenigen • 16.02.2022 praktijkdag bodem en nutriënten, Vredepeel • 17.02.2022 stakeholdermeeting leerreis, online • 18.05.2022 Stakeholderdag Boerderij vd Toekomst, Reusel • 20.05.2022 Community mestverwaarding, de Marke • 29.06.2022 community reg kringlopen, Venhorst • 13.07.2022 community reststromen, Den Bosch • 20.10.2022 community reg kringlopen, Den Bosch 	Manure processors, Advisors and research Policy and NCP	130



Belgium	12.09.2019 Brussels, Belgium	Ministry of Agriculture & Environmental Affairs, Flemish Land Agency and UGhent	5
	Different online workshops and 1 physical event <ul style="list-style-type: none"> 15.10.2021 Visit adapted stable construction Pittem 09.12.2021 Focus group manure separation 16.12.2021 Online workshop on the challenges and opportunities for the application of digestate (organized by the project DiBiCoo) 20.12.2021 Stuurgroep 15.03.2021 Stuurgroep 	Researchers; operational group, scientific community, farmers, policy makers	164
	4 webinars and 5 workshops in 2022 -2023 <ul style="list-style-type: none"> 30.08.2022 Stuurgroep 18.02.2022 Werkgroep Nutriëntenrecuperatie uit mest, online 22.02.2022 Werkgroep Nutriëntenrecuperatie uit afvalwater, online 14.03.2022 Werkgroep Nutriëntenrecuperatie uit de agrovoeding, online 11.03.2022 Werkgroep Duurzame afzet en bodemgebruik, online 16.06.2022 Proefveldbezoek herwonnen meststoffen, Wingene, Belgium 06.09.2022 Innovatieve technieken in de varkenshouderij, Pittem, Belgium 06.12.2022 Nutricycle Vlaanderen studiedag, Drogen, Belgium 16.02.2023 Gespreksavond circulaire landbouw, Zwalm, Belgium 	Scientific community and SMEs, relevant OGs, farm advisors, regional and local authorities	300
	20.06.2023 De toekomst van duurzame landbouw in Vlaanderen	Researchers; operational group, scientific community, farmers, policy makers	66
Italy	07.06.2020 Valorizzazione dei reflui di allevamento, impatti ambientali e recupero dei nutrienti: traguardare il futuro, online	Industry	10
	12.01.2021 La ricerca scende in campo; un incontro con gli operatori. Organized by Acqua&Sole.	Farmers, enterprises	48
	25.03.2021 23° Seminario SATA Bovini organizzato da A.I.A. A.R.A. Lombardia e ARAL un interessante webinar dal titolo: "Il percorso verso una produzione zootecnica sostenibile", Online	General public, Industry	153
	01.12.2021 La ricerca scende in campo - Un incontro con gli operatori. Agriturismo Granai, Certosa, 27025 Torriano (PV), Italy.	Farmers and enterprises	70
	31.01.2023 Societa' Agricola CORTE ETRUSCA S.S a Cascina TEZZE in Comune di Torre Pallavicina Bergamo, Italy	Pig Farmers entrepreneurs Entrepreneurs Technicians	38
	15.02.2023 Demo site, Vellezzo bellini, Italy	Pig Farmers entrepreneurs Entrepreneurs Technicians	20

Portugal	04.10.2019 Reunião de Lançamento da Task Force Do Projeto Nutri2Cycle, Lisbon, Portugal	Farmers, legislators, technicians, researchers	72
	10.02.2020 SWOT analysis of the use of organic materials at farm level, Lisbon, Portugal	Policy makers; farmers; local operational groups; farmer; scientists	15
	05.03.2021 Solutions for dairy manure management: the Barão e Barão case study analysis Online	Farmers, legislators, technicians, researchers	15
	03.09.2021 Open day at Cholda Farm - DEMO Quinta da Cholda, Azinhaga, Portugal	Farmers, legislators, technicians, researchers	57
	05.11.2021 Analysis of the legislation regarding manure application in Portugal Online	Legislator, technicians, reserchers	11
	04.02.2022 Open day at the orchard experiment	researchers, technicians, farmers, decision makers	16
	04.03.2022 Seminar on the use of organic fertilizers	researchers, technicians, farmers, decision makers	75
	29.09.2023 Reunião de apresentação dos principais resultados obtidos pela equipa portuguesa	Farmers associations, researchers	33
France	29.09.2019 Fertilising with wastes : situation in Europa and France Webinar	Advisors from the Chambers of agriculture	25
	03.12.2020 Return to the ground for the organic wastes : european and national perspectives	Advisors from the Chambers of agriculture	25
	04.02.2021 Principles and expects about NUTRI2CYCLE Online meeting	Farmers, policy makers	8
	14.01.2022 French NTF workshop of the H2020 Nutri2Cycle project	Scientific community Agricultural consultants Ministry of agriculture local authorities	10
	25.09.2023 French NTF workshop of the H2020 Nutri2Cycle project Online meeting	Advisors Policy makers	5
Denmark	26.06.2019 Fertilisers Network annual meeting - with specific Nutri2Cycle NTF session Research Center Foulum, Aarhus University	Agro-industry and fertilizer company representatives Local and national agricultural advisors, University researchers Technology innovation centers & administrators	25
	01.07.2021 Fertilisers Network annual meeting - with field excursion and special Nutri2Cycle session, University of Copenhagen Experimental Farms, Taastrup, Denmark	Farms, enterprises, agro industry, NGOs, National advisory and R&D, Universities	31
	07.07.2022 3rd NTF Denmark event, LandboNord, Brønderslev, Denmark	Farms, enterprises, agro industry, NGOs, National advisory and R&D, Universities	24
	04.07.2023, 4th NTF Denmark event, VKST in Zealand, eastern Denmark	Farms, enterprises	30
Ireland	20.06.2019 Field visit to Teagasc Nutri2Cycle Demo	Research/advisory staff Agri science students	15

	Teagasc Johnstown Castle research Centre, Wexford, Ireland		
	10.09.2019, Teagasc Johnstown Castle, Co. Wexford	Farmers, advisors, and agricultural entrepreneurs	26
	21.10.2020, Irish Nutrient Sustainability Platform - Meet the Stakeholder Meeting Zoom Meeting.	Researchers, farmers	20
	06.07.2021 Outdoor in-service training of 35 Grassland Agro Teagasc Johnstown Castle research Centre, Wexford, Ireland	Grassland Agro Technical and Sales Staff Agri-professionals	35
	08.12.2022, Irish Nutrient Sustainability Platform (INSP) - End of Waste Workshop	Researchers, SMEs, policy makers	14
	07.07.2023 Private organic arable farm, Co. Wexford, Ireland	primarily organic arable farmers, organic mixed farmers, farmers interested in converting to organic systems, and, agricultural advisors.	23
Hungary	29.10.2019 Establishing the HU NTF in the frame of the Nutri2Cycle project Szent István agricultural university Budapest, Hungary	Universities; agricultural companies; chamber of agriculture ; technology providers ; decision makers	46
	30.07.2021 Economical and sustainable agri application of the ABC BioPhosphate BION-NPK-C compound biofertilizers to create financial and non-financial values and market competitive benefits for the User Farmers Kajaszó, Hungary	Producers organization	22
	25.08.2021 NUTRI2CYCLE Animal byproduct processing, Val, Hungary	Farmers	14
	27.09.2021 EU EGTOP dossier and organic substance approval of the BioPhosphate products, Budapest, Hungary	BIOKONTROLL Nonprofit for certification and control of organic farming operations	3
	31.10.2022 BioPhosphate product farm applications for elder and wheat, Val Producer Organisation, Hungary	SME, Farmers	20
	14.04.2023 - 24.05.2023 - 23.08.2023 - 08.09.2023 Economical and sustainable agri application of the ABC BioPhosphate BION-NPK-C compound biofertilizers to create financial and non-financial values and market competitive benefits for the User Farmers Biofarm Agri Research Station Conference Centre (Kajaszó, Central Transdanubia)	Farmers, relevant operators, producers organisation	47
	9.11.2022 The second HU NTF meeting in nutrient recycling in the frame of the Nutri2Cycle project (online)	Farmers, Advisers, scientists, policy makers, organiser	24
Germany	11.11.2019 Agritechnica Fair in Hannover, Germany	Chambers of agriculture; local farmers/farmer organizations; advisors ; scientists	30

	15.06.2022 DLG-Feldtage, Fachforum, Menheim, Germany	Policy makers, farmers	20
	31.03.2022, Agritechnica online	Policy makers, farmers	30
Poland	22.11.2019 National Task Force-Kick-off meeting 2019 Częstochowa University of Technology	Farmers; local operational groups; farming and poultry associations; scientists	19
	13-14.12.2021 - Workshop during the Biogas Congress	Farmers; local operational groups; farming and poultry associations; scientists	50
	14.09.2022 Workshop Nutri2Cycle: Circular Farming in frame of Polish National Task Force.	Farmers; local operational groups; farming and poultry associations; scientists	15
	15.09.2022 - Workshop during the 25th anniversary conference	Farmers; local operational groups; farming and poultry associations; scientists	15
Croatia	02.12.2019 Nutri2Cycle workshop and organisation of NTF Croatian Chamber of Commerce, Sisak, Croatia	Agricultural producers and processors Operational groups active in the area Agro-connected intermediaries Agro SME's	25
	02.06.2022 Presentation of Nutri-2-Cycle project priority technologies and attitude of stakeholders in Croatia	Scientific community, farmers	6
	01.06.2023 Presentation of Nutri-2-Cycle project and technologies for farmers University of Applied Sciences, Križevci, Croatia	Scientific community, farmers, relevant operational group	20
	27.09.2023, Nutri-2-Cycle project - application of sustainable technologies, Croatia	Farmers, Farmers organization, SMEs, local public authority	14
Spain	16.12.2019 Iniciatives europees per al reciclatge de nutrients en sistemes agroalimentaris Vila-Sana, Dilluns, Spain	Policy makers, researchers, SME Companies, advisors, farmers	70
	04.12.2020 Course 2020. Agricultural and livestock advisors,online	Policy makers, agricultural advisors, farmers union, treatment companies, farmers	12
	10.12.2020 Estratègies per augmentar la sostenibilitat dels sistemes agroramaders, online	Policy makers, agricultural advisors, farmers union, treatment companies, farmers	60
	28.10.2021 NTF Nutri2Cycle. Bioeconomia en el sector agrario, online	Regional public authority Relevant operational groups Farmers organization & Farmers Technology suppliers	46
	06.10.2022 Reptes Metodologics. Quantificacio ambiental de la gestion de les dejeccions, Caldes de Montbui, Spain	Regional public authority Relevant operational groups Farmers organization & Farmers Technology suppliers	27

Over the course of the project, all NTF countries also produced 2 brochures in twelve languages: English, Spanish, Irish, Hungarian, Dutch (one brochure by the Dutch NTF and one brochure by the Belgian NTF), Italian, Portuguese, Hungarian, Croatian, French, Danish, German. The brochures using a common template contained general information on the principles of nutrient recycling as well as who to contact and where to find more relevant information.

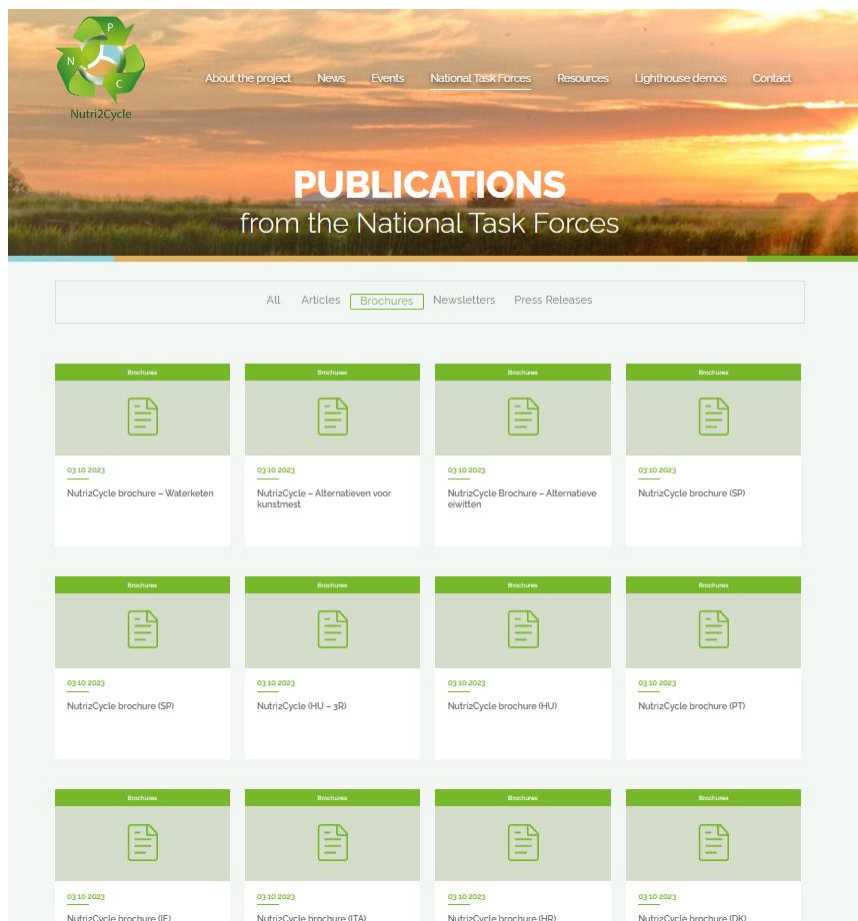


Figure 2 Webpage of NUTRI2CYCLE publications - brochures

As per the Grant Agreement, a total of 24 brochures have thus been published, which can all be found on the Nutri2Cycle website (see Figure 2). The NTFs also produced in total 26 specific newsletters, which can be found on the Nutri2Cycle website under the section “National Task Forces” with two examples given below (see Figure 3). Examples on Nutri2Cycle brochures are also shown in Figure 4.



Figure 3 Examples on NTF newsletters (ES and HU versions).



Figure 4 Examples of NUTRI2CYCLE standard brochure (EN and HU versions)

Of particular interest is the Flemish NTF – namely Nutricycle Vlaanderen– which has a multi-actor stakeholder group that consists out of 5 public administrations, 2 local farmer associations, 3 sector organisations (water technology, food industry, manure processing sector) in addition to the Nutri2Cycle partners Ghent University and INAGRO. The operational activities are organized through 4 thematic working groups (Water, Manure, Agro & Food, Sustainable Fertiliser Use and Soil management), each chaired by a representative sector organization.

The focus of this NTF is to translate international research in language (Dutch) and terminology so that scientific results can be adapted to end-user professional terminology. This has been done amongst others by compiling research and information on specific topics, making it easy for the stakeholders to find and process the information (as compared to for example scientific papers). Following the success during the Nutri2Cycle project Ghent University has committed to prolong the NTF activities beyond the scope of the project. Also other regions/countries (e.g. Spain, Ireland, Germany, the Netherlands, Poland, Croatia) have taken active steps to prolong the NTF activities beyond the scope of the project. The outcome of these steps still need to be seen in the future.

1.2. Lighthouse demos

A very important part of the dissemination and communication activities towards the stakeholder group “farmers, farmer organisations and operational groups” were of course linked to the 14 **lighthouse demos** in 8 countries (Belgium, Italy, The Netherlands, Hungary, Spain, France, Ireland and Portugal).

As a short reminder the lighthouse demos are demos around Europe (see Figure 5) to demonstrate upscaling of research along with continuing technical validation at full or pilot scale. As such the lighthouse network proved to be an ideal tool to relay technical and other (economic, regulatory...) information to an audience of end-users, in particular farmers. It focused not only on the research theory behind nutrient and carbon (re)cycling in modern agriculture, but actually demonstrated this at relevant operational scale, while lowering the threshold for asking very practical questions and concerns.

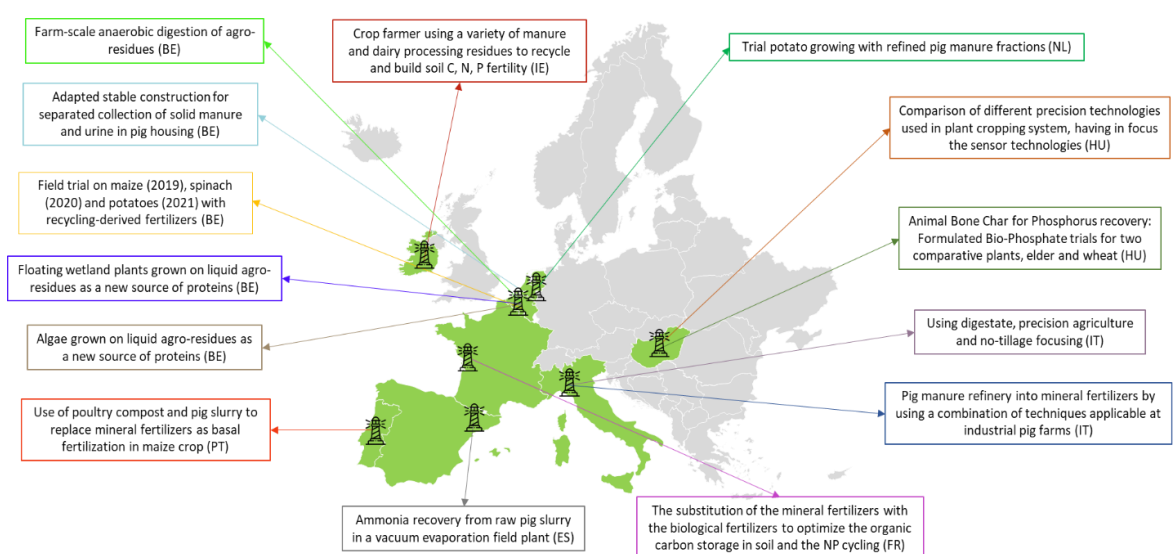


Figure 5 Overview of the 14 Lighthouse demo sites

A detailed, extensive overview of all the dissemination and communication activities carried out by the different lighthouse coordinators during the entire lifespan of the project, has already been provided in the D6.2 ‘*Compilation of individual monitoring reports*’, and will thus not be repeated here. A summary per lighthouse demo as also given in D6.2 can be found in Table 2 below.

Table 2 Summary table of overall tally of additional dissemination activities

Demo ID	Publication		Presentation	Learning engagement	Media outreach	Total tally per demo
	Journal	Popular Article	Conference/webinar/Seminar	Open dat/Field visit/Workshop	Newsletter/Outreach	
Farm-scale anaerobic digestion		6	2	3	6	17
Adapted stable construction for separated collection		1		2	3	6
Using digestate, precision agriculture and no-tillage	1		1		9	11
Crop farmer using a variety of manure and dairy proc.	1	2	17	20	14	54
Comparison of different precision technologies	1		2	1	10	14
Trial potato growing with refined pig manure fractions	1	1	3	3	2	10
Field trial on maize (2019), spinach (2020) and potatoes (2021) with RDFs		10	3		11	24
The substitution of the mineral fertilizers with biol.		1	2		15	18
Ammonia recovery from raw pig slurry		2	1	9	8	20
ABC Animal Bone Char for Phosphorus recovery			1	6		7
Pig manure refinery into mineral fertilizers	1				6	7
Use of poultry compost and pig slurry		5	1	1	4	11
Floating wetland plants grown on liquid agro-resid.	4	2	1	1	3	11
Algae grown on liquid agro-residues	1	2	1	1	1	6
Total/type	10	32	35	47	92	216

In addition to the above mentioned outreach activities the project also organised a very successful **series of webinars** (19-28 April 2022) with a specific focus on the lighthouse demo’s entitled ‘Nutri2Cycle Lighthouse Network: Demonstrating nutrient and carbon recycling in EU agriculture in practice’. The webinars were structured along the different Research Lines and were intended to showcase the lighthouse prototypes. Participants could thus register for their particular interest. During the events, partners responsible for developing lighthouse demo solutions presented and demonstrated the research outcomes at relevant pilot, field or farm scale. Each lighthouse solution was complemented by surveys developed by TEAGASC and THUENEN, aimed at assessing the technical feasibility of the proposed solutions and their real transferability across the EU regions, to be incorporated in D4.1. The webinar series gathered approximately 80 participants, who joined all the different sessions. Details and recordings can be found on the event section of the Nutri2Cycle website. Below the invitation to the webinar including the full programme can be found.

The Nutri2Cycle Lighthouse Network

19th April 2022
22nd April 2022
28th April 2022

Demonstrating nutrient and carbon recycling in EU agriculture in practice

The Nutri2Cycle project aims to close the existing carbon (C), nitrogen (N), phosphorus (P) flows, proposing an integrated approach to create a more efficient and sustainable farm business models for nutrient recovery and recycling. With the aim to put theory in action, the Nutri2Cycle consortium is organizing a series of webinars, which are intended to present the lighthouse prototypes of nutrient management approaches and innovation. The lighthouse demos will demonstrate the research outcomes at relevant pilot, field, farm scale in order to assess the technical feasibility of the proposed solutions and favor their transferability across the EU regions.

19 April 2022 from 10:00 to 11:30 CET

The first day of the webinar series will focus on two aspects: (i) innovative management systems, tools and practices for optimized nutrient and GHG management in animal husbandry and (ii) novel animal feeds produced from agro-residues. [REGISTER HERE](#)

Speakers:

- Farm-scale anaerobic digestion of agro-residues/pig manure to increase local nutrient cycling & improve nutrient use efficiency, Sander Vandendriessche, Inagro
- Adapted stable construction for separated collection of solid manure and urine in pig housing (followed by separate post-processing), Erik Meers, Ghent University, Geert Vermeulen, Vermeulen Construct
- Crop farmer using a variety of manure and dairy processing residues to recycle and build soil C, N, P fertility, Patrick Forrestal, Teagasc
- Floating wetland plants grown on liquid agro-residues as a new source of proteins, Reindert Devlamynck, Inagro
- Algae grown on liquid agro-residues as a new source of proteins, Marcelito Fernandez de Souza, Ghent University

22 April 2022 from 10:00 to 11:30 CET

The second day will provide a comprehensive overview on the achievements regarding biobased fertilizers and soil enhancers from agro-residues in various lighthouse demo solutions. [REGISTER HERE](#)

Speakers:

- Field trial on maize (2019), spinach (2020) and potatoes (2021) with recycling-derived fertilizers: ammonium nitrate, ammonium sulphate, (liquid fraction of) digestate, pig urine and pig slurry, Tomas Van de Sande, Inagro
- The substitution of the mineral fertilizers with the biological fertilizers to optimize the organic carbon storage in soil and the NP cycling: two application cases in France, Jean-Philippe Bernard, CA17 - Chamber of agriculture of Charente-Maritime
- Ammonia recovery from raw pig slurry in a vacuum evaporation field plant, Miriam Cerrillo, IRTA
- ABC Animal Bone Char for Phosphorus recovery: Formulated Bio-Phosphate trials for two comparative plants, elder and wheat, Edward Someus, 3R-BioPhosphate Ltd
- Pig manure refinery into mineral fertilizers by using a combination of techniques applicable at industrial pig farms, Axel Herrens, UMITE

28 April 2022, 10:00 to 11:15 CET

On the final day of the webinar series, lighthouse demo solutions on innovative soil, fertilization and crop management systems, practices for enhanced N,P efficiency and increased soil organic C content as well as tools, techniques and systems for higher-precision fertilization, will be presented. [REGISTER HERE](#)

Speakers:

- Using digestate, precision agriculture and no-tillage focusing on OM stocking in an area characterized by the lack of it, Massimo Zillo, UMITE
- Use of poultry compost and pig slurry to replace mineral fertilizers as basal fertilization in maize crop, Paula Azeiteiro, ISA
- Comparison of different precision technologies used in plant cropping system, having in focus the sensor technologies, Zoltán Hajdu, SOLTUB
- Trial potato growing with refined pig manure fractions, Chantal Hendriks, Wageningen

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Figure 6 Invitation and programme of the webinar series: “The Nutri2Cycle Lighthouse Network”

A mobile-friendly and interactive section has been launched at the Nutri2Cycle website (<https://www.nutri2cycle.eu/lighthouse-demos/>) to show the distribution and content of all lighthouse demo’s across 8 European countries, including pictures and infographics. Importantly, there also dedicated videos can be found as all lighthouse demo coordinators also produced a video explaining in detail the proposed solutions. These video’s explain in a concise, easy way the concept of the lighthouse demo’s and can be consulted by the farmers (or other stakeholders) at any time.

1.3. Practice Abstracts

The project committed to feed the end user material from the project directly to the EIP-AGRI website under the form of practice abstracts. Practice abstracts are short summaries describing a practice/recommendation/information towards end users from the research results of the project to ensure a broader dissemination. Full packages of practice abstracts have been submitted and published at the different phases of the project. During the first period (M1-M18), 11 practice abstracts (D7.4) were submitted presenting the major research lines managed within Nutri2Cycle and the early research results in WP2. In the second phase (M18-M36), the consortium produced 16 practice abstracts (D7.5), focused on operational experiences and practical guidelines. For this last period (M36-M60), additional 22 practice abstracts were produced by the consortium with a focus on the lighthouse demos and the achieved results. This brings the total to 49 Nutri2Cycle practice abstracts (predominantly orientated towards farmers, farmer organisations and operational groups) which exceeds the preset target of 23.

All the practice abstracts have been collected in one final document (D7.6), which has been submitted to the EC and will be available on the Nutri2Cycle website under the Resource section.

1.4. CBA tool

An important exploitation outcome towards farmers, farmer organizations and operational groups is the development of the Cost Benefit Analysis (CBA) tool. The CBA tool enables farmers and agro-consultants to provide an indicative (first level evaluation) farm-level (micro-)economic assessment of the economic viability of mitigation measures (small scale anaerobic digestion, separated collection of urine and feces and use of biobased N & P fertilizers) for their particular case. Importantly, farmers can adjust the input parameters towards their own context and situation, making it a very hands on tool that can provide immediate insight of the potential of a selected technology. We intentionally choose to integrate the tool at the same location as other farmer orientated tools developed under previous European projects. This one stop strategy should create maximum user-friendliness and hence use. The tool can be found at <https://www.systemictools.eu/Nutri2Cycle> and is more detailed described in Deliverable D3.6.

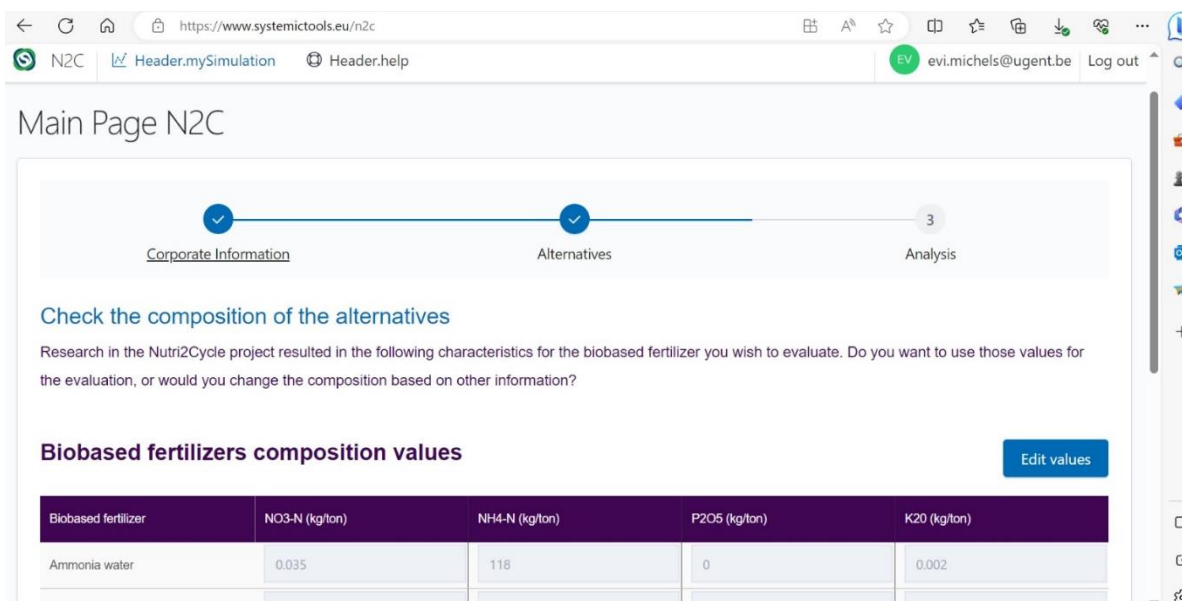


Figure 7 Illustrative screenshot of the CBA webtool

1.5. Extra outreach event – Central & Eastern Europe

Finally, in the last reporting period – an additional event was organized specifically towards Central & Eastern European stakeholders, following reviewer advice (based on the midterm project review). In addition to Ghent University – the NTFs and partners from Hungary, Poland and Croatia were involved in the organization and execution of this event. In total 100 participants registered with a final of around 80 true attendees. Recording of the event can be found on the Nutri2Cycle website under the section «events».

 **Nutri2Cycle presents:**
Best practices and barriers in nutrient efficient agriculture in Hungary, Croatia and Poland

February 3rd 2023, 14.00-16.30 CET

Moderator: Ana-Marija Špicnagel (IPS Konzalting, HR)

Welcome and introduction to Nutri2Cycle -
 Çağrı Akyol (Ghent University, BE)

How to achieve an efficient circular economy in Europe? - The case of the biogas industry - Marina Pasteris (European Biogas Association, BE)

Where do we stand with the implementation of bio-based circular fertilizers in Europe? -
 Erik Meers (Ghent University, BE)

Status and future of energy and fertilizer market in Hungary and Poland -
 Edward Someus (3-R-Biophosphate Kft, HU) & Krystyna Malinska (Czestochowa University of Technology, PL)

Best practices and possible barriers towards the transition to nutrient efficient agriculture in Hungary, Croatia and Poland

The case of Hungary - Zoltán Hajdú (Soltub Ltd., HU)

The case of Croatia - Barbara Dukic (IPS Konzalting, HR)

The case of Poland - Krystyna Malinska (Czestochowa University of Technology, PL)

Coffee Break

Selected Nutri2Cycle solutions

ABC Animal Bone Char for phosphorus recovery: Formulated Bio-Phosphate trials for two comparative plants, elder and wheat - Edward Someus (3-R-Biophosphate Kft, HU)

Comparison of different precision technologies used in plant cropping system, having in focus the sensor technologies - Zoltán Hajdú (Soltub Ltd., HU)

Anaerobic digestion of poultry manure - Anna Jasińska (Czestochowa University of Technology, PL)

Crop farmer utilizing a variety of manure & dairy processing sludges to recycle & build soil C,N, P - Elizabeth O'Carroll (Teagasc, EI)

Q&A

Wrap-up and conclusion

Click here to register

Follow us to discover more on the Nutri2Cycle progress and results!

 www.nutri2cycle.eu
 [@BiorefinCluster](https://twitter.com/BiorefinCluster)
 [@Biorefine Cluster Europe](https://www.linkedin.com/company/biorefine-cluster-europe)

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 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773682.

Figure 8 Program of the outreach event to Central and Eastern Europe

2. Policy makers

The Nutri2Cycle project had a strong engagement towards providing recommendations at the EU level, with specific reference to the implementation of the New Fertilisers Regulation. The project produced in total 6 policy briefs, recommendations or answers to calls providing research background to finetune and support the European Commission in developing policies and favouring the closing of nutrient loops and the transition to the circular economy. Three of this policy briefs were created in joint capacity with other European projects. This type of cross-project statements are a strong

exploitation measure and will help the EC in integrating the knowledge of European projects in their policy roadmap. In the case of Nutri2Cycle this strong engagement is the result of the leadership within the policy working Group in frame of the European Sustainable Nutrient Initiative (ESNI) (see also D7.8). Besides the policy briefs also 2 high level closed communication events are listed which enabled the project to put forward the insights of the project. A comprehensive overview is provided in Table 3. For more insights we refer to Deliverable D4.3 ‘Policy Report’ and the Nutri2Cycle website where all policy briefs can be found in a specific section under ‘Resources’.

Table 3 Overview of output regarding recommendations to EU policy makers

Type	Organizations involved	Subject	Target audience
Recommendation	All Nutri2Cycle partners	Fertilising products - digestate	DG GROW
Answer to call for evidence	All Nutri2Cycle partners	INMAP	DG ENV
Answer to call for evidence	All Nutri2Cycle partners	Soil Health Law – public consultation	DG ENV
Joint Position Paper - joint	Nutri2Cycle In collaboration with projects: Renu2Cycle, Circular Agronomics, Lex4Bio, Fertimanure, Ferticycle, Systemic, Nitroman	Ammonium salts – harmonious approach between EC DGs on status	DG GROW, DG ENV
Open letter - joint	Nutri2Cycle In collaboration with associations & projects: Copa Cogeca, EBA, Nutribudget, Novafert, Fertimanure	RENURE products in INMAP	DG ENV
Open letter - joint	Nutri2Cycle, Copa Cogeca, EBA, Novafert	INMAP – public consultation	DG ENV
Video address	Ghent University, EBA	Added value of biogas as key enabling technology in nutrient cycling	European Parliament
Full day of excursions and meetings	Ghent University, Wageningen University	Need for EC to move forwards on legal framework for RENURE	European Commission – Cabinet of Frans Timmermans (environment)

Apart from the official statements as listed above, different consortium partners also engaged in open or closed working Groups, presentations to policy makes etc.

- Ghent University, INAGRO and Wageningen University were part of the SAFEMANURE study trajectory. This trajectory had a.o. a meeting in Sevilla (Spain) in September 2020 under coordination by the Joint Research Center and under mandate by the European Commission, DG ENV. The intent of the policy trajectory was to investigate the potential to upcycle manure derived nitrogen into synthetic fertilizer substitutes. These were – in that study trajectory – named RENURE : Recovered Nitrogen from Manure. As a consequence, the Nutri2cycle partners and consortium have taken a lead position on pushing forwards practical implementations that bring about the substitution of synthetic nitrogen fertilizers (produced from natural gas) by these RENURE products.
- UCPH participated on a public hearing in November 2022 on "Reducing the Impact of Fertilizers from Production to End Use - Improving the Circular Economy in Agriculture"
- ISA was involved in the EU CAP Network Seminar ‘Smart circular farming to address high energy and fertiliser prices’

- Ghent University was involved in the STRUBIAS Working Group under coordination of the Joint Research Center (Sevilla, Spain) and under mandate by DG GROW. This Working Group was dedicated to amending the Fertilising Product Regulation with products from Struvite, Ashes and Biochoar.
- Ghent University authored the chapter on Biobased Fertilisers for the Joint Research Centres in the Annual EC Outlook of Circular and Bioeconomy in Europe
- EBA and Ghent University are involved in the partnerships between the Europe Commission and Industry on stimulating the state-of-production and state-of-development on biogas and biomethane in the EU-27. In this, Ghent University is co-chairing the Task Force 5 (Research needs) together with a co-chair from the EC and a co-chair from the industry. The overall management of the Biomethane Industrial Partnership (BIP) - as this initiative is called – Is coordinated by the EBA together with the EC. In frame of these activities, the importance of positioning biogas operations also as key enabling hubs for nutrient recycling has been thoroughly addressed in the output of the BIP.
- Thuenen participated through an oral contribution (More sustainable diets and their impacts on EU agriculture) to the 2023 EU Agricultural Outlook Spring workshop (06.06.2023 Brussels, Belgium)

3. Broad audience

3.1. Nutri2Cycle website

The [Nutri2Cycle website](http://www.nutri2Cycle.eu) (www.nutri2Cycle.eu) serves as a central hub for the project’s identity, news, events, updates and place to find the different outputs of the project. It was officially launched in month 4 of the project and has continued to be an important aspect of the project. Throughout the lifetime of the project, some adjustments have been made to the original website to revamp and highlight some specific aspects of the project. A nice example of this is the section completely dedicated to the lighthouse demo’s. To make this very attractive and easy to find for stakeholders a dedicated page was created where all relevant info was listed (details see section [Lighthouse demos](#)), where the user either check the list of proposed solutions or explore the European map showing where the lighthouse demo solutions are located. Also, through the use of filter functions in the “resource” section stakeholders can easily filter for the information they are looking for (e.g., policy briefs, newsletter). Adequate attention is also given to the different events. Some screenshots of different sections of the Nutri2Cycle website are given in Figure 9.



Figure 9 Screenshot of different sections of the Nutri2Cycle website (partim “events”; “Resources-Policy briefs” and “lighthouse demo’s

The website analytics have proven to be strong since the launch with a total number of 1.7K unique visitors. The most popular pages on the website were the home page and the “about” page which explains the project. Interestingly the dedicated page on the lighthouse demo’s completed the top 3 of most visited pages. Analytics of novel users indicate that first time users almost equally find the website through organic search as by direct search. Users have a good global distribution. The heat map shows the strongest representation in Belgium (home of the lead partner) and European countries, but also a strong representation of North America as well as China. These are important partner regions in terms of R&D on climate change abatement and sustainable agriculture. The attention drawn towards Nutri2Cycle and EU positions in these domains has therefore drawn attention from key regions in the world, on top of the EU domestic market itself.



Figure 10 Heatmap of the Nutri2Cycle website users by country

3.2. Nutri2Cycle Newsletter

Stakeholders that were interested in receiving regular updates on the project could opt to register for the **digital project newsletter**. In total 12 newsletters were produced throughout the project by Ghent University with support of the consortium partners, which was the set target for the project. All newsletters can be found on the website under the section “Resources” at the following link: [Nutri2Cycle](#). For two newsletters we decided to join forces with the Biorefine Cluster Europe (BCE) through a “special edition”. The Biorefine Cluster Europe is a free of charge network that interconnects projects and people within the domain of biobased resource recovery. Projects can become member and use the outreach channels for reaching a broad network of stakeholders. By opting for two special editions on nutrient recycling hosted by Nutri2Cycle we could promote the Nutri2Cycle work towards the BCE community that reaches over 2000 subscribers. We also regularly fed news items to the general BCE newsletter. A comprehensive list of Nutri2Cycle contributions to the BCE newsletter can be found in Annex1. Next to the global project newsletters, the individual project partners committed to adding Nutri2Cycle news in their institutes’ newsletters (as well as the Biorefine Cluster Europe).

3.3. Social media

Next to the website and newsletters to reach out to stakeholders, also **digital media** play an important role in making our stakeholders aware of the Nutri2Cycle project and highlighting our progress. Nutri2Cycle has been mainly been active on Twitter and LinkedIn with the **#nutri2Cycle**. Also for digital media we made use of the Biorefine Cluster Europe network by providing Tweets for their network.

Below are reported the statistics of the entire project lifespan.

Table 4 Overview of the Nutri2Cycle tweets on the BCE website

Total number of tweets	Total number of tweet impressions	Total number of tweet engagements
174	107.309	7006

Table 5 Overview of the Nutri2Cycle posts on the LinkedIn website

Total number of LinkedIn posts	Total number of total views	Total number of total engagements	Total number of clicks	Total number of feedback
71	14904	664	659	357

Additionally, the project partners committed themselves to regularly promote projects activities via their own social media accounts.



Figure 11 Facebook post on “Konferencja 25 lecia Wydziału Infrastruktury i Środowiska” with Workshop Nutri2Cycle: Circular Farming in frame of Polish National Task Force by the partner PcZ

3.4. Consumer surveying

In the context of the deliverable D5.4 “Results of the value chain focus groups for the selected case studies”, the stakeholders’ opinions, attitudes and expectations along the added value chain towards the adoption of several circular innovations within the Nutri2Cycle were analyzed, focusing on the reduction of GHG emissions and optimization of C, N, P loops at farm level in representative EU countries. In that sense, dedicated focus groups were organized in Belgium, Italy, Ireland, the Netherlands and Spain to obtain a holistic perspective on how the stakeholders in the agri-food supply

chain perceive the benefits and limitations of the eight selected circular innovations analysed within Nutri2cycle (see D5.4). The participants were composed of stakeholders both from the supply side (“producers”) and stakeholders from the demand side (“consumers”). A total of 130 stakeholders participated, in which 62% were from the supply side of the agricultural value chain and included farmers in the pig, cattle, and dairy sectors, technical advisors, representatives from farmers’ cooperatives, suppliers, researchers, and decision makers. The remaining 38% of stakeholders were from the demand side of the agricultural value chain, and comprised consumers responsible for grocery shopping, retailers, representatives of consumers’ associations, and agents from the food service sector.

The Nutri2Cycle project partners also collected data regarding consumers’ preferences, opinions and attitudes towards environmental friendly and sustainable food Labels, and their behaviour on recycling and waste management to produce agro-products via more sustainable processes. In this regard, a publication on the meta-analysis of consumers’ willingness to pay for sustainable food products has been published at the following link <https://doi.org/10.1016/j.appet.2021.105239>. Results of the activities conducted over the course of the project were also presented by IRTA-CREDA in the two major congresses, EAAE XVII Congress, Rennes France held from 29.08.2023 to 01.09.2023 and AEEA 14 Congreso Economía Agroalimentaria, Zaragoza, Spain, held from 06.09.2023 to 08.09.2023.

3.5. General outreach via press releases

The consortium was committed in disseminating the project activities and results through different press releases. In the previous period (M1-M36), the partners made in total 7 press releases with additional 3 in this particular period. The recent press releases are reported below.

- In 2022, Soltub published a press release on Agroforum about using the drones in the plant cropping systems (link not available)
- Thuenen published a press release on 20 February 2023 on its own website: <https://www.thuenen.de/de/newsroom/presse/aktuelle-pressemitteilungen/detailansicht/langfristig-auf-der-gewinnerseite>
- On 3rd March 2023, Thuenen published a press release on TopAgrar magazine: <https://www.topagrar.com/panorama/news/umstieg-auf-rein-pflanzliche-ernaehrung-fuehrt-zu-12-einkommensverlust-der-landwirte-13325003.html>

3.6. General outreach via specialized (non-scientific) press

Finally, also general outreach was performed through different channels, often via specialized (non-scientific) press. This kind of communication reaches a broad audience ranging from farmers, to consumers, to policy makers to researchers etc.

Specialized (non-scientific) press:

In the period M37-M60 the consortium created 15 additional specialized contributions to (non-scientific) press on Nutri2Cycle related content. Taken in account the input that was already reported in D7.2 and D7.3 this generates a total of 31 .

- Inagro and Ugent published an article in Proeftuinnieuws 11/03/2022: Bemestingswaarde herwonnen meststoffen vergelijkbaar met die van kunstmest
<https://www.proeftuinnieuws.be/wp-content/uploads/2022/03/Bemestingswaarde-herwonnen-meststoffen-vergelijkbaar-met-die-van-kunstmest.pdf>
- Article covering results field trials Flanders in Landbouwleven 18/07/2022: Zijn er mogelijkheden voor herwonnen meststoffen
<https://www.landbouwleven.be/14303/article/2022-07-18/zijn-er-mogelijkheden-voor-herwonnen-meststoffen>
- Article covering NTF event in Flanders in Landbouwleven Eendenkroos en emissiearme stallen kunnen varkenshouderij duurzamer maken
<https://www.landbouwleven.be/14742/article/2022-09-15/eendenkroos-en-emissiearme-stallen-kunnen-varkenshouderij-duurzamer-maken>
- Article Coverage on NTF event Flanders VILT: Studiedag over nutriëntenrecuperatie toont potentieel voor kringlooplandbouw
<https://vilt.be/nl/nieuws/studiedag-over-nutrient-recuperatie-toont-potentieel-voor-kringlooplandbouw>
- Article coverage on studyday on which also results Nutri2Cycle lighthouse demo were presented: Grote interesse in pocketvergister ondanks vergunningsproblematiek
<https://vilt.be/nl/nieuws/grote-interesse-in-pocketvergister-ondanks-vergunningsproblematiek>
- <http://www.agrotec.pt/noticias/agrotec-43-aborda-a-cultura-da-batata/>
- From fork to farm: Impacts of more sustainable diets in the EU-27 on the agricultural sector
<https://acaudio.com/playlist/from-farm-to-table-exploring-the-agricultural-sector>
- 22.03.2022 Enerpedia Wat is kleinschalige vergisting en kan het iets betekenen voor mijn bedrijf? <https://www.enerpedia.be/nl/nieuws/wat-is-kleinschalige-vergisting-en-kan-het-iets-betekenen-voor-mijn-bedrijf-2218/>
- 28.07.2022 Mestverwaarding Varkensmest en concentraat kunnen zich meten met kunstmest <https://www.mestverwaarding.nl/kenniscentrum/2860/varkensmest-en-concentraat-kunnen-zich-meten-met-kunstmest>
- 26.08.2022. Fertilization of potatoes with bio-fertilizers <https://e-opg.eu/gnojidba-krumpira-bio-gnojivima/>
- 26.08.2022. Biogas - production and perspective <https://e-opg.eu/bioplina-proizvodnja-i-perspektiva/>
- 26.08.2022. Catch crops for a better circular economy <https://e-opg.eu/lovni-usjevi-zabolju-kruznu-ekonomiju/>

- 28.08.2022. Project Nutri2Cycle <https://e-opg.eu/projekt-nutri2cycle/>
- Website of the agricultural chambre - Nutri2Cycle : Vers une agriculture européenne plus efficace dans la gestion du carbone et des éléments nutritifs. <https://charente-maritime.chambre agriculture.fr/techniquesinnovations/horizon-2020/>
- Published article on IRTA website promoting updates from the demo & the Nutri2Cycle project - article published in 3 languages: Catalan, Castella and English (link not available)

Dedicated video's:

In the period M37-M60 the consortium created 8 additional videos on Nutri2Cycle related content. Taken in account the input that was already reported in D7.2 and D7.3 this generates a total of 15 videos.

- IRTA produced a Video titled "European initiatives for nutrient recovery in agri-food systems"https://www.youtube.com/watch?v=LoBvflHOWUI&list=PLQJKVVt93v7QA3T_LJFQ5fgCr2z1_47ep
- ISA produced a Video titled "Project Field Day 'Nutri2Cycle' – David Fanguero – ISA"<https://www.youtube.com/watch?v=0GMaZTKnG-o>
- Produced video promoting small-scale anaerobic digestion Video titled "Tournée Provinciale – Pocketvergisting"<https://www.youtube.com/watch?v=YzkprwPD9E0>
- Participation in programme for West Flanders television station 'Focus-WTV' - the T.V. segment was in the local native language & visited a private farm implementing farm-scale AD technology Link to segment: <https://www.focus-wtv.be/video/pocketvergisting-op-landbouwbedrijven>
- UMIL produced a video promoting updates/ findings from three years of the trial was promoted via LinkedIn platform https://www.linkedin.com/posts/activity-7001198632691503104-MPqa/?utm_source=share&utm_medium=member_ios
- Video Leerreis Nutrientcycles in practice [Film Leerreis Nutriëntenkringloop bereikt Europees publiek \(mestverwaarding.nl\)](https://www.leerreis.nl/film/leerreis-nutri%C3%A9ntenkringloop-bereikt-europees-publiek-mestverwaarding-nl)
- Soltub 2021. Video film about using the digestate as bedding material in dairy farms [Link](#)
- Soltub 2021 Video film about the tractor mounted sensor technologies [Link](#)

Oral non-scientific contributions

- IRTA gave an oral contribution entitled Anàlisi Social de Cicle de Vida de sistemes agrícoles: Perspectives i reptes a Catalunya at Anàlisi Social de Cicle de Vida de sistemes agrícoles: Perspectives i reptes a Catalunya (28.10.2021)
- IRTA gave an oral contribution entitled Valorización de nutrientes en forma de fertilizantes inteligentes at De depuradoras a biofactorías: el potencial del agua en la economía circular (07.04.2022)
- Inagro gave a guided tour on farm scale anaerobic digestion at their premises (26.01.2023) and at the Cross Visit Resilience4Daury event in Zulte (14.03.2023)

- Inagro presented Nutri2Cycle online at “On the ground: a discussion with European farmers” on 02.03.2023
- ISA gave an oral contribution on the project and how to improve slurry management in Portuguese farms at “Roundtable Portuguese Pig Farm (13/04/2023)
- Thuenen gave an oral contribution “Wie werden Gülle und Gärrestaufbereitung in anderen Ländern gesehen und angewendet? Welche at DLG meeting (14-16.06.2023)

4. Collaboration with other projects

As part of the broad outreach strategy, since the beginning Nutri2Cycle had several exchanges with nutrient-related EU-funded projects. Some examples of these regular and fruitful collaborations are reported below:

- The project organized together with other 5 other EU projects members of the Biorefine Cluster Europe (Circular Agronomics, NUTRIMAN, Phos4You, ReNu2Farm and Systemic) the European Sustainable Nutrient Initiative (ESNI) 2019 conference to raise awareness on the essential role of nutrient recycling in the transition towards circular economy systems.
- The collaboration with its sister project also led to the co-organisation of the ESNI 2022 (online format) where both projects joined their forces to have a greater impact of their activities. Still, Nutri2Cycle partnered with EU-funded projects, such as Lex4Bio, Fertimanure and ReNu2Farm in the Biorefine Conference, where the project Opportunities and limitations of using biobased fertiliser as a replacement for chemical fertiliser or slurry manure in (precision) arable farming systems.
- Similarly, Nutri2Cycle had a prominent role in the Nutrient Recycling Community (now European Sustainable Nutrient Initiative – ESNI) where it led the Working group on Policy, which scope is to discuss the legal hurdles and the potential solutions for nutrient recycling and recovery. Given its role, Nutri2Cycle co-chaired a policy roundtable at the ManuResource Conference 2022, focused on the missing links between RENURE (Recovered Nitrogen from Manure) and Fertilising Products Regulation. The outcome ended up in a policy brief signed by Nutri2Cycle, Renu2Farm, Circular Agronomics, Lex4Bio, FertiManure, FertiCycle, Systemic and Nitroman.
- As part of the three days final event, Nutri2Cycle presented its policy outcomes at the ESNI 2023 plenary, where it also shifted the lead of the Working Group on Policy to the Interreg NEW Renu2Cycle project. On the same day, Nutri2Cycle collaborated with NutriBudget in the Policy perspective workshop, where they explained how the outcomes of the lighthouse demos as well as the models used in Nutri2Cycle will be an added value from which NutriBudget can build up its activities. In the 2023 edition of ESNI, there were already 12 projects involved in the co-organization of workshops in addition to 3 other project involved via brief project pitches.
- During the project duration – Nutri2Cycle extensively exchanged content and insights with the CSA NUTRIMAN project. In addition, towards the end of the Nutri2Cycle project three new CSA projects started: NOVAFERT, NUTRI-KNOW and FER-PLAY. Steps have been taken during the last stages of the Nutri2Cycle project period to transfer the National Task Force activities

towards these CSAs. This in order to prolong the established platforming structures beyond the project lifetime.

- Analogously, the various community Working Groups which were initiated in 2023 under the flag of the “Biorefine Cluster Europe Nutrient Recycling Community”, which at the ESNI-event itself was re-branded into the (shorter) “ESNI Community” had very determining impact and contribution from the Nutri2Cycle project – both in setting up the inter-project community structures as well as in assuring the continuation thereof beyond the project lifetime. The ESNI community set up 4 Inter-project Working Groups, in each of which Nutri2cycle played a key role: WG Technology (led by FERTIMANURE), WG Sustainability (led by NOVAFERT), WG Agronomy (led by LEX4BIO) and the WG Policy (led by Nutri2Cycle). Moreover, Nutri2Cycle assured continuation of the Policy WG chairmanship by handing over coordination to the RENU2CYCLE project at the ESNI-2023 event.

5. Conclusion

The Nutri2Cycle communication and dissemination strategy has been structured to effectively reach a variety of stakeholders each with dedicated channels and structures:

To reach policy makers, Nutri2Cycle partners participated in a number of committees and panels organized by the EC itself, in addition to respond to public consultations of the EC and the publication of policy recommendation from the Nutri2Cycle perspective via policy briefs. Moreover these policy briefs were generated in inter-project setting to maximize impact.

To reach agricultural end-users – i.e. farmers, agri-businesses (incl. processing such as biogas), businesses supplying agriculture (e.g. Fertilizer industry) and agro-consultancy – a network of lighthouse demonstrators was set up, in addition to National Task Forces in each of the involved 12 member states. The combination of both allowed to translate research findings into practical knowledge for end-users. This approach proved successful as over the course of the project, partners were able to reach out to several key actors and get them engaged to different extent. This resulted from a coordinated and regular internal communication, which favoured the organisation of the major activities, involving National Task Forces and Lighthouse Demo leaders, aimed at disseminating the project activities and showcasing proposed solutions at field, farm and pilot levels.

Researchers were approached via scientific publications and conferences (see D7.8 for more details on this stakeholder group).

A more general outreach to broader audiences was established via press releases, articles in broader media, in addition to which consumer behaviour was also included within the activities of Nutri2Cycle via a broad consumer survey.

Synergies with other nutrient-related projects played also a relevant role to maximise the impact of the project as it allowed to have an exchange of knowledge between different consortia, which also facilitate the identification of major bottlenecks, potential challenges and possible solutions to favour the nutrient recycling.

The comparison of the reached and targeted key performance indicators (KPIs) are summarized in Table 6.

Table 6 Overview of the reached and targeted KPIs at the end of the project

		Reached KPI at the end of the project (M60)	Targeted KPI at the end of the project (M60)
Partners	Visual identity	1	1
	Updates Comms plan	2	2
Broad outreach	Press releases	10	3
	Project Newsletter	12	12
	Articles in specialised agri-press	31	24
	Practice abstracts	49	23
Research outreach	Summer/winter school	3	3
	Special issue	<i>cancelled*</i>	1
	Contributions to events	87	30
	Scientific papers	49	20
	Final conference	1	1
Farmers, Farmers groups, OGs and bio-bases sector	Newsletter	26	Min2/NTF
	Regional workshops	56	24
	Country brochure	24	24
Policy outreach	Policy working group	1	1
	Policy recommendations	6	<i>Nd</i>

*informed and corrected via the Second Amendment

6. Annex

Annex 1. Overview of Nutri2Cycle contributions to the Biorefine Cluster Europe newsletter

- [Biorefine News Bulletin 'April-May 2023' - Cluster Europe | Biorefine](#)
- [Biorefine Cluster News Bulletin ' February - March 2023' - Cluster Europe | Biorefine](#)
- [Biorefine Cluster News Bulletin ' January 2023' - Cluster Europe | Biorefine](#)
- [Biorefine Cluster News Bulletin 'December 2022' - Cluster Europe | Biorefine](#)
- [Biorefine Cluster News Bulletin 'November 2022' - Cluster Europe | Biorefine](#)
- [Biorefine Cluster News Bulletin 'September 2022' - Cluster Europe | Biorefine](#)
- [Biorefine Cluster News Bulletin 'August 2022' - Cluster Europe | Biorefine](#)
- [Biorefine Cluster News Bulletin 'June 2022' - Cluster Europe | Biorefine](#)
- [Biorefine Cluster News Bulletin 'May 2022' - Cluster Europe | Biorefine](#)
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