

PROGRESS

Interreg Europe



European Union
European Regional
Development Fund

PROMoting the Governance of Regional Ecosystem Services

THIRD HANDBOOK OF GOOD PRACTICES

Policy theme:

Explore innovative financial and marketing mechanisms for payment
for ecosystem services.



Institute of the Civil Engineering
and Real Estate Economics
Faculty of Engineering
Economics and Management



UNIVERSITATEA
DIN
CRAIOVA



CREAF



SEVERO
OCHOA
EXCELLENCE



Tionól Reigiúnach Oirthir agus Lár-Tíre
Eastern and Midland Regional Assembly

Contents

I. Introduction.....	2
II. Descriptions of Good Practices.....	4
1. Natural Capital Ireland Framework	12
2. Protecting Farmland Pollinators	13
3. Community supported afforestation.	23
4. My Farm Harta	29
5. Sincere - Forests for water in Catalonia	36
6. Greenhouse Gas and Ammonia Emission Reduction Tool.....	42

I. Introduction

The objective of the PROGRESS project Third Handbook of Good Practices (GPs) is to present 6 good practices of project partners presented during the 3rd Interregional Thematic Seminar (ITS) that took place online on 22 March 2021. The policy theme of the 3rd ITS was “Explore innovative financial and marketing mechanisms for payment for ecosystem services.”

The six selected PROGRESS good practices:

1. Natural Capital Ireland Framework
2. Protecting Farmland Pollinators
3. Community supported afforestation
4. My Farm Harta
5. Sincere – Forests for water in Catalonia
6. Greenhouse gas and ammonia emission reduction calculation tool.

The IE definition of a good practice (GP) provides that *“The good practice is defined as an initiative (e.g. methodology, projects, processes, techniques) undertaken in one of the programmes thematic priorities which has already proved successful and which has the potential to be transferred to a different geographic area. Proved successful is where the good practice has already provided tangible and measurable results in achieving a specific objective.”*

Therefore, identification, analysis and sharing of good practices is a part of the PROGRESS mutual policy learning process to achieve the improvement of policy capacity or capitalization of its partners and regions. In addition, transferring of good practices from one partner region to another can be included in the regional action plan if it can result in a policy change.

In line with the above capitalisation objective, the PROGRESS project aims to: *“initiate a process of policy change in the partners’ regions improving the implementation of the policy instruments under Structural Funds programmes and other regional strategies dedicated to the conservation of biodiversity and the maintaining nature’s capacity to deliver the goods and services that we all need, through policy learning and capacity building activities”*.

The idea of the Handbook of Good Practices is to further extend the capitalization and achieve spill-over effects outside the PROGRESS partners’ territories to those interested parties, which might wish to transfer and implement good practices developed by other regions in their own area. In addition, information on the selected good practices will also be shared on the Interreg Europe Policy Learning Platform.

This Third Handbook of Good Practices is one of four handbooks describing the best good practices of PROGRESS partners under the four policy themes:

1. Promote the measurement of the costs and benefits of ecosystem services derived from land use.
2. Support the horizontal integration of the ecosystem concerns into the sectoral policies and plans at regional and/or national level.
3. Explore innovative financial and marketing mechanisms for payment for ecosystem services.
4. Improve landscape governance for economic and environmental sustainability.

The Fourth Handbook of Good Practices on the policy theme “Improve landscape governance for economic and environmental sustainability.” is expected in the second half of 2021.

II. Descriptions of Good Practices

1. Natural Capital Ireland Framework



© Natural Capital Ireland

Frame from NCI video introducing the concept of Natural Capital Accounting to the farming community and agri-food industry.

Natural Capital Ireland (NCI) was founded in 2014 to advance the conversation on natural capital in Ireland. NCI is made up of a group of organisations and individuals from academic, public, private and NGO sectors, interested in the development and application of the natural capital agenda. The mission of NCI is to value, protect and restore Ireland’s natural capital and ecosystem services by 1) organising high profile events, seminars, webinars, lectures and meet-ups to promote informed public and private sector decision-making 2) producing and sharing resources on their website and via social media channels to support the adoption of natural capital concepts in public policy and corporate strategy 3) connecting NCI members with experts (including global experts on natural capital accounting), and 4) advancing the natural capital agenda in Ireland by participating in original research to assist in the establishment of a national natural capital accounting standard. NCI also contributes to draft policy and discussion frameworks.

Good practice general information	
Title of the practice	Natural Capital Ireland Framework
Organisation in charge of the good practice	Natural Capital Ireland (NCI), formerly the Irish Forum on Natural Capital (IFNC)
Description	
Short summary of the practice	Natural Capital Ireland (NCI) is a not-for-profit organisation leading the conversation on natural capital in Ireland, where it is the main driver and promoter (or ‘marketer’) of awareness and capacity building for natural capital accounting. NCI is made up of a group of organisations and individuals from academic, public, private and NGO sectors, interested in the development and application of the natural capital agenda. Drawn from these sectors, NCI comprises the following functional elements: 5-member Board of Directors; 15-member Steering Committee; 2-person Secretariat, and; 900 registered

	<p>members. The mission of NCI is to value, protect and restore Ireland's natural capital and ecosystem services. NCI does this by 1) organising high profile events, seminars, webinars, lectures and meet-ups to promote informed public and private sector decision-making 2) producing and sharing resources on their website and via social media channels to support the adoption of natural capital concepts in public policy and corporate strategy 3) connecting NCI members with experts (including global experts on natural capital accounting), and 4) advancing the natural capital agenda in Ireland by participating in original research to assist in the establishment of a national natural capital accounting standard. This includes the INCASE project which is piloting natural capital accounting in Ireland. NCI also contributes to draft policy and discussion frameworks.</p>
<p>Category of the good practice</p>	<p>Information dissemination and awareness raising.</p>
<p>Resources needed</p>	<p>Natural Capital Ireland was founded in 2014 and was incorporated as a non-profit Company Limited by Guarantee in August 2018. It is currently funded by the National Parks and Wildlife Service, under National Government by the Department of Housing, Local Government and Heritage, as well as the Department of Agriculture, Food and the Marine. NCI previously received funding from the Irish Environmental Protection Agency and the Department of Communications, Climate Action and Environment. The amount of funding secured varies year on year. In terms of paid human resources, the NCI secretariat comprises an Executive Coordinator and a Communications Executive. A Finance Officer oversees the accounts and supports the secretariat to prepare mid- and end of year statements. NCI running costs are approximately €70,000 per year.</p>
<p>Timescale (start/end date)</p>	<p>2014 - Ongoing</p>
<p>Strategic relevance (long term impact)</p>	<p>Natural capital is an economic metaphor for nature; a concept that frames the world's resources like plants, animals, water, and minerals as assets or stocks that yield a flow of benefits to people. The natural capital approach involves measuring and valuing natural capital assets. Values can be expressed in many different ways, including in qualitative, biophysical and monetary terms. Values can help reveal how natural capital is delivering important benefits to society and the economy. These natural capital assessments can be used to support more sustainable decision-making. <i>Natural Capital Accounting</i> is a system for organising information about natural capital assets and ecosystem services. The UN has a standard for this type of accounting, called the System of Environmental-Economic Accounts (SEEA). The aim of organising this information is to help decision-makers understand how the environment</p>

	<p>interacts with the economy. According to its Strategic Plan for 2021-2023, the long-term mission of NCI is to value, protect and restore Ireland’s natural capital and ecosystem services. NCI is doing this by promoting the adoption of natural capital concepts in public policy and corporate strategy, supporting informed public and private sector decision-making, and assisting in the establishment of a national natural capital accounting standard. This includes the development of short engaging videos and other resources to ‘market’ natural capital principles and natural capital accounting.</p>
<p>Evidence of success (results achieved)</p>	<p>Since its establishment as the Irish Forum on Natural Capital in 2014, NCI has advanced the natural capital agenda in Ireland. The results outlined here are for 2020 only and demonstrate the type and range of activities that NCI undertakes to achieve its objectives.</p> <p>In 2020, the Irish Programme for Government ‘Our Shared Future’ committed to a range of measures relevant to natural capital. To react to these announcements and inform policymakers about how the natural capital approach can support these measures, NCI held an online policy briefing in June aimed at Irish policymakers and civil servants. More than 100 civil servants attended to hear about key natural capital concepts and the need for natural capital accounting to be integrated into Irish policy.</p> <p>NCI made written submissions to the consultations for new Statements of Strategy for five Government Departments and established five Policy Working Groups. These Working Groups help to prepare and coordinate NCI’s response to national policies and programmes relevant to NCI’s mission. The Groups have delivered responses for: Ireland’s National Recovery & Resilience Plan; the review of the National Development Plan, and; an Agro-Environment Results Based Pilot Project.</p> <p>NCI projects and activities in 2020 included: 1) Launch of an online survey of third-level institutions to gauge the status of teaching of natural capital and ecosystem services approaches in Ireland; 2) Business and Biodiversity study (with partners) to examine how business can better support national biodiversity objectives. In October 2020, NCI partnered with the <i>Business in the Community</i> advisory group to deliver the preliminary findings on a webinar. The project report was submitted to National Parks and Wildlife Service in November 2020 and published in January 2021; 3) NCI facilitated a series of workshops with members of the National Biodiversity Forum and delivered a commentary report on the National Biodiversity Action Plan to Minister of State for Heritage; 4) NCI partnered with the Department of Agriculture, Food & the Marine to deliver a video on how the natural capital approach can be used on farmland; 5) NCI provided communication and dissemination services to the EPA-funded INCASE project,</p>

	<p>which is piloting natural capital accounting in Ireland for the first time.</p>
<p>Tangibility</p>	<p>The IFNC strategy for 2018-2020 outlined five key objectives:</p> <ol style="list-style-type: none"> 1. Establish the Irish Forum on Natural Capital as a professional and sustainable organisation. 2. Progress Natural Capital Accounting at national level, integrate natural capital in Government policy and build expert capacity in Ireland. 3. Work with Irish businesses to adopt the natural capital approach to inform their own strategies and decision-making. 4. Raise awareness of natural capital with key stakeholders, relevant groups and the general public. 5. Develop large-scale natural capital case studies. <p>In late 2019, the NCI Board, Steering Committee and Secretariat met to discuss progress against the 2018-2020 strategy and agreed that significant progress had been made against all five objectives. It was agreed that the next strategy would continue to reinforce these objectives.</p> <p>NCI's Strategy 2021-2023 was developed in March 2020 and revised by the Board between December 2020 and February 2021. The Strategy sets out three core objectives:</p> <ol style="list-style-type: none"> 1. Increase funding & develop governance; 2. Build natural capital awareness and capacity in Ireland; 3. Implement research programmes. <p>The expected outcomes from the strategy are that:</p> <ul style="list-style-type: none"> • NCI has established a long-term funding model; • NCI is seen by prospective funders as a professional and trustworthy organisation; • Relevant stakeholders are aware of NCI, key natural capital concepts and NCI benefits of natural capital accounting; • Irish policy is beginning to incorporate key natural capital concepts; • NCI participates in original research to advance knowledge on natural capital in Ireland and internationally.
<p>Durability</p>	<p>The year 2020 saw substantial growth in NCI reach and impact with membership increasing by 50% from approximately 600 to 900. Three research projects were delivered, Board and Steering Committee elections took place, events were organised and learning materials provided. The incorporation of the organisation as a non-profit Company in 2018, the launch of a new ambitious strategy to 2023 and the establishment of a Media Response Unit have positioned NCI as a durable model for similar or complementary initiatives in other regional contexts.</p>

Visibility

In 2020 an NCI Media Response Unit was established to respond to relevant initiatives, articles and events in order to raise the profile of NCI and advocate for the natural capital approach via press releases, letters, media interviews and social media updates. The unit comprises the NCI Secretariat, the Chair/Director of NCI and two other members of the Steering Committee.

NCI issues monthly newsletters to its members, featuring NCI news, general natural capital news, updates from the INCASE project, events and workshops, research calls, reports and papers.

NCI published 35 blogs over the period with more than 4,200 views reported in the 2020 Annual Report.

The NCI Twitter page has over 2,200 followers – an increase of over 1,000 from the 2019 Annual Report. The NCI LinkedIn page, which was launched in 2019, has over 550 followers.

NCI hosted several well-attended events over the period to raise awareness of natural capital topics, to keep stakeholders informed of various developments in the field and build capacity for the organisation. On October 19th, 2020, NCI hosted Dieter Helm (Oxford University), chair of the UK’s Natural Capital Committee, for a student-aimed seminar on achieving net zero emissions, which has since had over 300 views on YouTube.

The NCI partnered Business & Biodiversity project report received coverage in numerous media outlets including Irish Tech News, the Irish Independent and the Times. NCI discussed the findings on Business, Biodiversity & Finance webinar on January 19th, 2021, with two international speakers presenting recent studies on business and biodiversity abroad, and NCI providing a summary of the Report findings. The event had over 100 attendees, and over 200 YouTube streams (Annual Report 2020, published January 2021).

The NCI produced a video: *Introduction to Natural Capital Accounting*. See ‘Added Value’ section below.

Meanwhile, the INCASE Feasibility Report was published by the EPA in July. Dr Catherine Farrell (INCASE, Trinity College Dublin) was interviewed for a podcast for Burren Nature Sanctuary and took part in the Irish Rural Link ‘In Conversation’ series in October plus the Irish Tech News podcast in early 2021. Dr Farrell and Lisa Coleman (INCASE, Trinity College Dublin) contributed to a natural capital map as a part of Bioeconomy Week. INCASE project economist, Professor Stephen Kinsella (University of Limerick) also addressed a financial audience during Climate Finance Week in November 2020 for a session entitled *Financing Biodiversity*, while Prof Jane Stout (Chair of the NCI Board, Trinity College Dublin) also

	<p>addressed the <i>Environment Ireland Conference</i> in October, 2020.</p> <p>INCASE project communications: number of subscribers has more than doubled from 60 in early 2020 to close to 150 in January 2021, while the project’s Twitter account has gained 900 followers over the course of the year.</p> <p>The <i>Natural Capital on Farmland</i> video was publicly welcomed by the Minister of State for Land Use and Biodiversity, Pippa Hackett, and was widely covered in the press, including by Agriland and the National Rural Network. The video received over 600 views in its first week of publication.</p> <p>The NCI commentary report on the National Biodiversity Action Plan with the National Biodiversity Forum was widely covered in the media, including the Irish Times, the Irish Examiner, the Irish Independent and the Government News Service website.</p> <p>NCI used its Twitter page and press releases to publish reactions to the EPA State of the Environment report 2020 and to the Department of Agriculture’s <i>Ag Climatise</i> document.</p>
<p>Added Value</p>	<p>The work of Natural Capital Ireland is highly interdisciplinary and collaborative, resulting in substantial added value from the project. One example is the production of the ‘Introduction to Natural Capital Accounting’ video, a spin-off output of NCI’s involvement in the EPA-funded INCASE project. Building on the communication and dissemination services that NCI provides to the INCASE project, NCI released a lively 4-minute video which provides an introduction to natural capital accounting. To produce this, the NCI secretariat worked with an animation team to script, produce and launch the video which was widely shared online, translated into a number of languages (including Hindi), and has received over 6,800 views on YouTube since its launch in June 2020 (figure correct as of 15th March 2021): https://www.youtube.com/watch?v=ykzFmT4rhmM.</p>
<p>Effectiveness</p>	<p>Since its establishment in 2014, NCI has become a respected and effective actor in promoting natural capital concepts and accounting in Ireland. Its success in attracting new members, in securing funding for and delivering three research projects to date, and providing resources including learning materials and online has been clearly demonstrated through its results. If the success of NCI can be measured through the inclusion of the language and practice of natural capital accounting in policy, the words of an Irish Government Minister responding to the NCI video (with DAFM) on how the natural capital approach can be used on farmland is a clear example of the effectiveness of the NCI approach: “I look forward to a time when we all speak easily about natural capital. The services nature provides are so widespread and so important that we should be recognizing them almost without thinking. And we must start accounting</p>

	for them too.” - Minister of State for Land Use and Biodiversity, Pippa Hackett.
Innovation	NCI (formerly known as the Irish Forum on Natural Capital) began as an idea in 2013 with a view to advancing a comprehensive economic assessment of the whole range of resources, goods and services produced by the Irish environment. It has since grown to lead the conversation on natural capital in Ireland. In its seven years of existence, Natural Capital Ireland has: launched the concept with the Ireland’s Hidden Wealth conference in 2014; co-delivered the sold-out National Biodiversity Conference at Dublin Castle in 2019; built capacity by producing videos, infographics and quick reads; participated in original research such as the pioneering INCASE project, which is testing natural capital accounting at catchment scale in Ireland for the first time. As such, NCI is a unique and innovative initiative which is dedicated to the promotion and advancement of natural capital as a concept in policy and in business by working with partners to promote and develop financial mechanisms and methodologies for valuing, measuring and paying for natural capital and the ecosystem services that it provides.
Efficiency	The governance of NCI comprises a Board of Directors, a Steering Committee and a Secretariat. NCI’s work is divided between these three branches, with the Board providing strategic direction and governance, the Steering Committee providing technical insights and thought leadership, and the Secretariat delivering projects and coordinating the Steering Committee and Board. In December 2020, NCI held Steering Committee elections. NCI members were invited to elect a new Steering Committee to guide Natural Capital Ireland’s work over the next two years. In addition to the five places reserved for past and present funders and the Chair of the Board, 15 members were elected with 7 continuing and 8 new members drawn from a mix of public, private, NGO and independent sectors. NCI is in the process of hiring more contractors to deliver its work.
Externality	Results from the 2020 Survey of Irish third-level institutions are being compiled to inform recommendations on the incorporation of natural capital concepts in third level curricula. The National Parks and Wildlife Service is using the NCI partnered Business and Biodiversity study to inform its new strategy. NPWS manages Ireland’s nature conservation responsibilities under national and European law and international commitments. Its mandate is to protect, preserve and present our natural heritage. The Program for Government 2020, ‘Our Shared Future’, set out a commitment to “review the remit, status and funding of the National Parks and Wildlife

	<p>Service (NPWS), to ensure that it is playing an effective role in delivering its overall mandate and enforcement role in the protection of wildlife.” The chair of the NPWS review is Prof. Jane Stout (Director of Natural Capital Ireland) and the facilitator of the stakeholder consultation is Dr. Micheál Ó Cinneide (a founding member of IFNC/NCI).</p>
Intra-regional coordination	<p>The very essence of NCI and its approach is intra-regional coordination among key actors and stakeholders in order to value, protect and restore Ireland’s natural capital and ecosystem services. NCI does this by undertaking activities which support the adoption of natural capital concepts in public policy and corporate strategy, promoting informed public and private sector decision-making and assisting in the establishment of a national natural capital accounting standard in Ireland.</p>
Extra regional impact	<p>NCI is an “all-island” organisation and reserves a place on its Steering Committee for representatives from Northern Ireland (NI). As of 2021, there are two NI representatives on the Steering Committee, one from eNGO NI Environment Link, and one from the Ulster Wildlife Trust. NCI is actively working with these partners to develop cross-border projects, for example under EU LIFE and PEACE Plus.</p> <p>Following the publication of the EU Biodiversity Strategy for 2030, the EU Business @ Biodiversity Platform recently announced its relaunch as an initial step to implement the strategy. As part of this new phase, on 23 June 2020, the Platform convened a virtual meeting of EU and national B@B platforms, and networks to share experiences, learn about each other’s priorities and trigger new partnerships, where necessary to further encourage the uptake of biodiversity among business decision-makers, and raise awareness across a larger group of enterprises. In total, 26 participants representing 19 EU & national platforms and networks, and other relevant organisations joined the virtual meeting. During the meeting, NCI shared lessons learned from creating new national platforms. NCI also shared the introductory video on natural capital accounting.</p>
Quality	<p>The Board of Directors, Steering Committee and the Secretariat of NCI comprise highly qualified and engaged individuals from across public, private, NGO and independent sectors. With a clear vision, mission, strategy and structure, which has delivered significant results, and impact, NCI is a high-quality innovative initiative which has started to successfully build natural capital awareness and capacity in Ireland.</p>
Potential for learning or transfer	<p>The NCI structure and approach provides a high-quality template, which can potentially be emulated in other regions and national contexts, where there is a desire to build natural capital awareness and capacity, and/or use natural capital</p>

	<p>accounting techniques to value protect and restore ecosystem goods and services. The means by which such an initiative might engage with policy and research would depend on established practices in the given context. Furthermore, the establishment of such an initiative requires committed and dedicated work from leaders in academia, government, private sector and NGOs, which is in the most part voluntary. Funding would have to be sought and secured from relevant sources, and a strong stakeholder network would need to be developed and managed. The new NCI Strategic Plan for 2021-2023 provides an example roadmap of how the work of such an organisation might be progressed into the future. https://7b5267e1-c27b-40fd-9211-f4a6c5c30b12.filesusr.com/ugd/94066f_13e9f9cb1b0f45e0b8f3ef76a2d4a03c.pdf</p>
Further information	https://www.naturalcapitalireland.com/



Natural Capital Ireland meeting
© Natural Capital Ireland

2. Protecting Farmland Pollinators

Protecting Farmland Pollinators (PFP) is a five-year EIP-Agri project working with a group of 40 farmers, across farm types (beef, dairy, mixed, and tillage) and intensities (high, medium, and low) in Co.Kildare and neighbouring counties in the Eastern and Midland Region of Ireland. The project has four key objectives: 1) To test the effectiveness of a range of pollinator measures across different farm types in Ireland and to identify those that have most impact, and those that are most cost-effective; 2) To test the impact of these pollinator measures on overall biodiversity; 3) Based on the pollinator measures, to develop a simple farm-scale pollinator scoring system that uses a habitat matrix approach to quantify how pollinator-friendly the entire farm is, and 4) To develop a simple results-based payment method that encourages and assists farmers in attempts to improve their whole farm pollinator score. The project is effective as it is built on evidence-based actions and a results-based payment model, where participating farmers receive an annual payment based on their overall farm pollinator score, which is calculated based on the quantity and quality of pollinator-friendly habitat on the farm.



Source: National Biodiversity Data Centre Ireland

Good practice general information	
Title of the practice	Protecting Farmland Pollinators
Organisation in charge of the good practice	National Biodiversity Data Centre (NBDC)
Description	
Short summary of the practice	This five-year project is working with a group of 40 farmers, across farm types (beef, dairy, mixed, and tillage) and intensities (high, medium, and low) in Co.Kildare and

	<p>neighbouring counties in the Eastern and Midland Region of Ireland. The 40 farms make up a total area of 2,774.70 ha. The project has four key objectives: 1) To test the effectiveness of a range of pollinator measures across different farm types in Ireland and to identify those that have most impact, and those that are most cost-effective; 2) To test the impact of these pollinator measures on overall biodiversity; 3) Based on the pollinator measures, to develop a simple farm-scale pollinator scoring system that uses a habitat matrix approach to quantify how pollinator-friendly the entire farm is, and 4) To develop a simple results-based payment method that encourages and assists farmers in attempts to improve their whole farm pollinator score.</p> <p>The project is built on evidence-based actions and a results-based payment model. The participating farmers receive an annual payment based on their overall farm pollinator score, which is calculated based on the quantity and quality of pollinator-friendly habitat on the farm. Scores are based on indicators relating to the following 5 criteria: 1) Flowering hedgerows, 2) Pollinator-friendly trees; 3) Pesticide inputs; 4) Flowering margins around field edges; and 5) Flowers. The higher the pollinator score of the farm, the more the farmer will be paid annually. The maximum payment any farmer is able to draw down in any year is limited to €4,000. The farmer is required to complete the scorecard and the project team then calculates the score based on the information submitted by the farmer. Actions are weighted, so that those actions that are more beneficial to pollinators score more. Scores are also further adjusted for quality.</p>
Category of the good practice	Sustainability instrument
Resources needed	Protecting Farmland Pollinators is one of 23 Irish EIP-AGRI Operational Group projects funded by the Irish Department of Agriculture, Food, and the Marine (DAFM) under the Rural Development Programme 2014-2020. Total funding for PFP for 5 years: €1,194,679.
Timescale (start/end date)	July 2019 - end of 2023
Strategic relevance (long term impact)	Pollinators are important for many reasons. For growing insect-pollinated crops, fruits, and vegetables; for marketing fresh produce; for the health of our environment; for their cultural significance, and for the economy. Farmers recognise this importance, but farmland has experienced wide-scale loss of wild pollinators over the last 50 years. The decline in bees, butterflies and other insects has largely resulted from the effect of monoculture and the drive to ever higher levels of agricultural productivity, which is also characterised by a loss

	<p>or neglect of hedgerows, farmland edges and scrub^{1,2}. In Ireland, one third of our 98 wild bee species are threatened with extinction.</p> <p>This project is working with farmers to roll-out a whole farm pollinator scoring system and identify what management practices on Irish farmland benefit pollinators. The whole farm pollinator score is calculated based on each farmer's management practices. In the long term, this score will help farmers to understand how pollinator-friendly their farm is, and identify what simple, low-cost actions they can take to work towards improving their score in a way that does not negatively affect productivity.</p>
<p>Evidence of success (results achieved)</p>	<p>In 2020, for the first time, farmers have received a results-based payment depending on how pollinator-friendly their farm is. The total sum of farmer payments for the farming year 2019/2020 was €63,209.57. Pollinator-friendly habitat was identified on each of the 40 farms and farmers were provided with examples of how to increase their pollinator score for the next assessment period. In Year 1, extensive insect and plant surveys were carried out to gather data to test whether farms that have higher scores have more pollinators (bees, hoverflies) and more biodiversity generally. 'Number of pollinator-friendly trees' was the most frequently used action on the 40 participating farms in 2019/2020. The number of trees on the individual farms ranged from 12 to over 500. The second most popular action on the scorecard was mixed species sward/clover pasture (32 of the 40 farms). Thirty-one farms contained pollinator-friendly non-farmed areas. Some of these areas were identified as biodiversity 'hotspots'.</p> <p>The scoring system and associated weighting is under constant development, and will slightly change annually as the project progresses. The new data will allow the project team to finetune the scoring system in line with the project objectives. The review of the scoring system and associated measures is undertaken in response to which specific measures are identified as being most effective in enhancing biodiversity, and that are most cost-effective.</p>
<p>Tangibility</p>	<p>The whole farm pollinator scores for the 2019-2020 farming year (Year 1 of the results-based payments), ranged from 1,020 pollinator points to 248,946 pollinator points (Median = 22,067 ± 49,292 standard deviation). The scoring system has worked and is showing the expected range for the pilot group of 40</p>

¹ Hallmann, C.A., Sorg, M., Jongejans, E., Siepel, H., Hofland, N. and Schwan H., 2017, More than 75 percent decline over 27 years in total flying insect biomass in protected areas. *PLoS ONE* 12(10) e0185809. <https://doi.org/10.1371/journal.pone.0185809>

² Merckx, T., Marini, L., Feber, R. and Macdonald, D. 2012, Hedgerow trees and extended-width field margins enhance macro-moth diversity: Implications for management. *Journal of Applied Ecology* 49, 1396–404.

	<p>farms that were chosen to reflect differing farm types and intensities.</p> <p>The highest score overall came from a beef farm (248,946 pollinator points), the second highest came from a mixed farm (192,190 pollinator points) and the third highest from a tillage farm (108,176 pollinator points). Mixed farms were found to have the highest average pollinator points overall and tillage farms had the lowest.</p>
<p>Durability</p>	<p>According to the 2020 Annual Report for the Protecting Farmland Pollinators project, the success of the project in Year 1 has demonstrated how the scoring and payments system could be rolled out on a national scale as an eco-scheme or other results-based agri-environment programme. On this basis, the Protecting Farmland Pollinators team is working to secure long-term funding and further roll-out of the project through the reformed Common Agricultural Policy, in alignment with the sustainable ambitions of the European Green Deal. The future CAP reform is due to be implemented from 1 January 2023, pending final agreement between the European Parliament and the Council of the EU. To align with this, the current EIP-Agri Protecting Farmland Pollinators project will run until the end of 2023.</p>
<p>Visibility</p>	<p>The Project website was launched in February 2020: www.biodiversityireland.ie/farmland.</p> <p>The Project manager is disseminating the project through Twitter (@SaorlaKK, #FarmlandBiodiversty) and is further supported by the AIPP and NBDC's Twitter accounts (@PollinatorsIreland and @BiodiversityIreland). Biodiversity Ireland's Facebook page is also used to disseminate the Project updates.</p> <p>Participant beef farmer Kim McCall and Dr Úna Fitzpatrick (Project Co-ordinator) were interviewed about the project on national television on 27th May 2020. The interview was featured on <i>Nationwide</i>, a prime-time TV programme on the main channel of the Irish national broadcaster, RTE (RTE 1). The coverage of the project is available at: https://www.youtube.com/watch?v=VFQltrWUGh4&feature=emb_logo.</p> <p>The project manager participated in an interview with 'Midlands Science' for an online TV series for children funded by Science Foundation Ireland: https://www.youtube.com/watch?v=mA8pQNs_8MQ&feature=youtu.be.</p> <p>Three newspaper articles were published after the project launch:</p>

	<ol style="list-style-type: none"> 1. The Farmers Journal https://www.farmersjournal.ie/farmers-taking-part-in-new-pollinator-project-530842 2. The Kildare Nationalist https://kildare-nationalist.ie/2020/03/10/new-project-aims-to-get-farmsbuzzing-again/ 3. The Irish Independent https://www.independent.ie/business/farming/tillage/helen-harris-how-doesbiodiversity-drive-square-with-the-demand-for-cheapfood-39029208.html. <p>In Year 1, Saorla Kavanagh (project manager) presented the project at the Tillage Industry Ireland meeting in January 2020. The project was also presented at the Biodiversity Training workshop in Co. Clare, the AIPP consultation meeting at the Ulster Beekeepers Association Annual Conference in February 2020, the Burren Winterage School, October 2020 and at the Teagasc Tillage Training workshop in December 2020. (See also 'Externality' section below.)</p> <p>An Annual Report for 2019/2020 was published in January 2021. This report contains an update on key achievements, background of the project, an outline of 1) how the results-based system works; 2) kinds of actions that are considered when generating the farm-scale pollinator score; 3) results to date, and; plans for 2021: https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Protecting-Farmland-Pollinators-Annual-Report-2021.pdf. This report provides most of the information included in this Good Practice write-up.</p>
<p>Added Value</p>	<p>Before the farmer can score his or her farm, they must create solitary bee nesting habitat for mining and cavity nesting solitary bees. This was a requirement for participation with a view to adding value from the outset of the project. Since July 2019, participant farmers have installed over 130 bee boxes for cavity nesting bees and nests of four different cavity bee species have been recorded in the newly created bee boxes. Over 300 bare soil solitary mining bee nesting sites were created by participant farmers and after just a few weeks, nests were recorded as occupied on 16 farms. Early results suggest that – as a result of the project in year 1 - seven different species of solitary mining bee have set up home across the newly created nesting sites.</p>
<p>Effectiveness</p>	<p>The project to-date demonstrates that participating farmers have been very interested in learning about biodiversity and want to know, how to protect and enhance biodiversity on their farms while having a productive farming system. In 2021, training will be available to all 40 farmers on-line and on-farm in accordance with government guidelines related to COVID-19. A guidance document will also be produced in 2021 to</p>

	<p>explain the whole farm pollinator scorecard, and will provide examples to farmers on how best to manage their farm for pollinators and wider biodiversity without negatively affecting productivity. This document will be produced in consultation with farmers and will be based upon the 'Farmland Guidelines' of the All-Ireland Pollinator Plan. This document will ensure greater protection for farmland pollinators across the participant farms and will help to improve awareness and understanding of the project. It will include a large number of real-life examples to make it as easy as possible for farmers to understand the features on their farm that are most beneficial for pollinators and how to maximise their scores (and therefore their payments) if they wish.</p>
<p>Innovation</p>	<p>The agricultural economy in Europe has developed around payment for production of commodities such as food, while all the other services that are vital to human well-being and survival are seldom rewarded in the marketplace^{3,4}. Agri-Environmental (AE) schemes have existed in Europe since the 1980s⁵. Traditional AE schemes are prescription/actions-based. They are designed to compensate farmers for the costs incurred and income foregone from adopting practices that promote biodiversity, protect water quality and combat climate change⁶. This typically means that a farmer will be required to carry out a range of actions or follow a management prescription on their farm in order to receive payment. The payment remains the same for all farmers, regardless of their level of success.</p> <p>The concept of paying farmers for producing ecosystem services on the other hand is a relatively new idea. Until recently, the wide diversity of ecosystem services provided by farmers (such as water quality, flood and fire resilience, and soil quality) has not been acknowledged in payments to farmers. This lack of connection between farming enterprise and the provision of wide-ranging ecosystem services results in a disproportionate level of reward being granted to the food provision service. This practice ultimately comes at the cost of the other ecosystem services⁴.</p> <p>There is increasingly a move towards agri-environmental Results-Based Payment Schemes (RBPS). In a RBPS, a farmer's payment is linked to the desired deliverables of the</p>

³ Kelly *et al.* 2016 *Agri Vision 2015 Committee*. Report of the Agri Vision 2015 Committee. Department of Agriculture, Food and the Marine, Dublin.

⁴ McLoughlin, D., Browne, A. and Sullivan, C.A., 2020, *The delivery of ecosystem services through results-based agri-environment payment schemes (RBPS): three Irish case studies*, *Biology and Environment: Proceedings of the Royal Irish Academy*, Vol. 120B, No. 2, pp. 91-106.

⁵ CEC 1998 *Evaluation of agri-environment programmes, State of Application of Regulation (EEC) No. 2078/92*, DGVI Working Document, VI/76555/98.

⁶ DAFM 2015 Ireland - Rural Development Programme (National) 2014–2020, Department of Agriculture, Food and the Marine Europa website (2020) <https://www.agriculture.gov.ie/ruralenvironmentsustainability/ruraldevelopmentprogrammerdp2014-2020/>

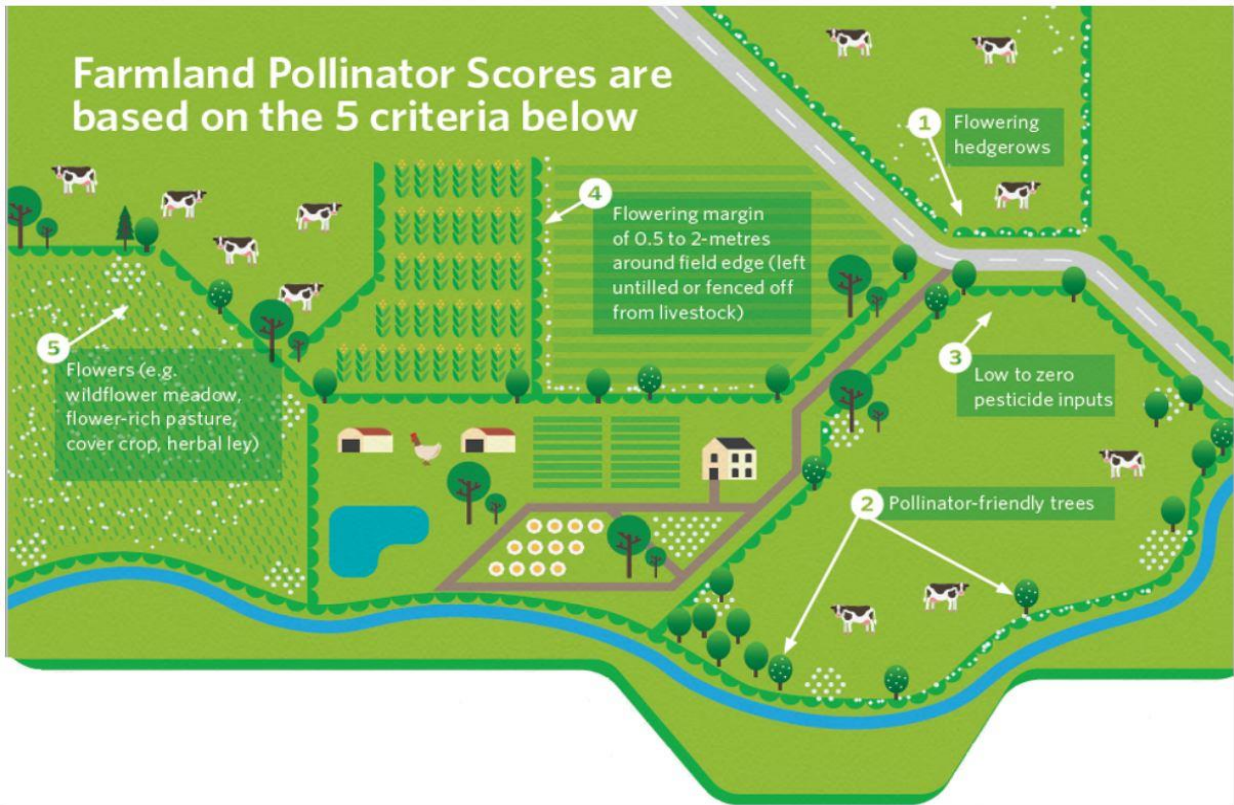
	<p>programme: the higher the quality of product delivered, as defined by habitat quality scorecards (result indicators), the higher the payment to the farmer⁷. If the quality increases over time, the farmer receives an increased payment; this provides an opportunity and strong incentive to manage land to a higher environmental standard and offers increased flexibility to the farmers in choosing how they deliver ecosystem services⁴.</p> <p>European Innovation Partnerships (EIPs) are partnerships that aim to better co-ordinate existing financial instruments and initiatives in a number of key areas including agriculture sustainability and productivity (EIP-AGRI). EIP-AGRI was launched in 2012 to contribute to the EU's 'Europe 2020 Strategy' of smart, sustainable and inclusive growth. The Irish DAFM was transformative in its decision to use EIP-AGRI funding to address the restoration, preservation and enhancement of ecosystems, as most other European member states focused this mechanism on productivity.</p> <p>Therefore, in testing an innovative RBPS focusing uniquely on pollinators, and funded through a scheme that - in other European Member States - traditionally focuses on productivity, the very essence of Protecting Farmland Pollinators is innovation.</p>
<p>Efficiency</p>	<p>The Protecting Farmland Pollinators Project is co-ordinated by the National Biodiversity Data Centre (NBDC). The NBDC is the national centre for the collection, collation, management, analysis, and dissemination of data on Ireland's biodiversity⁸. There is a project co-ordinator, as well as a project manager who manages the day-to-day running of the project. Both are based in the NBDC. There are two Financial Managers for the project employed by Compass Informatics. Three surveyors worked on the Ecological Survey Team for 6-months between March and August 2020 (Year 1 scoring and assessment). Annual on-farm inspections will be conducted on at least 10% of the farms from Year 2. The operational group for the project includes the NBDC; Five Champion Farmers; Bord Bia (the Irish Food Board); Glanbia (an Irish global nutrition group with operations in 32 countries); HEINEKEN Ireland; Macra na Feirme (an Irish voluntary rural youth organisation); Teagasc (the semi-state authority responsible for research and development, training and advisory services in the agri-food sector) and the University of Dublin, Trinity College. The group is locally led by the five Champion Farmers across types (beef, dairy, mixed and tillage). It has been put together to ensure scientific expertise in pollinator requirements, project design and data analyses; farmer engagement and knowledge transfer;</p>

⁷ Byrne et al. 2018 *Non-technical Summary: Results-based Agri-environment Pilot Schemes in Ireland and Spain*. Report prepared for the European Union, Agreement No. 07.027722/2014/697042/SUB/ B2 https://rbapseu.files.wordpress.com/2019/01/rbaps_es01_non_technical-summary.pdf

⁸ The NBDC is an Initiative of the Irish Heritage Council and is operated under a service level agreement by Compass Informatics. The NBDC is funded by the Department of Culture, Heritage and the Gaeltacht, and the Heritage Council.

	and to advise on future practical recommendations with respect to agri-environment and biodiversity/sustainability schemes from a commercial perspective. The Operational Group is further supported by the 16-member steering group of the All-Ireland Pollinator Plan.
Externality	Participant tillage farmer Andrew Bergin presented the project at the <i>Halting the Loss of Pollinators Conference</i> on February 21 st 2020, in Brussels, where he shared his experience with a European-wide audience. This conference focused on the role of EU agricultural and regional development policies in halting pollinator loss. Neus Rodriguez-Gasol (ecological survey team member) wrote a blog describing the different methods being used by the project to assess farmland biodiversity. It is available at: https://www.biodiversityireland.ie/measuring-farmland-biodiversity/ . A blog was published by the All-Ireland Pollinator Plan team for Pollinator Week 2020 which showcased the Protecting Farmland Pollinators project: 'Working together with farmers to help pollinators' https://pollinators.ie/working-together-with-farmers-tohelp-pollinators/ .
Intra-regional coordination	A monthly project newsletter was established in June 2020 and is distributed to the participant farmers, the Operational Group, and other interested parties across the region. The newsletters are available to download on the NBDC website: https://www.biodiversityireland.ie/projects/protecting-farmland-pollinators/news/ . The first edition of an annual Children's Farming Newsletter was published in May 2020 and is available here: https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Newsletter-Farming-Kids-EIP-Pollinators-Issue-1.pdf . A WhatsApp group was set up for the 40 participant farmers and their families in order to share information and co-ordinate actions.
Extra regional impact	The Protecting Farmland Pollinators Project is featured on the new European Results based Payments Network website, which was launched on 7th May 2020: https://www.rbpnetwork.eu/country-infos/ireland/protectingfarmland-pollinators-17/ . The project manager is also a member of a European Innovation Partnership (EIP) webinar working group. Webinars are organised by the European Forum on Nature Conservation and Pastoralism with support from the Irish Heritage Council and in collaboration with Galway-Mayo Institute of Technology. These webinars aim to bring together the broader land management /agri-environment EIP projects within Ireland and across Europe.
Quality	This project has a specialised project team consisting of managers and scientists that have appropriate specialist knowledge and are skilled in database management, communication and financial administration. All 23 funded

	<p>EIP-AGRI projects in Ireland have detailed monitoring programmes that record the rate of improvement of the conservation status of the target habitat and species. In the case of Protecting Farmland Pollinators, this is pollinators and their habitats on farmland (the 2019/2020 scorecard contains 18 measurable actions/indicators relating to food, shelter and safety for pollinators). Such comprehensive monitoring programmes have been absent to date from national AE schemes in Ireland. This is an inherent aspect of the results-based approach and is what incentivises farmers to improve ecological quality. The focus is on delivering ecosystem services in tandem with—rather than in spite of— producing food products. Programmes that do not use habitats as indicators for ecosystem quality payments risk missing an opportunity to provide multiple co-benefits, and indeed risk potential negative impacts of some other ecosystem services⁴.</p>
<p>Potential for learning or transfer</p>	<p>Since results-based pollinator measures must be present in order to obtain pollinator points, the Protecting Farmland Pollinators measures are, in effect, self-targeting and have the ability to fit conditions and circumstances in any target location. As an RBPS model, with a standardised system of payments linked to desired deliverables of the programme as defined by habitat quality scorecards (result indicators) under development, the approach is highly transferrable to other EU regions. For successful transfer, the results-based approach of the Protecting Farmland Pollinators project needs to be supported by the farmer and the Project Team. Farmer training is provided to offer advice on pollinator-friendly farm management and on how to score the farm. However, the farmer is free to choose the methods most suited to them and their farming conditions to deliver the desired result. While the empirical results of the project will take a number of years to be realised, Year 1 results suggest that the scoring and payments system of the Protecting Farmland Pollinators project could be rolled out on a national scale. There is no reason why this should be limited to the Irish context. Aspects of the Project are subject to change over the life of the project, in response to participant feedback and project monitoring.</p>
<p>Further information</p>	<p>www.biodiversityireland.ie/farmland</p>



Source: National Biodiversity Data Centre Ireland

3. Community supported afforestation.

Community supported afforestation initiative was started by MyForest Community Forests Foundation in 2019 as a platform to organize environmentally conscious businesses, individuals for creating new forests, thus contributing to recovering biodiversity losses and mitigating climate change impacts, while offering an experience of charity to the donors. The MyForest acts as a connecting platform bringing together:

- ordinary citizens who are concerned about the climate and intend to contribute to the common goal by planting trees;
- businesses seeking to participate in planting forests;
- landowners who contribute to the project by offering their lands; i.e. by providing their lands for afforestation;
- businesses that want to plant trees for their customers or bind their purchases for tree planting.

It is very easy for everyone to become a part of this project by purchasing a package that's suitable for wallet or company budget and, therefore, the donor can take responsibility for the Earth, reduce his or her carbon footprint. Every target group can find their suitable options for being part of afforestation without organising planting or not knowing where to start, because there is a professional team of MyForest taking care of every aspect.



MyForest site waiting for afforestation.
Source: MyForest



MyForest community planting
Source: MyForest

Good practice general information	
Title of the practice	Community supported afforestation
Organisation in charge of the good practice	MyForest Community Forests Foundation
Description	
Short summary of the practice	Forests are essential for life on earth. Forests provide habitat for a vast array of plants and animals, many of which are still undiscovered. They protect our watersheds. They supply the oxygen we need to survive and provide the timber for products we use every day. Forests are so much more than a collection of trees and are home to 80% of the world's

terrestrial biodiversity.
<https://www.worldwildlife.org/habitats/forest-habitat>

The number of forests on the planet ideally should be doubled as one of the main reasons for global warming is that two-thirds of the forests have disappeared since the industrial revolution. The remaining one third can no longer bind the amount of CO2 emitted by human activities, leading to increasingly extreme sign of global climate change. As forest density increases all over Europe, there are significant improvements in this area, however more actions should be taken to tackle this issue.

The MyForest community forests initiative established a platform to organize environmentally conscious businesses, individuals in creating new forests thus contributing to recovering biodiversity losses and mitigating climate change impacts, while offering an experience of charity to the donors.

MyForest acts as a connecting platform bringing together

- ordinary citizens who are concerned about the climate and intend to contribute to the common goal by planting trees;
- businesses seeking to participate in planting forests;
- landowners who contribute to the project by offering their lands; i. e. by providing their lands for afforestation; and
- businesses that want to plant trees for their customers or bind their purchases for tree planting.

There are many ways to join the project:

- As a business – purchases and orders can be tied to planting a tree or team-building events can be organized to have a company tree or forest, otherwise a business can just decide to help planting and managing forest,
- As an individual – the planting and nurturing of trees can be financed directly, thus, becoming a donor. Also anyone can join the team as a volunteer participating in planting and other activities,
- As a land owner – land can be offered for afforestation (currently only free offers are accepted, but the team is working on the legal ways to lease land),
- As a student – trees can be planted and the class of students can participate as a donor, and help in planting the trees as an educational activity.

Those who are interested in afforestation can buy any number of saplings, just like in a Web Shop. As soon as there are enough donations to fully afforest a specific area (usually at least one hectares), the plantation commences involving volunteers and donors. The forest area managed up to 10 years if necessary and, as it is usual, are protected by a fence. Donors are displayed on the website of the MyForest Foundation and they also receive a logo to use it in their communication materials.

The donors that are directly or indirectly paid for the renewal or restoration of a specific ecosystem service can gain

	<p>knowledge about forests and a sense of charity, and an increased attachment to forests, especially those who participate in the planting of trees. The price for donors is modest (590 HUF/sapling) making it open to everyone who is willing to participate in the scheme. The forests will not be cut down or clear-felled, therefore, the impact of the initiative can be long lasting.</p>
Category of the good practice	Biodiversity
Resources needed	<p>The cost of trees was calculated considering the factors listed below:</p> <ul style="list-style-type: none"> • cost of the land (purchasing/leasing the land); • land works: clearing the land from overgrown bush, ploughing; • temporary fencing (to protect the land and the saplings); • cost of the saplings, transportation and planting; • everyone works as a volunteer in the foundation, however, the contributions should cover the operating costs of the organisation. <p>The amount needed to plant one tree: 590 HUF (1,6 €).</p> <p>In addition, every forest has its maintenance cost for the first 10 years (cutting twigs, picking dying seedlings, pest control, replenishment of trees) included in the price.</p>
Timescale (start/end date)	The project was started in 2019, and is ongoing.
Strategic relevance (long term impact)	<p>Recently, the MyForest team is in the middle of an organic expansion. They are building a national network leaning on local communities, where local volunteers can visit local land owners and also engage local individuals and businesses. The think globally act locally attitude is crucial in tree planting as well, just like in dealing with climate change.</p> <p>The key objectives of the New EU Forest Strategy are: effective afforestation, forest preservation and restoration in the EU, so as to increase the potential of forests to absorb and store CO₂, promote the bio-economy and reduce the impact, and the extent of fires, while protecting biodiversity.</p>
Evidence of success (results achieved)	The degree of afforestation and the number of new forests is growing, even further plantings are already funded, future locations are already selected and launched due to the high demand from donors.
Tangibility	In 2019-2020, 75.226 trees were planted resulting in 3 new forests (3,55 hectares in total) owing to more than 1500 individual and 150 company, and organizational contributions.
Durability	Permanent forests are established on the lands offered, which means that trees there are not supposed to be felled. The trees are a property of “no one” and the official communication is that the only owner of these woods is the planet Earth, with all the living creatures on it; a message that also increases visibility of the initiative.

	<p>These forests are taken care for 10 years. After this period their future will be in the landowner's hands according to the contract with MyForest. They have contractual obligation to selection cutting. The planted species are oak, mixed broad-leaved trees and wild fruit trees, which means that their longevity varies between 20-100 years.</p>
<p>Visibility</p>	<p>Every supporter's name is indicated on the webpage. The number of the supported trees is also marked together with the species, and the place and time of planting.</p> <p>Donors are encouraged to be a part of the planting and also welcome to visit any forest with family and friends, spend time there, organize programs etc. On MyForest web- and Facebook pages followers can see news about the forests.</p>
<p>Added Value</p>	<p>The webpage and donations are easy to reach, and the overall scheme is transparent, it has clear advantages for nature and donors as well. Being able to track the locations, the number of saplings, as well as participate in the planting events increases commitment as well.</p>
<p>Effectiveness</p>	<p>It is very easy to become a part of this project by purchasing a package that's suitable for the wallet/company budget and, therefore, the donor can take responsibility for the Earth, reduce his or her carbon footprint.</p> <p>Every target group can find their suitable options for being part in afforestation without organising planting or not knowing where to start. A professional team is taking care of every aspect.</p>
<p>Innovation</p>	<p>There are only a handful of projects and initiatives in the country to support reforestation, especially involving several target groups (individuals, businesses, schools/students). In this regard, being easy to access and offering a way for companies, schools, and individuals an easy way to donate and help forests, and reforestation is certainly a market gap – if it can be considered as a market – in eco-conscious charity.</p>
<p>Efficiency</p>	<p>The top-down approach of the selection and management of the activities contributes to the coordinated and efficient nature of operation without spreading thin resources. Volunteers help planting the trees, but the price per sapling is defined to cover the costs of land rental, saplings, necessary earthworks before and after planting, green works and protection of the area.</p>
<p>Externality</p>	<p>The MyForest initiative plans to move to new countries and involve new local forests and communities. The MyForest initiative has already been launched in Romania. In the future, the project will rely on local initiatives coordinated by local groups, which can be considered as spin-off projects.</p>

Intra-regional coordination	Local communities are being established to assist in finding new partners, land owners and donors, who are willing to join this reforestation initiative.
Extra regional impact	<p>The MyForest initiative has already been launched in Romania and they are actively looking for new partners in other countries as well.</p> <p>It is easy to implement a similar project anywhere, because it requires only a small amount of resources and there are active organizations in other countries as well, who are willing to take actions for restoring biodiversity through afforestation.</p>
Quality	<p>The advantages of being part of this project are well communicated, the operation is transparent, the webpage is easily accessible, the donation/purchase is simple as in a Web Shop and the names of donors are publicly available.</p> <p>Operating in such legal form, MyForest Foundation has to publish yearly accounts, which describe incomes and expenses of the organization.</p>
Potential for learning or transfer (1000 char)	The MyForest initiative can be deployed easily in other countries, as willing participants and environmentally conscious individuals are easy to find. Project management, efficient approach and transparency, good communication are key elements that should be addressed by those who would like to adopt such approach. Due to the top-down nature of the project, even government agencies, regional or municipal governments can initiate similar projects. Focusing on several target groups at once also contributes to reaching a critical mass, where the results are clearly visible from a numerous perspective as well.
Further information	https://www.myforest.hu

MyForest community planting



Source: MyForest

4. My Farm Harta


My Farm Harta is the community-supported agriculture (CSA) model connecting producers and consumers directly within the food system by allowing the consumer to subscribe to the harvest of the farm. It is an alternative socioeconomic model of agriculture and food distribution that enables the producer and the consumer to share the risk of farming. In case of MyFarm Harta, participants of this initiative get their regular boxes of vegetables and other optional farm goods, like fruits, eggs, herbs, spices, meat and honey from the farm. A wide range of seasonal supply is available in the webshop; in the summertime mostly fruits and vegetables, while in the wintertime – smoked meat products and fresh eggs.

However, participants of the My Farm Harta initiative can participate in the decision making of the farm. The farmer and his team have a Facebook group, where a constant cooperation is kept up, information and news are shared, preferred plants and proportions in the plantation can be voted for. Participants are welcome to visit the farm, participate in the harvest or just follow the development of the plants via an online application. The whole operation is transparent, which builds and maintains trust. A charity scheme is also included in the model – the farm donates 10% after each order to children in need and charity package can also be bought.

As the model extends new farmers are getting involved. Careful selection contributes to maintaining that those who enter measure up to such standards as environmental consciousness and social responsibility. Ultimately, only those who show signs of real commitment can start their own businesses, as new entries are separate businesses, meaning that this model works as a kind of “solidarity-based franchise”.



Source: <https://www.myfarmharta.com>

Good practice general information	
Title of the practice	Community supported agricultural business model in Hungary
Organisation in charge of the good practice	MyFarm Harta 
Description	
Short summary of the practice	<p>Buying groceries and food products is not only a question, which market is the easiest to reach but as customer awareness increases, becomes a matter of trust. Buying directly from farmers and supporting local economies ensures low emissions, as there is no extra transport required, and contributes to fairer return for farmers as well, as highlighted in the Farm to Fork strategy of the European Union. Reversing the loss of biodiversity, helping mitigating the impacts of climate change are also important goals that can be easily achieved with short supply chains and chemical- and pesticide-free farming methods. From the perspective of the consumer, however, this is not as easy as going to a local supermarket and being able to purchase everything in one go.</p> <p>The Community-supported agriculture (CSA) model connects the producer and the consumers directly within the food system by allowing the consumer to subscribe to the harvest of the farm. It is an alternative socioeconomic model of agriculture and food distribution that enables the producer and the consumer to share the risk of farming.</p> <p>Because subscribers have practically full rental rights, not just the profit, but also the risk is shared. In case of vis major events subscribers might get no produce, but in a year of optimal weather conditions the crate arrives loaded full of vegetables and other goods.</p> <p>In case of MyFarm Harta it is no different, in return for subscribing harvest, subscribers get their regular boxes of vegetables and other optional farm goods, like fruits, eggs, herbs, spices, meat and hone A wide range of seasonal supply is available in the webshop; in the summertime mostly fruits and vegetables, while in the wintertime – smoked meat products and fresh eggs.</p> <p>The farm was initially financed through IndieGoGo, a crowdfunding platform, which granted the start-up capital in 2019. The aim of the project was to promote small-scale farming and make organic vegetables and fruits easily accessible.</p> <p>This crop-sharing practice has many advantages; the pesticide-free farming helps to prevent a loss of topsoil, soil poisoning, water pollution, death of insects, birds etc. and the organic produce has been shown to have a higher vitamin and mineral content, so it contributes not just to biodiversity but health and</p>

	<p>more nutrient-dense food. It's a short supply chain without intermediaries, so overhead costs are low, from which both the producer and the customer can benefit. Chemical free cultivation requires 3-5 times more human work than chemical farming, so it directly helps local employment.</p> <p>Subscribers have a say in the happenings on the farm. The farmer and his team has a Facebook group, where a constant cooperation is kept up, information and news are shared, preferred plants and proportions in the plantation can be voted for. Subscribers are welcome to visit the farm, where they can participate in the harvest or just follow the development of the plants via an online application. The whole operation is transparent, which builds and maintains trust. A charity scheme is also included in the model, the farm donates 10% after each order to children in need and charity package can also be bought.</p> <p>As the model extends new farmers are involved. Careful selection contributes to maintaining that those who enter measure up to the standards of this practices. Expertise is needed to join, but applicants also share the values of the model including environmental consciousness and social responsibility. Ultimately, only those who show signs of real commitment can start their own businesses, as new entries are separate businesses, meaning this model works as a kind of "solidarity-based franchise".</p>
<p>Category of the good practice</p>	<p>Biodiversity, Circular economy, Resource efficiency</p>
<p>Resources needed</p>	<p>The optimal farming area was determined in around 2000 square meters for a family-run business. This ensures that regular inspections can be made and even the removal of harmful insects can be done in a physical way, without using pesticides. New farmers entering this scheme should provide their own farmland, but the management provides all other resources in the first year. From 200 applicants, only five started their farms in 2021. During the first year, new farmers are limited to 500 square meters to be later extended to around 2000. Seeds and other resources are to be bought from the centre of operations later on.</p>
<p>Timescale (start/end date)</p>	<p>The project was started in 2019 and it is ongoing.</p>
<p>Strategic relevance (long term impact)</p>	<p>The pesticide-free farming encourages biodiversity, and it has no harmful effect on nature. The overall health of the consumers of organic vegetables improves because they eat fresh, safe, highly nutritious and toxin-free food.</p> <p>This model accords with the Farm to Fork Strategy of the EU aiming to make food system fair, healthy and environmentally-friendly. Our transition to a sustainable food system should be accelerated, which is solved in this cropsharing model with all its positive effects (that are highlighted in the strategy):</p>

	<ul style="list-style-type: none"> - it has a neutral or positive environmental impact - helps to mitigate climate change and adapt to its impacts - reverses the loss of biodiversity - ensures food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food - preserves affordability of food, while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade. <p>The model contributes to job creation, the farmer has a more productive and stable livelihood and the renters can enjoy all the benefits. The cooperation between them makes it even more functional and progressive.</p> <p>In November 2020, a foundation was established for helping those in need. Since then a thousand kilograms of vegetables and 1700 eggs were donated for charitable purposes. In the framework of the foundation the cooperation expanded resulting in 6 new production points and the development of an educational series was started.</p>
<p>Evidence of success (results achieved)</p>	<p>The model started with one 450 m² farm in 2019, extending to 800 m² by 2020 and 1000 m² by 2021. The maximum area of each farm is determined to be 2000 m², as this seems to be an optimal size considering both quality of farming, products and income. An important aspect of this model is that it is highly value-oriented that is mirrored by these limits of farm areas.</p>
<p>Tangibility</p>	<p>There are currently 6 farms scattered all around Hungary in 2021. For 2021, 200 applicants came forward to join, and ultimately five were chosen to start their businesses.</p> <p>The number of subscribers is about 750 – there are around 250 weekly, 250 monthly and around another 250 one-time (there is also a test-package) customers.</p>
<p>Durability</p>	<p>MyFarm Harta plans to acquire organic/bio certification for their produce, but it requires a few years to be able to receive this certification.</p> <p>The consistency of the project and its high quality in terms of vegetables and fruits produced and customer service brings repeat customers, so the base of the costumers (50%) are regular, around 25% come by personal recommendations and only 30% of the subscribers are dropping out every year. 1/3 of the costumers subscribe for weekly boxes, approximately 1/3 for monthly boxes and the rest are casual buyers.</p> <p>For those, who find it hard to cook from random ingredients a cooking show is being prepared with a famous chef to help getting ideas or some creativity.</p> <p>In order to protect the produce from extreme weather conditions they have two back-up farms as a safety net. Setting anti-ice net over specific plants' orchard can help in protection.</p>

	<p>A mere 10% of the plants cannot survive generally, which proves that organic farming is more resistant to extreme weather events. Yet, the extremity in weather caused by global warming makes organic farming more difficult, because, for example, pest is collected by hand and drought significantly increases costs.</p>
<p>Visibility</p>	<p>Renters are welcome to visit the farm but they can also follow the progress online through a live streaming application. A Facebook group was started where members get notified about the activities of the farm, they can vote for the preferred vegetables or the proportion of the planting and they can also share ideas, tips or recipes.</p> <p>The advantages of being part of this system are clearly and professionally communicated, the operation is transparent, the webpage is easily accessible, and the ordering process is simple.</p>
<p>Added Value</p>	<p>The customers are able to oversee and control every aspect of farming activities. The charity actions included also offer additional social value. External effects are kept to a minimum including distribution, as the producer supply customers directly without intermediaries.</p> <p>In terms of ecosystem services, agricultural products were identified as a standalone ecosystem service. In this sense, the customers are directly paying for ecosystem services (chemical-free and ecological farming methods further underline this notion) and the customers also share some of the inherent risks, mainly weather effects, together with farmers.</p> <p>This model also contributes to rural development goals by offering a complete career model to farmers.</p>
<p>Effectiveness</p>	<p>This cropsharing system is beneficial for the farmers because they have a stable financial background, while customers join to a transparent, sustainable network. The back-up gardens ensure that subscribers get their expected, regular boxes.</p>
<p>Innovation</p>	<p>No such business model was applied in Hungary so far. Shortening the supply chain by a significant margin, while involving professionals to ensure marketing and management, is a cross-sectoral cooperation leading to increasing incomes for farmers, while restoring losses of biodiversity, helping in a charity scheme and providing a reliable and trusted source of agri-food products for the customer.</p>
<p>Efficiency</p>	<p>Farmers who can join the MyFarm system are strictly selected to ensure commitment towards the values that the model is representing. Last year 5 farmers have been chosen out of 200. Professional competence matters, but the human aspect, the attitude is more important. Being a farmer in MyFarm gives stable livelihood, but, as the business accelerates, the members should contribute towards nature by planting trees and also by</p>

	<p>giving 10% of the profit for charity. (both are eligible as expense)</p> <p>The crop sharing model can provide a career model, as well for those who have experience in cultivation, but not in undertaking business. As a matter of fact thanks to the community funding the farmer can start a business with zero risk. This way this system has a direct effect on the development of rural areas.</p>
Externality	<p>External effects are kept to a minimum due to not using chemicals, such as pesticides. The ecological farming methods applied in the farms have other external advantages clearly communicated to the customers as well.</p>
Intra-regional coordination	<p>According to Regulation 52/2010 of the Ministry of Agriculture and Rural Development (now: Ministry of Agriculture) on small farmers, they are allowed to sell their products in a 40km area or in their respective counties directly or by delivery as well, and in all farmer’s market in Hungary.</p> <p>Based on the webpage subscribers can choose the closest MyFarm to their home or if it is not evident, the selection happens by agreement.</p>
Extra regional impact	<p>N/A</p>
Quality	<p>The management body of the MyFarm model includes economic, marketing and agriculture experts assisting farms to achieve high quality and yield, as well as high visibility. The entry as a farmer is tied to a quite high threshold both in terms of professional capacities in farming and the ability to collaborate and take part in the MyFarm system.</p> <p>They plan to acquire the “organic” label, however, a minimum history of three years is required, and also this applies to all newcomers, meaning that individual farms will be able to apply for the label at different times.</p>
Potential for learning or transfer (1000 char)	<p>This business model can be easily applied in other regions as no special tools or highly specialized knowledge is required. Key elements are transparency and appropriate marketing, which are skills usually not confidently known and applied by farmers. Cooperation between farmers and trained economists identifying demand, solvency, providing management for farmers and for logistics can lead to increasing income for farmers and added value stemming from the transparency and chemical-free production for customers. The MyFarm scheme also includes a career model for individuals and families wishing to become farmers given that they can offer suitable land for starting their farms. Initial resources and knowledge is provided by the management body. Limitations of the market for chemical-free and organic products (obviously at a relatively higher price), and the number of farmers that the</p>

	management can control in terms of quality and production should be taken into account.
Further information	https://www.myfarmharta.com/harta



Source: <https://www.myfarmharta.com>



Source: <https://www.myfarmharta.com>

5. Sincere - Forests for water in Catalonia

Sincere – Forests for water in Catalonia is framed within the *EU H2020 funded project Spurring INnovations for forest eCosystem sERVICES in Europe* (SINCERE) developing novel policies and new business models by connecting knowledge and expertise from practice, science and policy, across Europe and beyond. This Good practice aims at strengthening the link between forests and water with an overall objective to diversify financial sources for forest management by integrating ecosystem service provision into the economic balance sheet. It is expected that this practice will help to reach a consensus, and written recognition in a legal document, of the role of forestry in water and landscape conservation, and the recognition of forestry as a potentially relevant economic activity in the area that can be promoted along with tourism. To achieve so, a participatory process has been implemented with all key stakeholders in the water, forests, territory sectors.



Author: Teresa Baiges, CPFC

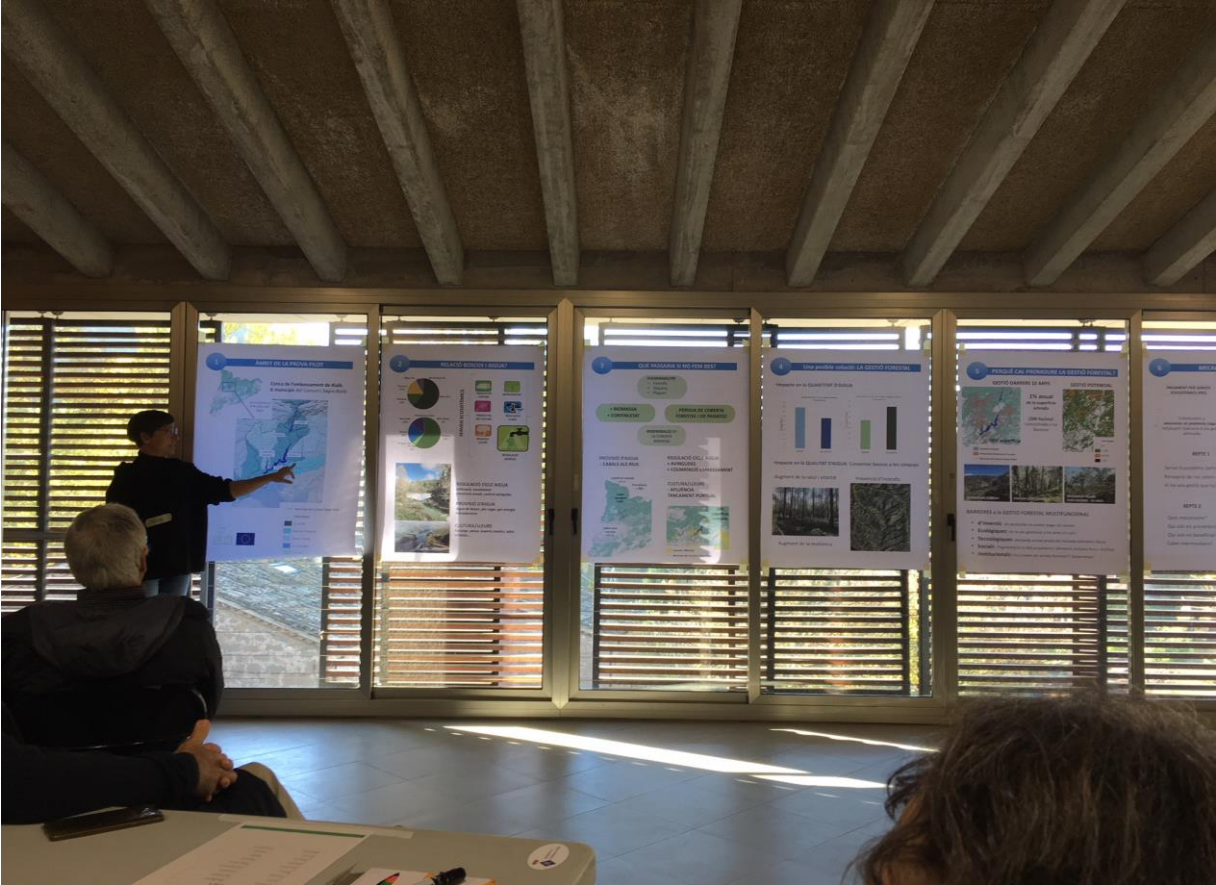
Good practice general information	
Title of the practice	Sincere - Forests for water in Catalonia
Organisation in charge of the good practice	Forest Ownership Centre – Regional Ministry of Agriculture & Forest Science and Technology Centre of Catalonia
Description	
Short summary of the practice	<p>The practice is framed within the <i>EU H2020 funded project Spurring INnovations for forest eCosystem sERVICES in Europe</i> (SINCERE). SINCERE is developing novel policies and new business models by connecting knowledge and expertise from practice, science and policy, across Europe and beyond.</p> <p>The innovation case in the Catalan Region aims at strengthening the link between forests and water with the overall aim of diversifying financing sources for forest management by integrating ecosystem service provision into the economic balance sheet. Work includes, in the first place, strengthening governance and cooperation amongst the different sectors involved (water, forests, territory). Thus, participatory joint water-and-forest planning was identified as the previous step to take. The instrument chosen to frame this joint strategic planning was the “Urbanistic Masterplan of the water reservoir (PDU)” which production had been recently</p>

	<p>started for the Rialb reservoir (as it is the newest water reservoir in Catalonia). It is an urbanistic regulation instrument can include incentives for the economic development of the area.</p> <p>The aim of this practice is to reach a consensus, and written recognition in a legal document, of the role of forestry in water and landscape conservation, and the recognition of forestry as a potentially relevant economic activity in the area that can be promoted along with the tourism. To achieve so, a participatory process has been implemented with all key stakeholders in the water, forests, territory sectors.</p> <p>In parallel to the production of the PDU, a real Payment for Ecosystem Services (PES) mechanism has also been designed and begun to be implemented in the area, as a suggestion raised in the first multifactor group meeting: voluntary fund for forests and water (Fund). The Fund will be based on the diagnosis, priorities and recommendations included in the PDU. It will be local for the 6 municipalities affected by the Rialb reservoir (Tiurana, La Baronia, Bassella, Oliana, Peramola and Ponts) and will only invest on its watershed (aprox. 35.000 hectares)</p>
<p>Category of the good practice</p>	<p>Enabling environment.</p>
<p>Resources needed</p>	<p>The project has a budget of 103.000 euros (60 % personnel costs, 20 % other costs, 20 % indirect costs) for 4 years. Personnel costs involve the facilitation and energization of all stakeholders, the organization and facilitation of meetings, the preparation of all technical, and planning documents required, as well as the communication activities. 4 persons from the Forest Ownership Centre are involved in the project. "Other costs" are basically used for the externalization of expert consultancies or meeting facilitation services</p>
<p>Timescale (start/end date)</p>	<p>From 2018 to 2022</p>
<p>Strategic relevance (long term impact)</p>	<p>Awareness raising on positive links between the forestry and the water sector.</p> <p>Available funding (in kind or cash) for financing forestry works in the area.</p> <p>In the mid-to long term, we expect to see an increase of the amount of water being released to the watershed (8%-10%) and an improvement in the protection of water quality and landscape</p>
<p>Evidence of success (results achieved)</p>	<p>Official recognition of forestry in the Masterplan of the Rialb water reservoir (2019) as a key economic activity to foster in the area because it is providing benefits (FES) for the society, and particularly to the provision of good quality water.</p>

	<p>The activation of a participative process to co-design together with a PES scheme in the area, including regional, local and international stakeholders from the water and the forest sectors, following the methodology developed at the H2020 SINCERE Project.</p> <p>First steps taken (despite the COVID situation!) for the establishment of the co-created PES scheme in relation to forests and water in the area.</p>
Tangibility	<p>Gathering of the scientific evidence to back up the link between forestry and water quantity and quality for the Rialb area.</p> <p>Identification of the best forestry practices and of priority areas in order to optimise expected impacts.</p> <p>Collaborative design of a new tool (the Fund) to explore the real possibilities of such an instrument to succeed.</p>
Durability	<p>Once established, the Fund should be self-sufficient, sustainable and financially independent.</p>
Visibility	<p>The first meeting of the “SINCERE” project in the Rialb study case generated a lot of expectations and this is demonstrated by the attendance of a group of 40 people from many different fields and sectors. A selection of key stakeholders amongst this first group (30) which were directly concerned by the innovative mechanism to be put in place, gathered for a second (face-to-face) and third (virtual) meetings.</p> <p>The outcomes of the two first meetings were displayed in the local newspaper. Two scientific articles have been produced.</p>
Added Value:	<p>The co-designed “Forest for water Fund”, opens the door for recognising the concept of Forest Ecosystem Services linked to water and the need for societal co-responsibility in maintaining them. This idea and the design process could be replicated in other areas.</p>
Effectiveness	<p>This case has two main objectives: i) including forests and forestry in a joint strategic planning instrument and ii) the participatory design of a local Forest Fund.</p> <p>The legal planning instrument for the joint forest / water urban planning is the “Urbanistic Masterplan of the water reservoir (PDU)”, which can include incentives for the economic development of the area.</p> <p>The local Forest Fund concerns the six municipalities affected by the Rialb reservoir, and it will only invest in its watershed. In phase one, the Fund will engage rural tourism and other local businesses. In phase two, it will be open to any private or public funding.</p>
Innovation	<p>The implementation of the Forest Ecosystem Services Scheme in Catalonia has been present in the political agenda for a long time. However, it still exists only in theory rather than in practice. SINCERE will contribute to its implementation</p>

	<p>through the process of learning from other experiences abroad and through the support of the project roadmap guiding the process.</p>
<p>Efficiency</p>	<p>So far:</p> <ul style="list-style-type: none"> - More than 30 stakeholders periodically participating in the process - A diverse group of stakeholders engaged (by gender, impact capacity, age, scale...) - A consensus reached on the role of forestry and water in the area - Awareness raised in the area <p>Once the PES is functioning:</p> <ul style="list-style-type: none"> - Triple the amount of forestland being managed annually in the area (600-700 ha/yr.) in the mid-term, given priority to fire prevention in strategic areas. - 20 hectares/yr. of enrichment plantations in the area affected by previous fires. - An increase of 8-10 % of the water released annually to the water reservoir. - Conservation of the water quality by conserving and improving the forest land and reducing the risk of forest fires. - Improvement of biodiversity hosting capacity of forests by introducing a requirement of conservation measures in the forestry works applied.
<p>Externality</p>	<p>Water is a key driver for the socio-economic development of the Rialb area and climate change is posing a major threat to its availability and quality. Forests are the main land cover in the watershed and play a considerable role in water regulation, with recent studies showing that unmanaged forests can contribute to a decline in water availability due to trees' substantial water consumption. Yet, the level of forest management in the Rialb area is very low due to low profitability of timber production. Forest management is seen as the main tool to guarantee the provision of forest ecosystem services (FES), including those related to water (quantity, quality and landscape). Engagement of forests owners is the key, as 95 % of the area is privately owned.</p>
<p>Intra-regional coordination</p>	<p>The stakeholders directly involved in the implementation of the Fund: Segre-Rialb water reservoir Consortium, 6 Municipalities of the area, Local Forest Owners' Association and individual local forest owners. Other stakeholders participating in the participatory process of the PES design and evaluation: Catalan water administration (ACA), Catalan Office for Climate Change (OCCC), Urban Masterplan managers (all 3 of them belonging to the regional ministry of territory), Regional Ministry of Agriculture and forests, one Regional Forest Owners union,</p>

	Lleida Province administration, and 3 Catalan forest research centers (CREAF, CTFC, UdL).
Extra regional impact	<p>Due to the international framework of the SINCERE project: An international Learning Architecture facilitates continuous collaborative learning from the project's innovation actions, located in nine regions in Europe and two international cases in Peru, and Russia. Innovations developed through SINCERE are intentionally varying in nature but, as a whole, aim to explore new means to enhance forest ecosystem services in ways that benefit forest owners, as well as serving broad societal needs.</p> <p>SINCERE's research also contributes to the development of a coordinated European policy framework to maximize the value to society of forest ecosystem services and their sustainable provision.</p>
Quality	<p>Implication of a top research centre such as the Technology Centre of Catalonia assures maximum quality standards in relation to the gathering of scientific evidence to back up the link between forestry and water quantity, and the identification of the best forestry practices in order to optimise expected impacts. While the experience of the Forest Ownership Centre, as part of the Catalan Government, eases the identification of priority areas and guarantees the collaborative design of the Fund to explore the real possibilities of such an instrument to succeed.</p> <p>Following the H2020 methodology, a "Self-sustainability assessment" is being applied from the design phase to the final implementation phase, for which a set of 57 indicators have been defined with all stakeholders to assess the ecological, social, economic and institutional sustainability of the PES scheme.</p>
Potential for learning or transfer	<p>The assessment of the suitability of a payment for ecosystem services scheme to forestry in relation to water is an innovative and potentially useful tool that can be easily transferred to similar regions (forested catchments) in other parts of Europe.</p> <p>Belonging to an international European project provides transference and communication tools in order to be implemented in other potential areas.</p>
Further information	https://sincereforests.eu/forests-for-water-in-catalonia/



Author: Teresa Baiges, CPFC

6. Greenhouse Gas and Ammonia Emission Reduction Calculation Tool



Author: Ilva Zvirgzdina

The Greenhouse gas (GHG) and ammonia emission reduction calculation tool was developed in 2018 following the request of the Ministry of Agriculture of Latvia. This Tool allows agricultural enterprises to calculate GHG and ammonia emission reductions following algorithms based on the country-specific emission factors. Consolidation of GHG and ammonia calculation algorithms is one of the main innovative solutions of the good practice, which allows to understand the nitrogen circulation in the farm and to identify nitrogen losses. The Tool combines GHG and ammonia calculation algorithms enabling complex assessment of the environmental impact of reduction measures, in particular with regard to the nitrogen cycle in the agricultural enterprise. The result of calculation of the Tool is used as evaluation criteria for granting funding from the Rural Support Service for crop production, livestock breeding (cattle, pig, horse, sheep, goat), dairy farming, beekeeping and other livestock sectors.

The Tool is also publicly available at www.llu.lv, so that anyone interested can calculate and assess the reduction potential of GHG and ammonia emissions for agricultural enterprise. In addition, the Tool is used for educational and scientific purposes to raise public awareness about GHG and ammonia emissions reduction opportunities.

Good practice general information	
Title of the practice	Greenhouse gas and ammonia emission reduction calculation tool
Organisation in charge of the good practice	Latvia University of Life Sciences and Technologies, Rural Support Service; The Ministry of Agriculture of the Republic of Latvia
Description	
Short summary of the practice	In 2018, the Greenhouse gas (GHG) and ammonia emission reduction calculation tool (hereinafter - Tool) was developed, which allows agricultural enterprises to calculate GHG and ammonia emission reductions according to a common methodology after the implementation of the project measures.

	<p>The Calculation from this Tool is one of the evaluation criteria for granting funding from Rural Support Service (RSS). The RSS supports agricultural holdings to improve their economic performance and competitiveness, as well as promotes the development of cooperation, ensuring the sustainable management of natural resources and contributing to a climate-resilient economy. The following sectors are eligible for financial support: crop production, livestock breeding (cattle, pig, horse, sheep, goat), dairy farming, beekeeping and other livestock sectors.</p>
Category of the good practice	Empowering tools
Resources needed	<p>The Tool was developed in 2018 by the order of the Ministry of Agriculture of the Republic of Latvia within the framework of the project "Updating the methodology for calculating GHG and ammonia emissions in the agricultural sector for the quantitative assessment of reduction measures".</p> <p>Development costs of Tool: 22 000 EUR</p> <p>The working group consisted of 1 leading researcher, 2 researchers, 3 scientific assistants and 1 IT specialist.</p> <p>The Tool is maintained on servers of the Latvia University of Life Sciences and Technologies and maintenance costs are not specified separately.</p> <p>Availability of the Tool is ensured by the RSS, and its maintenance is ensured by the Latvia University of Life Sciences and Technologies.</p>
Timescale (start/end date)	Development time of Tool: 01.06.2018 - 30.11.2018. Since its development the Tool is freely available for users.
Strategic relevance (long term impact)	<p>This Tool is web-based and free to use for the quantitative assessment of GHG and ammonia reduction measures in the agricultural sector.</p> <p>The Tool is used by Latvian and European Union beneficiaries in the form of open calls for project proposals for the measure "Investment in tangible assets" in the agricultural sector.⁹ The Tool is publicly available at www.llu.lv, so that anyone interested can calculate GHG and ammonia emissions in the agricultural enterprise, as well as calculate the reduction potential of GHG and ammonia emissions. In addition, the Tool is intended to be used for educational and scientific purposes to raise public awareness about GHG and ammonia emissions' reduction opportunities.</p>

⁹ <https://likumi.lv/ta/id/269868-kartiba-kada-pieskir-valsts-un-eiropas-savienibas-atbalstu-atklatu-projektu-konkursu-veida-pasakumam-ieguldijumi-materialajos>

<p>Evidence of success (results achieved)</p>	<p>Farmers are able to carry out calculations on the Tool using the agricultural enterprise's basic information, and to choose the GHG and ammonia reduction measures that are the most appropriate for a particular agricultural enterprise. The use of the Tool provides competitive advantage over other applicants for receiving support from the RSS. By using the Tool and indicating planned reduction of GHG and ammonia emissions after the implementation of project's activities it is possible to get additional 20 points (the maximum of points when evaluating the application is 135). Applicants, who do not use the Tool can receive a maximum of 115 points. The inclusion of this criterion in the project application template forces farmers to focus on mitigating the contribution to climate change. In this way, sustainable agricultural practices and transition to climate neutrality are promoted.</p>
<p>Tangibility</p>	<p>The Tool is available for any interested party and is free of charge. The RSS offers project applicants an opportunity to receive additional points for the project evaluation if this is planned to implement any of the GHG and/or ammonia reduction measures, and a calculation has been made on the Tool. In this regard agricultural enterprise should focus on following categories: 1) manure storage facilities; 2) accurate technologies in agriculture; 3) accurate technologies in animal husbandry; 4) technologies for the use of renewable energy resources.</p>
<p>Durability</p>	<p>The use of the Tool contributes to ensuring the implementation of "Latvian Air Pollution Reduction Action Plan for 2020-2030"¹⁰. To achieve air pollution reduction targets, 9 action directions are developed. The 6th action direction of this plan is "Reduction of Emissions in the Agricultural Sector"¹¹. At the same time the Tool contributes to meeting GHG reduction and carbon dioxide sequestration commitments and to transition to climate neutrality.</p>
<p>Visibility</p>	<p>Farmers' organizations have been informed about the Tool, which isn't used only for project applications, but also in science and education to raise public awareness about potential reduction opportunities of GHG and ammonia emissions. According to legislation the availability of information about financial support opportunities is ensured by the RSS.</p>
<p>Added Value:</p>	<p>While developing the infrastructure of an agricultural enterprise, the GHG and ammonia reduction measures are envisaged, which allows to indicate emission reductions in the annual GHG and ammonia reports of Latvia. The reduction of GHG and ammonia emissions is directly dependent on the</p>

¹⁰ https://ec.europa.eu/environment/air/pdf/reduction_napcp/LV%20final%20NAPCP%2016Apr20.pdf

¹¹ <https://likumi.lv/ta/id/314078-par-gaisa-piesarnojuma-samazinasanas-ricibas-planu-2020-2030-gadam>

	<p>selected set of reduction measures that are planned after the implementation of a project that will be financially supported by RSS. The use of the Tool complements the calculation methodology used in the preparation of the annual report about the execution of GHG emission reduction and carbon dioxide sequestration commitments.</p> <p>An additional added value of this Tool is the fact that the agricultural enterprise can choose realistic GHG and ammonia reduction measures, thus facilitating the implementation of these reduction measures.</p>
Effectiveness	<p>The Tool is primarily intended for farmers, and it saves both, time and financial resources, as the agricultural enterprises do not have to contract a consulting firm or an expert for assessing the potential GHG and ammonia reduction after implementation of planned reduction measures. At the same time, the Tool provides all project applicants with a common calculation methodology, as well as provides a legitimate printout, which is required as a proof of planned GHG and ammonia emission reductions, as determined by the Cabinet of Ministers of Latvia Regulation No 600 from 30.09.2014. "Procedure for Granting State and European Union Support in the Form of Open Project Tenders for the Measure "Investments in Tangible Assets""¹². Tool offers to save a PDF printout with the calculation results. The printout of the Tool is accepted as justification for Rural Support Service when applying for financial support.</p>
Innovation	<p>The consolidation of GHG and ammonia calculation algorithms is one of the main innovative solutions of this Good practice which allows to understand the nitrogen circulation in the farm and identify nitrogen losses.</p> <p>The Tool combines GHG and ammonia calculation algorithms enabling complex assessment of the environmental impact on reduction measures, in particular with regard to the nitrogen cycle in the agricultural enterprise.</p>
Efficiency	<p>Results of the calculation interested party receives as soon as the calculation is completed in the Tool. In addition, it is possible to recalculate efficiency of GHG and ammonia reduction measures by changing the GHG and ammonia reduction measures until the agricultural enterprise reaches the GHG and ammonia reduction target, which provides an advantage during the project evaluation phase and for attracting funding.</p>
Externality	<p>Several EU and non-EU countries have shown interest about the Tool. The greatest restriction for other countries to take over the Tool is the Latvian language. In addition, the Tool is</p>

¹² <https://likumi.lv/ta/id/269868-kartiba-kada-pieskir-valsts-un-eiropas-savienibas-atbalstu-atklatu-projektu-konkursu-veida-pasakumam-ieguldijumi-materialajos>

	<p>based on particular GHG and ammonia emission factors of Latvia, which does not allow direct transfer of the Tool to other European regions. The Tool can be applied in other countries if the calculation algorithm incorporates country-specific emission factors.</p> <p>Agricultural enterprises and other stakeholders often use the Tool to address various issues of GHG and ammonia emissions, as well as to raise awareness about GHG and ammonia emission sources and reduction measures.</p> <p>The use of the Tool helps to ensure the implementation of “Latvian Air Pollution Reduction Action Plan for 2020-2030”¹³ and helps to report about the progress in fulfilment of climate goals and commitments to reduce greenhouse gas emissions and sequester carbon dioxide in the annual report of the Ministry for Environmental Protection and Regional Development “About commitment fulfilment of greenhouse gas emission reduction and carbon dioxide sequester”.¹⁴</p>
<p>Intra-regional coordination</p>	<p>The development of the Tool was ordered by the Ministry of Agriculture of the Republic of Latvia. It was developed by the Latvia University of Life Sciences and Technologies. There has been an ongoing coordination between the RSS and farmers' support organizations throughout Latvia.</p>
<p>Extra regional impact</p>	<p>Tool is used by researchers, students and other interested parties raising awareness about the sources of the GHG and ammonia emissions and the effectiveness of GHG and ammonia reduction measures. Tool helps to tackle goals which are determined by Paris Agreement¹⁵ and Convention on Long-range Transboundary Air Pollution.¹⁶</p>
<p>Quality</p>	<p>The interface of the Tool is designed to be user-friendly. An additional quality indicator is the ability to create a PDF printout, which allows to legitimize calculations.</p>
<p>Potential for learning or transfer</p>	<p>After the translation of its interface the Tool could be used by the neighbouring countries of the temperate climate region. In countries with warmer climate, this would be necessary to change the GHG and ammonia emission coefficients used for the calculation algorithm.</p> <p>In order to transfer this Good practice to other European regions a new project should be developed, taking into account particular region's GHG and ammonia emission factors and language of the tool.</p>

¹³ https://ec.europa.eu/environment/air/pdf/reduction_napcp/LV%20final%20NAPCP%2016Apr20.pdf

¹⁴ https://www.varam.gov.lv/sites/varam/files/content/files/Normat%C4%ABvo%20aktu%20projekti/Vides%20aizsardz%C4%ABbas%20jom%C4%81/varaminf_16112020_segizpilde.pdf

¹⁵ https://unfccc.int/sites/default/files/english_paris_agreement.pdf

¹⁶ https://treaties.un.org/doc/Treaties/1979/11/19791113%2004-16%20PM/Ch_XXVII_01p.pdf

Further information

https://orange.maxapex.net/apex/f?p=LLU_EMISSIONS_CALC%3A1%3A%3A%3A%3A%3A%3A

<https://www.lad.gov.lv/lv/atbalsta-veidi/projekti-un-investicijas/atbalsta-pasakumi/4-1-atbalsts-ieguldijumiem-lauku-saimniecibas-183>



Author: Sanda Geipele