

REPORT

ON IMPLEMENTATION OF THE PROJECT

DEMONSTRATION OF CLIMATE CHANGE MITIGATION MEASURES IN NUTRIENTS RICH DRAINED ORGANIC SOILS IN BALTIC STATES AND FINLAND

WORK PACKAGE

ELABORATION OF THE PROJECT COMMUNICATION PLATFORM

(A.2)

ACTIONS

Deliverable Replicability and Transferability Plan

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LIFE OrgBalt compiled the first regional Baltic/Finnish GHG emission factors for managed nutrient-rich organic soils (current and former peatlands), which have been made available for the customary scientific review and further verification for national GHG inventories in the hemiboreal region in Finland and the Baltic countries. While the project analysed selected CCM measures for drained organic soils in agriculture and forestry and developed spatial models and tools, it also identified remaining knowledge gaps. To bridge the remaining limitations and fill the gaps, it is essential to continue GHG measurements and model development, as well as to broaden and complete the scope of the evaluated CCM measures in the after-LIFE-project period, notably by including rewetting and restoration of peatlands that are currently considered to be among the most recommended CCM measures on drained peatlands in the EU. In addition, the developed Simulation and PPC models still include limited macroeconomic considerations and lack an assessment of all environmental impacts. For all these reasons, these models should be used carefully in CCM strategy development for the identification of gaps in climate neutrality transition policy and funding frameworks and need further optimization for broader applicability as decision-making tools.

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INTRODUCTION

The aim of this document is to analyse the potential of the project to be replicated and transferred during and after its implementation by other stakeholders such as governmental institutions, state enterprises, entrepreneurs, research centres, active in the LULUCF and agricultural sector, in the countries involved in the Project and in other Temperate climate zone regions in Europe.

The replicability and transferability strategy of the project include:

1. Sustainability activities aimed at ensuring the continuation of the project after its end
2. Specific replicability and transferability tools, defined under Action C5, which aim to ensure that the project results will not only be continued in the context of the project after its end, but will also be transferred in other contexts and multiplied.

Moreover, the replicability and transferability measures planned within the project are highly interconnected with implementation, monitoring and dissemination actions. Therefore some of the latter will be included in the present analysis. In brief, implementation actions provide the necessary data set to develop the simulation model and the calculation parameters planned under action C.5. In addition, the replicability tool planned under action C.5 will act as catalyser for monitoring actions planned under action D by providing a long-term projections of the obtained monitored results.

Finally communication and dissemination activities, having a transversal function, will have an important role in enhancing the replicability and transferability strategy by enabling to reach a wider audience and by providing long-term dissemination tools.

REPLICABILITY AND TRANSFERABILITY STRATEGY

The goal of the replicability and transferability strategy is to multiply the impact of the Project results during its implementation and to replicate and transfer its findings after its end, in order to reach a wider audience and implement its results in further sites and regions, other than the Project demo sites.

Replicability specific tools

The strategy will depend on a set of clearly defined activities, with a calendar of tasks, each with an identified leader. As further explained the materials and data produced through the different actions of the project will be used, and in particular the output of the actions C1, C3, C4, D1, D3. The development of the replicability and transferability strategy will be undertaken through different actions of the project including the deliverables planned under Action E “Communication and dissemination of results” as it will be described

further in this analysis, but also through specific diverse activities planned under Action C5, which will include:

C5. Task. 1 Elaboration of a Simulation model (SM) for a single field and regional level projections of GHG emissions and socio-economic outputs

1. Interim draft report on development of Simulation model.
2. Simulation model with spreadsheet interface for a single parcel-based calculations of business as usual scenario and different management options.
3. Developed Simulation tool applied in real life conditions at least 5 times in partner countries (1 per partner country).

As described in the project the Simulation model will serve as a policy planning / decision support tool for the development of GHG emissions projections at local and/or regional level and the analysis of the socio-economic impact for 2 scenarios – with and without implementation of CCM measures - with dynamic background information on changes of technical conditions of drainage systems.

The Simulation model SM will be developed to support local and regional stakeholders in making projections of GHG emissions and socio-economic consequences given a set of initial conditions and selected management options. The elaboration of this support tool will be possible on the bases of the results of Activities C1 and C2, namely the elaboration of a catalogue of CCM measures including a socio-economic impact assessment, the improvement of GHG emission factors and of the methodologies for GHG inventory reporting together with the related national reports, and finally the elaboration of mathematical equations and tools for GHG projections from organic soils.

The simulation model will also be proposed as an evaluation tool for the development and the evaluation of CCM measures related projects in the context of the Common Agricultural Policy.

Feedbacks from the involved stakeholders will be collected during the dissemination, training and networking activities planned under actions E.2 and E.3 in particular in the National workshops, Thematic Workgroup meetings, Networking workshop on national level and the Experience exchange visits. Feedbacks will be gathered to improve developed SM as well as to evaluate the results obtained through the SM tool, in terms of GHG emissions reductions and the socio-economic impacts under different management scenarios.

The developed tools will be applied in at least 5 properties (1 per partner country) and the 2-3 most valuable measures will be selected and included in the National report on GHG projections by the Latvian Ministry of Agriculture. A proposal to integrate the Project results into the Common Agricultural Policy planning documents will also be prepared and submitted to ministries as explained under C5. Task 3.

C5. Task 2. Default parameters for calculation of CCM effect

1. Interim draft report on development of Tables with default parameters for calculations of efficiency of the climate change mitigation measures.
2. Tables with default parameters for calculations of efficiency of the climate change mitigation measures.

The development of default parameters tables for the calculation of CCM measures effects has been planned as a separate task in order to provide a set of activity data, calculation parameters and applied emission factors (EFs) as an independent module to be implemented in different models, in other projects and in other regions and conditions. The tables will provide valuable information like minimum & maximum threshold values, data in the interference with other parameters, logical controls and a detailed description of the calculations method used in the model.

C5. Task 3. Integration of the SM in the policy planning

1. Interim draft report on development of Framework for training sessions for individual stakeholders for application of the developed tool.
2. Final framework for training sessions for individual stakeholders for application of the developed tool.
3. Data utilised in the model published in 2 peer reviewed articles by Luke, Silava, UT and LAFRC and presented in at least 2 international scientific conferences.

Proposals for integration of the Project results into the Common Agricultural Policy planning documents will be prepared and submitted to ministries based on the lessons learned by implementation of above mentioned actions.

Moreover specifically targeted training sessions and materials will be addressed to stakeholders to ensure the application of the Project tools and approaches. The training sessions will be developed by consulting and advisory organisation and business representatives (for the complete list see the “Plan for awareness rising and stakeholder engagement”), for which a first level training has also been planned given their main role in facilitating the training and knowledge transfer process.

A two-level training is indeed foreseen. A first training will be target to consultants, advisory and business representatives, who in a second stage will transfer the gained skills and knowledge regarding the application of the developed tools to the individual users they represent and or support. This Task will be implemented closely linked with E1-E3, although the scope of the transfer of the developed tools goes far beyond the simple transfer of knowledge, rather focusing on capacity building and therefore contributing to enhance the expertise of the target actors.

The presentation of the project knowledge through LULUCF and agriculture experts' annual meetings organised by the Joint Research Centre (JRC) will be proposed to enhance its replicability and transferability, ensure the spreading of the information on the project results in all EU countries and their international acknowledgement. A Workshop on replicability and transferability (R&T) of Project outcomes will be held in Lithuania.

In Table 1 the replicability tools have been summarized and matched with the stakeholders that will benefit from the different actions' deliverables. An analysis of the different stakeholders levels and groups involved in the project has been made in the "Plan for awareness rising and stakeholder engagement". Below a brief summary of the definition of primary, secondary and third parties stakeholders.

Primary stakeholders

Primary stakeholders, within the project mainly represented by governmental institutions and their departments and by governmental agencies and organisations, have the highest level of participation with a control and partnership role, and consequently the responsibility to offer consultancy services and to disseminate information. They have a direct stake in the project together with a high level of influence on the planning process and on the implementation of project-related policies.

Secondary stakeholders

Secondary stakeholders, within the project mainly represented by state-owned enterprises, research organisations, higher education institutions, advisory organisations, regional and local administrations and EU competent authorities, have a high level of influence given by their consultancy and/or partnership role, and contribute to the project overall reputation. However, they don't have a direct stake in the project, being not the final receivers of the project actions.

Third parties

Within the project third parties are mainly represented by business representatives, non-governmental organisations, landowners, farmers, foresters, students and local inhabitants. They are actively involved in the project, also due to their high interests, but have a low influence on its outcomes. This group includes also third parties that are neither involved in nor impacted by the project, but that it's very important to keep informed in order to increase awareness as for example students or local inhabitants.

Table 1: C.5 replicability tools

ACTION	DELIVERABLE	RESPONSIBLE PARTNER	1. STAKEHOLDERS	2. STAKEHOLDERS	THIRD PARTIES	Deadline
C.5 Replicability tools	Interim draft report on development of Simulation model.	LLU	X	X		2022-08-31
	Simulation model with spreadsheet interface for a single parcel-based calculations of business as usual scenario and different management options.	LLU	X	X		2023-06-30
	Developed Simulation tool applied in real life conditions at least 5 times in partner countries (1 per partner country).	LLU	X	X		2023-08-31
	Interim draft report on development of Tables with default parameters for calculations of efficiency of the climate change mitigation measures.	Silava	X	X		2022-08-31
	Tables with default parameters for calculations of efficiency of the climate change mitigation measures.	Silava	X	X		2023-06-30
	Interim draft report on development of Framework for training sessions for individual stakeholders for application of the developed tool.	LLU/MA	X	X		2022-08-31
	Final framework for training sessions for individual stakeholders for application of the developed tool.	LLU/MA	X	X	X	2023-06-30
	Data utilised in the model published in 2 peer reviewed articles by Luke, Silava, UT and LAFRC and presented in at least 2 international scientific conferences.	SILAVA	X	X		2023-06-30

Sinergy with other actions of the project

As previously mentioned, materials and data produced under the different actions of the project will be used and in particular the output of the actions C1, C3, C4, D1, D3. The latter also act as sustainability activities that ensure the continuation of the actions of the Project after its end.

In particular Action C1 “Filling knowledge gaps on GHG emissions from organic soils” will create the bases for the elaboration of the development of a simulation model under action C5 providing the activity data necessary for accounting on GHG emissions from nutrient-rich organic soils in cropland, grassland and forest land, and for the evaluation of the long-term effect of CCM measures. In particular, regionally specific emission factors will be elaborated and contribute to the advancement of GHG inventory and related national reports. Finally, the data obtained both in reference (C.1) and from demo sites (C.3) will be summarized in a final catalogue on climate change mitigation actions. The lifecycle of these activities will continue beyond the duration of the project through the National GHG inventory funding as a part of the implementation of the Improvement plans of the National GHG inventories.

As we have seen Action C1 is strongly related with action C3 which gives a practical base for the data collection process. Action C3 “Implementation of climate change mitigation measures in selected demo sites” sees the implementation of the identified CCM measures in different selected demo sites within the Baltic States and in Finland, with a higher number of demo sites in Latvia.

The demo sites will continue functioning also after the end of the project to analyse long-term effect and to continue data gathering of GHG and socio-economic effects. The majority of demo sites in Latvia will be established on areas owned by agencies subordinated to LLU and Silava and registered as long-term monitoring plots thus guaranteeing maintenance of them after the completion of the Project. Monitoring of GHG emissions in forest demo plots will be continued by the Agency “Forest research station” (basing on an internal agreement with LSFRI Silava). Measurements in agriculture related demo sites will be continued within the scope of ongoing research work in agriculture research stations (basing on an internal agreement with LLU). For demo sites established on private land in Latvia there will be individual agreements with land owners to ensure sustainability of the sites. For demo sites in Finland existing monitoring plots will be used and the continuation of the activities will be funded by national research projects.

Action C.4 “Strategies and action plans” has also an important role in the replicability and transferability strategy of the project. The action is divided in two main tasks, both crucial to guarantee the continuation of the project and the multiplication of its results. On one side the action aims at the implementation of the project results in relevant policies, strategies and action plans at national level, while on the other promotes the cooperation between the private and public actors involved. To fulfil the project replicability and transferability objectives, project results will be summarised in well discussed and scientifically sound proposals to be integrated into Common Agricultural Policy planning documents of the Baltic States as well as to contribute to improvement of related documents in Germany and Finland. This action has also networking effects since the elaboration of national Common Agricultural Policy planning documents involves both the public and private sector.

Finally also actions D.1 and D.3 are related to the replicability and transferability strategy of the project and their GHG emissions monitoring activities will continue after the end of the project under Higher Education Institutions (HEIs), education and research funding schemes. Although action D.1 focuses on the monitoring of short term effect and impact of the implemented CCM measures, long-term effects will be analysed by projections of the impact of applied measures using the analysis model provided within Action C.5. LIFE key performance indicators will also be monitored for a period of 5 years after the end of the project to analyse the success of the Project actions, their long term effect and the sustainability of the decisions made within the framework of the project.

Table 2: Sustainability and Transferability activities

ACTION	DELIVERABLE	RESPONSIBLE PARTNER	Deadline
C.1 Filling knowledge gaps on GHG emissions from organic soils	Interim draft report on improved GHG emission factors for nutrient-rich managed organic soils in Baltic states	Luke	2021-08-31
	Report on carbon inputs with litter and fine roots in forests on organic soils	Silava	2021-08-31
	Report on improved GHG emission factors for nutrient-rich managed organic soils in Baltic states	Luke	2022-10-31
	Interim draft report on improved methodologies for GHG inventory reporting and related national reports	Silava	2021-08-31
	Improved methodologies for GHG inventory reporting and related national reports	Silava	2022-12-31
	Catalogue of climate change mitigation actions	Luke	2021-08-31
C.3 Implementation of climate change mitigation measures in selected demo sites	Report on implementation of CCM measures in demo sites in Latvia	Silava Luke,	2021-01-01
	Report on implementation of CCM measures in demo sites in Finland	Luke, Silava	2021-01-01
C.4 Strategies and action plans	Report on public communication with the main stakeholders groups	Baltcoast	2021-07-01
	Interim draft report on proposals for improvement of sectoral strategies and action plans to reduce GHG emissions from organic soils	MA	2022-08-31
	Report on proposals for improvement of sectoral strategies and action plans to reduce GHG emissions from organic soils	MA	2023-06-30
	Proposal for PPC model and adopting of the Project results in Rural Development Plan	Baltcoast	2021-01-01
	Report on economic benefits of CCM measures for nutrients-rich land management practices on farm level	Baltcoast	2022-08-31
D.1 Monitoring of the implementation of project activities	Initial, Midterm and final monitoring report	UT	2021-01-01 2022-01-01 2023-07-01
D.3 Monitoring and measuring the LIFE key performance indicators	Report on progress regarding LIFE key performance indicators	Silava	2020-08-31 2021-08-31 2022-08-31 2023-08-31

The role of communication and dissemination activities

Communication and dissemination activities will also be fundamental in ensuring the replicability and transferability of the Project being transversal to whole actions as clearly explained in the work plan. They will be organized in order to ensure the replicability and transferability of the outcomes in the whole TCM climate zone in EU. A detailed breakdown of the different activities planned under Action E “Communication and dissemination of results” has been already provided in the communication plan therefore the present analysis will focus only on those activities strictly related to the replicability and transferability strategy.

Project website and social media accounts: after the project completion, the website and social media accounts will be further managed by Silava.

Scientific publications: scientific publications will be published in peer-reviewed journals, with two of them focusing on the data utilised in the simulation model. The results will also be presented in at least two international conferences. The international exchange of the research data will be secured using the national GHG inventory networking funding.

Information and education materials: different type of information and education materials have been planned including the broadcast of 4 short-films which are expected to enhance the transferability of the project by reaching a 10.000 (approximately) people audience.

Dissemination and training events: several dissemination and training events will be organized both at national and international level. The events will address all stakeholder levels (primary, secondary and third parties) and will include capacity building activities in order to provide the involved actors with the necessary expertise to extend the results of the project to other areas. As previously shown further training sessions will be provided within action C.5. In this context consulting and advisory organisation will play a great role facilitating the training and knowledge transfer process also outside of the planned training sessions and the targeted realities.

Networking: a great importance has been given also to networking activities to ensure the dissemination but also sustainability, transferability and replicability of the project results. Networking activities will include national and international events and are addressed to the different categories of stakeholders to facilitate cooperation, to transfer knowledge and to share data. They are expected to function as catalyser for the data and knowledge transfer and for the replication of the obtained results within new sites and projects. Networking activities also include the establishment, at the end of the project, of a Joint Baltic German, Finnish Climate Change Mitigation Actions Program with the aim to provide future research roadmap for scientists, roadmap for further improvements of National GHG inventories and policy development in the whole Temperate Cool Moist climate zone.

CONCLUSIONS

The replicability and transferability strategy of the project is based on specific replicability tools developed under action C.5, but also intertwined with several actions of the project that ensure a solid development of trust relationship, networking and future cooperation opportunity throughout the whole project lifecycle and beyond it. The implementation of the Replicability and Transferability plan is expected to promote the development of future joint action and cooperation opportunities and to extend the results of the project across the whole Temperate Cool Moist climate zone.