Final Project Conclusions

MANURE STANDARDS

Project title	Project duration
Advanced manure standards for sustainable nutrient management and reduced emissions	October 2017 - December 2019

Priority	Specific objective
Efficient management of natural resources	Clear waters

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
EUR 2.87 million	EUR 2.39 million	x	PA Bioeconomy

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/manure-standards-92.html	https://www.luke.fi/manurestandards/en/

Lead partner (country)	Countries involved
Natural Resources Institute Finland Luke (Finland)	FI, PL, SE, LT, EE, DE, DK, LV, RU

Project summary

Teaser

The Interreg project Manure Standards equipped farmers, their advisors, and authorities with practical tools to get more precise data on manure quantity and its nutrient content to better plan manure fertilisation and reduce the nutrient inflow in the Baltic Sea at the same time.

The challenge

Animal manure as a source of nutrients

Agriculture releases large quantities of nutrients into the Baltic Sea, with a significant amount of emissions from animal manure. This contributes to increasing of the euthrophication processes in the sea waters. The actual figures, however, are difficult to assess due to incomparable measuring methods and different ways of collecting data across the Baltic Sea region countries.

Lack of standards

Smart nutrient management in agriculture is one of the most efficient agri-environmental measures to reduce input of nutrients into the Baltic Sea. Currently, most manure is spread on fields as fertiliser without processing. If the manure is used in precision, the nutrient inflow from manure into the Baltic Sea could instantly be reduced. In order to achieve that, farmers and advisers need tools for proper nutrient bookkeeping, along with efficient fertilisation plans and nutrient balances. Equally important is to develop measuring methods that are transparent and harmonised, and applied at all levels: from farms up to the regional and national level across the Baltic Sea region.

DE DK EE FI LT LV PL RU SE

EUROPEAN REGIONAL DEVELOPMENT FUND
EUROPEAN UNION

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Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Tools for better handling manure

The partners helped farmers and their advisors use manure as a resource more wisely and efficiently on almost 100 farms in Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden. Thanks to research, comparing samples and calculating manure content across the farms, the partners developed tools that can universally be applied in the region. Now, farmers and their advisors have the means to collect more precise manure data. Based on the data, they can better plan the fertilisation processes with manure on their farms, use the correct amount of the manure as a fertiliser and – in this way – cut costs on buying mineral fertilisers and reduce emissions into the environment. For example, thanks to a manure properties calculation tool, farmers in Estonia can now implement efficient fertilisation with manure and ensure adequate capacity for manure storage.

Harmonanisation on the national level

The partners also helped agricultural and environmental authorities keep national and regional manure data updated. The data help shape manure-related policies and authoritative measures developed by the authorities in their daily work.

Thanks to the project, in Sweden, it was agreed to use the new calculation tool developed by the project partners. In Latvia, national authorities decided to update sampling and analysis methodology to get more precise data on manure composition, including nutrient content. In Finland, the Finnish Food Authority and the authorities responsible for environmental permitting of animal farms started using the project tools as guidelines to improve the permitting and surveillance processes. The authorities in Estonia plan to change the regulation on manure data generation and turn the farm-level calculation tool into an official tool for measuring manure nutrients and emissions on farms.

From local to pan-Baltic results

In the pan-Baltic context, based on the project results, the Baltic Marine Environment Protection Commission (HELCOM) developed and adopted the recommendations on the use of national manure standards. These recommendations guide the Baltic Sea region countries to improve manure data by establishing as well as reviewing and updating the national standard values for manure. HELCOM also uses the project results in preparing a Baltic Sea Regional Nutrient Recycling Strategy.

Thanks to the EUR 1.91 million support from the EU, the Interreg project Manure Standards delivered practical tools for effective manure management on a farm, regional, national and pan-Baltic levels. Researchers together with farmers and agricultural advisors from nine countries proved that manure management should be based on up-to-date data on manure quantity and composition. This is the way to maximise benefits manure brings as a valuable fertiliser and to minimise losses to the environment.

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Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Recommendations for manure data generation and use

These recommendations present how to generate manure data and how to use it. In particular, farmers get information on why manure data is needed and how it may affect farm practices as well as how to make better use of manure due to more accurate manure data. They get instructions how to measure manure quantity and properties. Advisors get information how they can support farmers in making the most of manure, how and why to use more accurate manure data in their own tools. Public authorities in relevant ministries on agricultural, environmental and food safety issues get information why it is important to use updated and accurate national manure data in policy measures, methods to generate the data and who should do it, where manure data can be used, how the data support in reaching the national and international targets for circular economy and emission reductions.

Link: https://projects.interreg-baltic.eu/projects/manure-standards-92.html#output-109

Handbook "How to make the most of manure?"

This handbook guides farmers and agricultural advisories through good manure management practices. It talks about manure as a valuable resource that should be managed efficiently to make use of its valuable nutrients. It explains how to minimise losses and reduce nutrient loading from agriculture. It highlights the importance of assessing the content of manure and presents two tools useful in the assessment:: manure sampling for chemical analysis and a farm level calculation tool.

Link: https://projects.interreg-baltic.eu/projects/manure-standards-92.html#output-110

Guidelines for manure sampling and analysis

The partners developed the guidelines for farmers, national advisors as well as laboratory personnel who take manure samples on farms for analysis. Using these guidelines, farmers and their advisors get more precise information on the nutrient content of manure that is necessary to develop an effective and comprehensive nutrient management plan on farms. These guidelines are a step forward in harmonising sampling methods used across the Baltic Sea region. In addition, a quick guide for manure sampling and a video of manure sampling accompany the instructions.

Link: https://www.luke.fi/manurestandards/en/results/

Calculation tools for the quantity and composition of livestock manure

Two manure calculation tools apply to the farm level and the regional level. The farm-level calculation tool helps calculate manure quantity, properties and relevant emissions throughout the whole production chain (on animal, housing and manure storage levels) on an individual farm. On farms, advisors may first support farmers in making the calculations. With the regional-level tool, expert organisations responsible for generating national manure data can calculate the annual livestock manure production and properties. The tool supports estimation of regional emission and enables calculation of nitrogen losses based on the production technologies. Both tools are accompanied by manuals.

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Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The SUMANU platform makes use of the recommendations developed by the partners in the Manure Standards project, for example, on effective manure management on farms and on the manure management on the regional level. When compiled and structured by SUMANU, these recommendations together with results from other projects feed into the updating of the Baltic Marine Environment Protection Commission (HELCOM) Baltic Sea Action Plan and developing of the HELCOM Nutrient Recycling Strategy.

In the Baltic Sea region countries, the project results are further considered. For example, in Estonia, the authorities plan to change the regulation on manure data generation. They plan to take the farm-level calculation tool developed in the project into an official tool for measuring manure nutrients and emissions on farms. In Finland, the authorities concluded that its manure data generation was in line with the project results. They also concluded that a regular procedure to maintain the manure data updated and in line with the manure management practices on farms needed permanent resources. The responsible ministries and research organisations planned to discuss further this issue.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

The project cooperated actively with organisations outside the formal partnership (i.e. partners receiving funding from the Programme). The partners worked with 92 pilot farms in nine Baltic Sea countries to develop, test and compare manure data tools. Ministries and other public authorities from the project countries attended actively national events to discuss current practices and needs for revision.

The project involved three partners organisations from Russia. They actively contributed to the project implementation, despite the later start of their own activities. Due to this, though, the ENI/RU funding spending rate reached only 51%.