ALENETWORK

LCA4FARMS – carbon & water wisdom for the farms of the Satakunta Region

Improving farm competitiveness and responsiveness to consumer needs and environmental requirements.

EAFRD-funded projects

Location: Satakunta, Finland Programming period: 2014-2020 Priority: P5 - Resource efficiency and climate Focus Area: Greenhouse & ammonia emissions Measures: M16 - Cooperation Funding: Total budget 154 015 (EUR) EAFRD 51 749 (EUR) National/regional 71 463 (EUR) Private 30 803 (EUR) Timeframe: 01.03.2022 to 31.12.2023 Project promoter: Pyhäjärvi Institute / Pyhäjärviinstituuttisäätiö sr Email: sauli.jaakkola@pji.f Website: https://pyhajarvi-instituutti.fi/en/home/

Summary

The aim was to increase the readiness of farmers in the Satakunta region of Finland to mitigate and reduce negative environmental impacts. The project delivered on-farm Life Cycle Assessments (LCAs) focusing on the environmental impact of food production. An LCA included the carbon footprint, eutrophication potential, land use and potential biodiversity losses due to food production. This information was then to be used to reduce the negative environmental impacts of farming and thereby support the economic growth and sustainability of the farms.

Project results

The following results have been achieved (so far):

- > 20 LCAs have been implemented whereby 20 farmers have gained knowledge about the environmental impacts of their individual farms.
- The project has raised awareness and understanding about the sources of emissions. This led to an improved understanding and appreciation of the key role and opportunities of food production in reducing the environmental harm caused by human activity.

> At the end of the project, it is expected that a total of 60 farmers will have received relevant quantitative information about the environmental impacts of their food production to utilise this information to reduce any negative impacts.

Key lessons and recommendations

- Despite the wide dissemination of project information across different organisations and social media, it was difficult to attract farmers to sign up for the project. Utilising personal contacts was essential.
- The existing tools and methods for conducting an LCA have proven rather difficult to operate. Therefore, one recommendation is to allow for sufficient time when conducting an LCA to make the results more reliable.





Context

The aim of the LCA4FARMS project was to answer the following questions: 'How much environmental impact does a single farm produce?' and 'Which stages of food production cause the most damaging environmental effects?'. This would enable the farms in the Satakunta Region of Finland to meet the constant and increasing demand for environmentally-friendly food production.

LCA refers to Life Cycle Assessment, a process of evaluating the effects that a product has on the environment from its origins across the entire period of its lifetime. LCA is applied with the aim of increasing resource efficiency and reducing any associated liabilities.



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The project was managed by the Pyhäjärvi Institute, which is an educational and research organisation based in Euran in the south west of Finland. The institute promotes sustainable and responsible food production and water management. It implements further education, which means studies after secondary education that are not part of higher education, research and other development actions specialising in topics such as food economy, water protection and environmental restoration.

Objectives

The main aims of the project were:

- > To improve the environmental friendliness of agricultural production.
- To increase the knowledge of farmers about the environmental impacts of their farms, the Life-Cycle Assessment (LCA) process and how they can mitigate any negative impacts.
- > To improve farm competitiveness and increase the responsiveness of farmers to consumer needs and environmental requirements.

Activities

The following activities were planned:

- Executing Life Cycle Assessments for 60 farms in the Satakunta region. An LCA includes the evaluation of greenhouse gas emissions, eutrophication potential, land use and potential biodiversity losses. As key beneficiaries of the project, individual farmers were directly involved in the LCA process. However, other farmers, consumers and food companies can also access the findings of the project and the average LCA results at regional level to inform their decision-making in relation to improving the sustainability of the food system.
- Implementing workshops. In 2022, the project organised two workshops with farmers. The first dealt with the concept and basic principles of LCAs, while the second presented the preliminary results of the delivered LCAs. Two more workshops are forthcoming in 2023, targeted, as before, at farmers who have signed up as project participants. Other farmers are also welcome to attend the workshops
- Producing an animation video about LCA. The key target group of the video were primary producers. However, the video also provides important information and know-how for anyone with an interest in LCA and sustainable food production.
- Producing a podcast episode about LCA: The project includes recording a podcast episode for farmers about LCA in 2023. The podcast episode will inform farmers as well as other people with an interest in LCA and sustainable food production.



Pyhäjärvi Institute

Main results

The following results have been achieved so far:

- > 20 LCAs have been implemented whereby 20 farmers have gained knowledge about the environmental impacts of their individual farms.
- 27 farmers have joined the workshops and gained knowledge about the basic principles of an LCA and the environmental impacts of food production.
- An animation video was produced and disseminated across a wide range of social media, thereby increasing the awareness and knowledge about LCAs on farms.
- The project has raised awareness and understanding about the sources of emissions. This led to an improved understanding and appreciation of the key role and opportunities of food production in reducing the environmental harm caused by human activity.
- At the end of the project (end of 2023), it is expected that a total of 60 farmers will have received relevant quantitative information about the environmental impacts of their food production to utilise this information to reduce any negative impacts.

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Key lessons and recommendations

- Despite the wide dissemination of project information across different organisations and social media, it was difficult to attract farmers to sign up for the project. Utilising personal contacts was essential. One recommendation is therefore to allocate sufficient time to contact farmers directly to ensure high participation rates.
- The existing tools and methods for conducting an LCA have proven rather difficult to operate, for example the assessment of the eutrophication potential is considerably time-consuming. Therefore, a recommendation is to allow for sufficient time when conducting an LCA to make the results more reliable. Alternatively, it might be beneficial to co-operate with those organisations that developed the LCA tools.
- > While many farmers were already aware of environmental issues related to food production, they were nonetheless surprised to learn about the most prominent sources of emissions on their farms, which they had thought were different ones beforehand.

"It is great to get numerical values about the emissions of my farm, so I can present these values to people when we discuss the emissions of farming."

Participant farmer



