

Carbon Action platform

18.12.2019

Laura Höijer, BSAG



Carbon Action / BSAG

Carbon Action videos:



Carbon Action 2019

<https://youtu.be/BrKbnCLF010>

YOUTUBE.COM
Carbon Action 2019

Carbon Action 2019: Research, Farmers, Companies and Multiple benefits

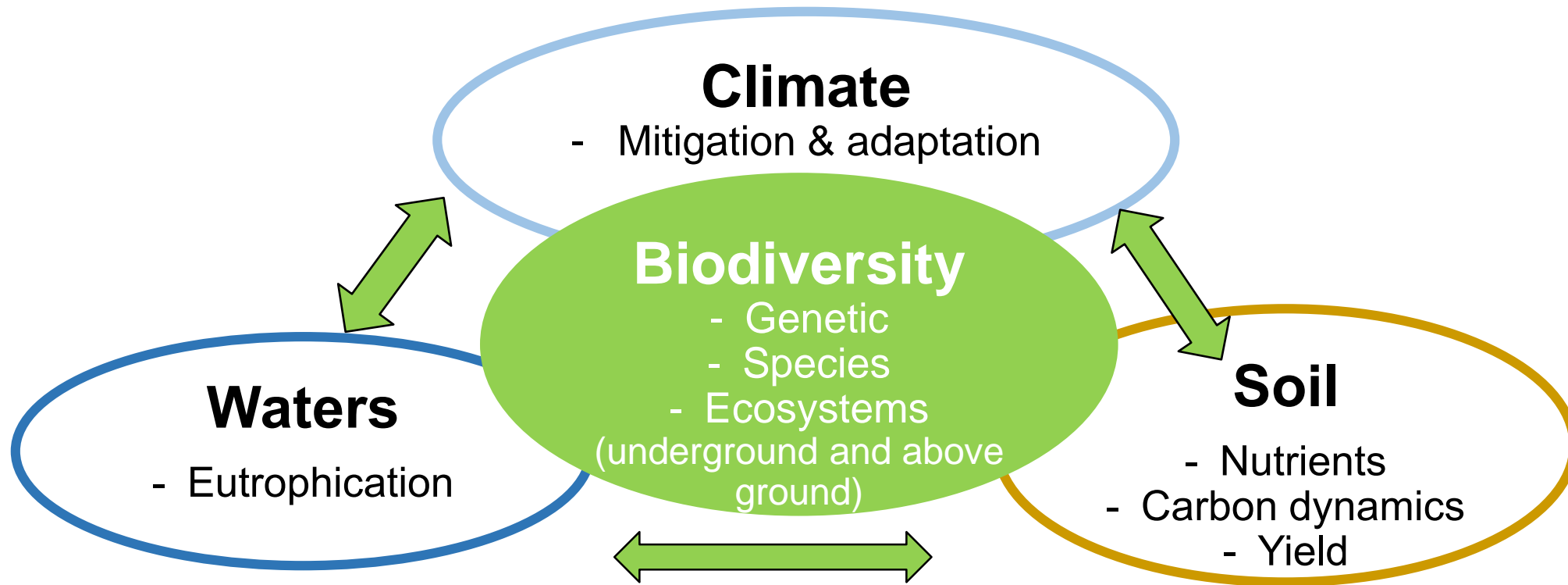
<https://www.youtube.com/watch?v=5nk1b3qBDGg&feature=youtu.be> (not correct link?)



Carbon Action 2019 Research, Farmers, Companies and Multiple benefits



Interlinked problems and solutions



Support from IPCC Special Report on Climate Change and Land (august 2019):



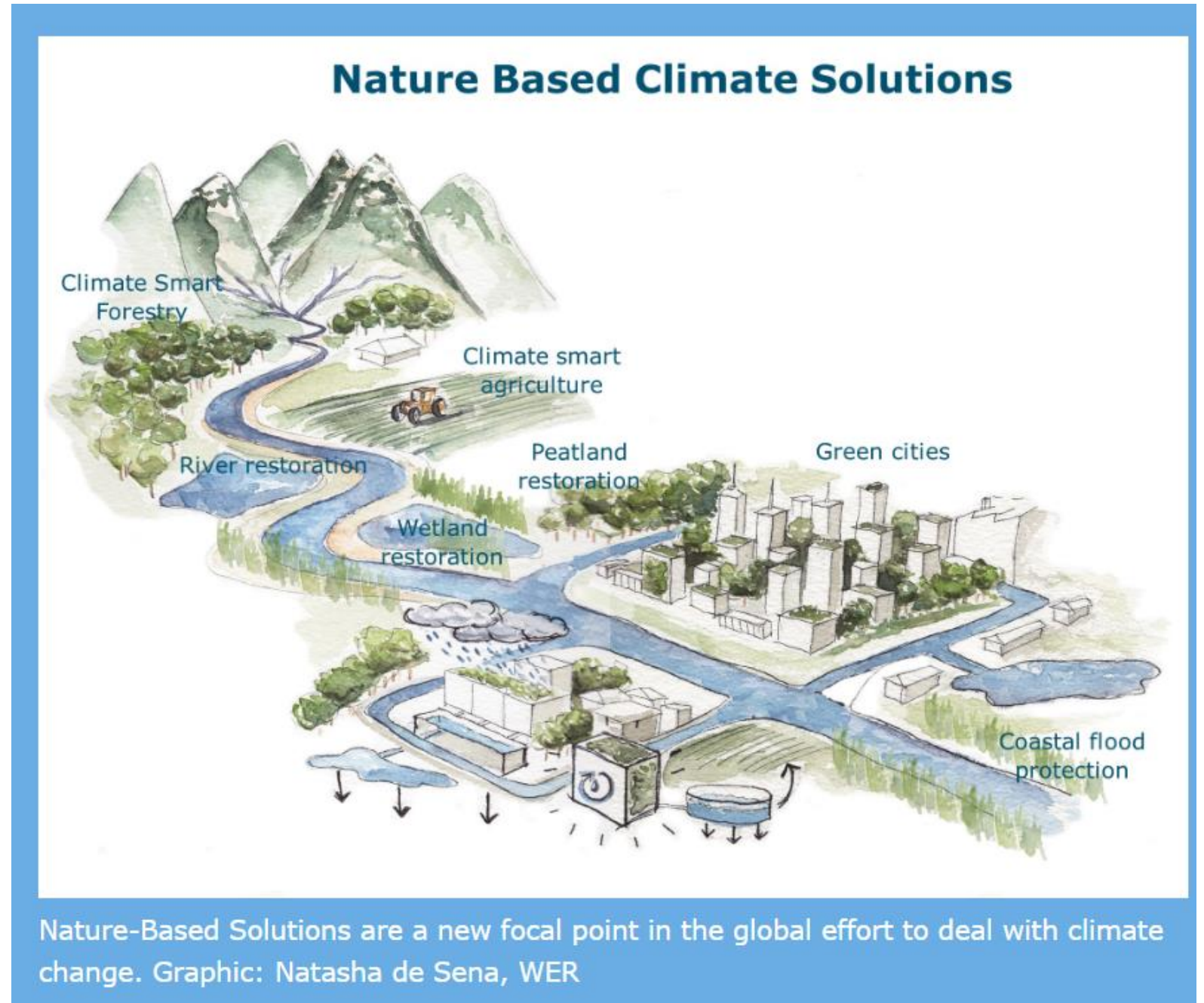
Response options based on land management		Mitigation	Adaptation	Desertification	Land Degradation	Food Security	Cost
Agriculture	Increased food productivity	L	M	L	M	H	---
	Agro-forestry	M	M	M	M	L	●
	Improved cropland management	M	L	L	L	L	●●
	Improved livestock management	M	L	L	L	L	●●●
	Agricultural diversification	L	L	L	M	L	●
	Improved grazing land management	M	L	L	L	L	---
	Integrated water management	L	L	L	L	L	●●
	Reduced grassland conversion to cropland	L	---	L	L	-	L
Forests	Forest management	M	L	L	L	L	●●
	Reduced deforestation and forest degradation	H	L	L	L	L	●●
Soils	Increased soil organic carbon content	H	L	M	M	L	●●
	Reduced soil erosion	↔ L	L	M	M	L	●●
	Reduced soil salinization	---	L	L	L	L	●●
	Reduced soil compaction	---	L	---	L	L	●
Other ecosystems	Fire management	M	M	M	M	L	●
	Reduced landslides and natural hazards	L	L	L	L	L	---
	Reduced pollution including acidification	↔ M	M	L	L	L	---
	Restoration & reduced conversion of coastal wetlands	M	L	M	M	↔ L	---
	Restoration & reduced conversion of peatlands	M	---	na	M	-	L
Response options based on value chain management							
Demand	Reduced post-harvest losses	H	M	L	L	H	---
	Dietary change	H	---	L	H	H	---
	Reduced food waste (consumer or retailer)	H	---	L	M	M	---
Supply	Sustainable sourcing	---	L	---	L	L	---
	Improved food processing and retailing	L	L	---	---	L	---
	Improved energy use in food systems	L	L	---	---	L	---

Support from New York Climate Action Summit (september 2019): Inspired by nature

Nature-based solutions (NBS) in the spotlight at the New York Climate Action Summit:

- If we want to be climate-proof in the future, we need to draw on the power of nature
- NBS are multifunctional solutions. They not only help sequester CO₂ but also improve the resilience of an area, increase biodiversity, ensure sustainable food supplies

18.12.2019



Government programme gives strong support to Carbon Action:

- Finland will advance the international 4/1000 initiative to increase carbon sequestration in agriculture. Research on new farming methods and advance the adoption of these will be developed.
- A strong focus will be placed on research, education and training, and advice. The main focus will be on carbon sequestration, low-carbon operations and competitiveness.
- Focus on researching carbon sinks, measuring carbon sequestration and developing calculation models will be continued
- Pilots for carbon sequestration and storage markets in Finland will be implemented, albeit not as a replacement for emissions reductions.
- Market-driven mechanisms will be developed to compensate farmers for soil carbon sequestration based on results.
- Sufficient funding will be ensured for climate and environmental objectives in the EU's financial framework negotiations and nationally (CAP, ERDF, LIFE)





EU agriculture ministers: agriculture can help increase soil carbon sequestration

Ministry of Agriculture and Forestry | 24.9.2019 13.46 | Published in English on 24.9.2019 at 13.57

PRESS RELEASE

Support during the Finland's Presidency of the Council of the EU:



Photo: Lauri Heikkinen/Prime Minister's Office, Finland

EU agriculture ministers convened for an informal meeting in Helsinki on Tuesday 24 September to discuss soil carbon sequestration as a climate action in agriculture. The discussion focused on supporting carbon sequestration through the EU's Common Agricultural Policy (CAP).

Minister of Agriculture and Forestry **Jari Leppä** chaired the meeting.

Funding needed to support actions

Soil carbon sequestration on agricultural land is one of the key means of mitigating climate change. Good farming techniques can help agricultural land absorb more carbon from the atmosphere, and these techniques can be supported through the CAP.

According to Minister Leppä, soil carbon sequestration makes farmers key providers of solutions.



CARBON ACTION platform



Carbon Action pilot, funded by Sitra (2017-2019), has grown into **a platform**. The platform contains several funders and projects, and enables close cooperation among the projects. The platform brings together farmers, advisors, researchers, companies and decision-makers.



Carbon Action aims at **multiple benefits**: improved growth, biodiversity and resilience, climate change mitigation and reduction of emissions to water bodies such as the Baltic Sea.

The specific objectives of the Carbon Action platform are:

- Research and develop ways to accelerate and scientifically verify soil carbon storage
- Promote and experiment with multi-beneficial regenerative cultivation measures on farms, which improve soil health
- Develop financial and other control tools for the widespread adoption of these solutions in Finland and elsewhere
- Mobilize the actors needed for systemic change



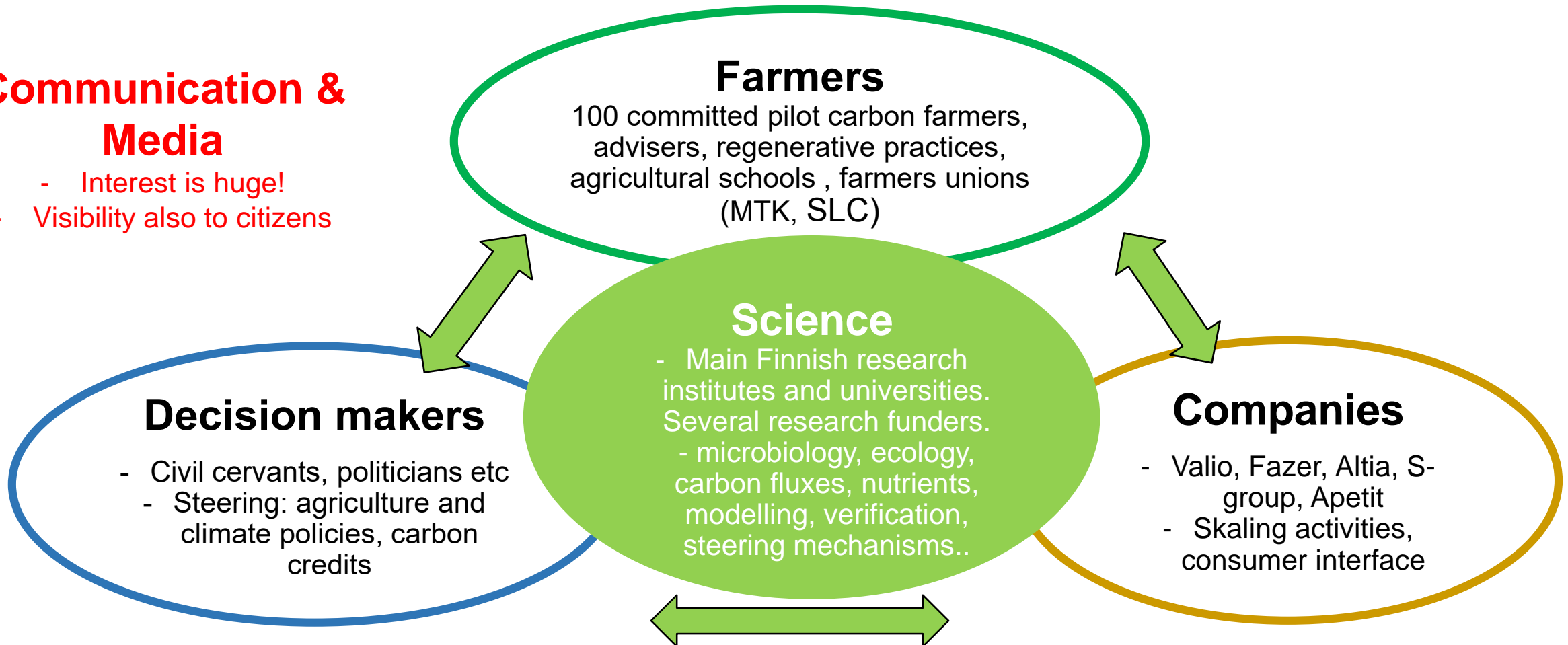
Carbon Action -platform



From problems to solutions – together
science, farmers, policy and companies

Communication & Media

- Interest is huge!
- Visibility also to citizens



Corporate participation in Carbon Action platform <https://carbonaction.org/businesses/>:



- **Altia**'s selected contract farmers participate in Carbon Action. Altia will cover the costs of soil sampling.
- **Valio** will train their dairy farmers in carbon farming. First farmers are trained, and the goal is to train all by 2035.
- **S-group** provides funding for soil sampling (1 meter samples)
- **Apetit**'s Räpi experimental farm is one of Carbon Action's pilot farms. Apetit aims to promote sustainable food chain and commercialise carbon farming
- **Fazer** has joined the Carbon Action platform by making climate change mitigation and carbon sequestration an integral part of its Grain Vision, the aim of which is to promote sustainable farming

ALTIA



Apetit





Implementation on farms



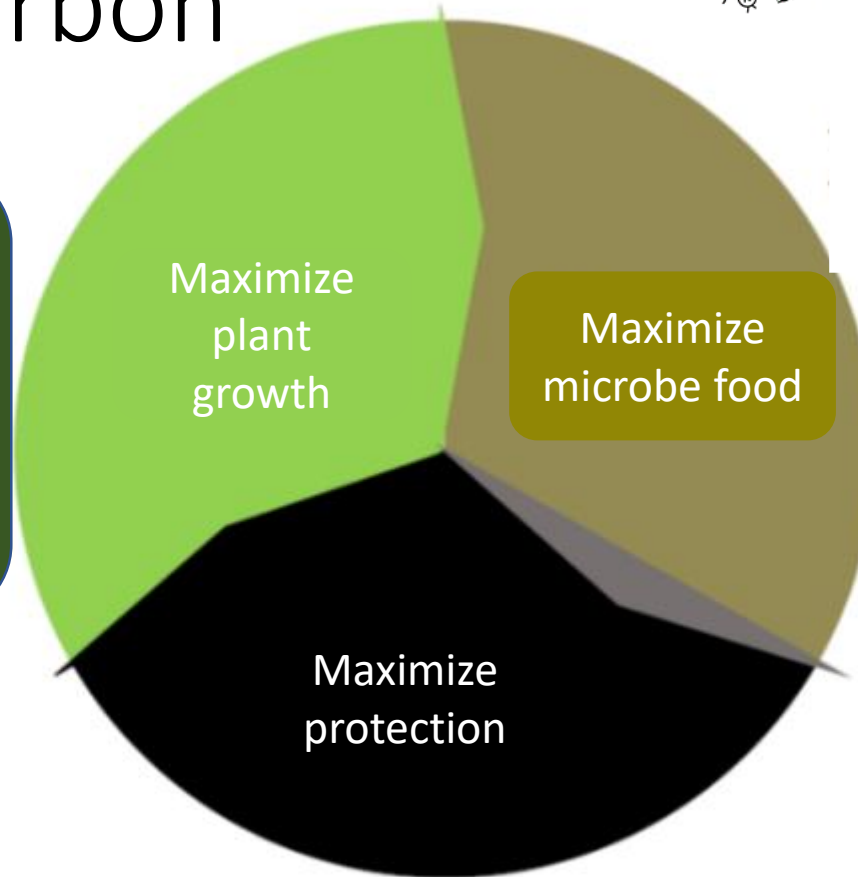
- Over 100 different Carbon Farms around Finland
- Training, peer-to-peer learning, testing and piloting in co-operation with researchers
- 3 hectare test area where each carbon farmer tests different measures of C sequestration. Soil samples now and after 5 years
- Testing different measures in practice, give feedback and development tips to researchers



Checklist to increase soil organic carbon



- Continuous plant cover
- Balanced plant nutrition
- High leaf area



- Make sure soils smell good
- Develop large root systems
- Give wrecked soils a kickstart

- Minimal tillage and disturbance
- Minimal pesticide use
- Stable aggregates and good structure

CC 4.0.
Tuomas J. Mattila
2017.

Examples of carbon sequestration measures included in the research:



- Increasing photosynthesis by increasing vegetation cover, lengthening the period of growth and selecting crops and strains that increase yields
- Management of soil structure and health (prevent and fix compaction etc)
- Reduced tillage
- Increasing soil organic matter content by application of manure, recycled fertilizers and soil amendments
- Diversified crop rotation and crop diversification (incl. long rooted plants)





Different production, different
carbon sequestration

And not just what but how and when!

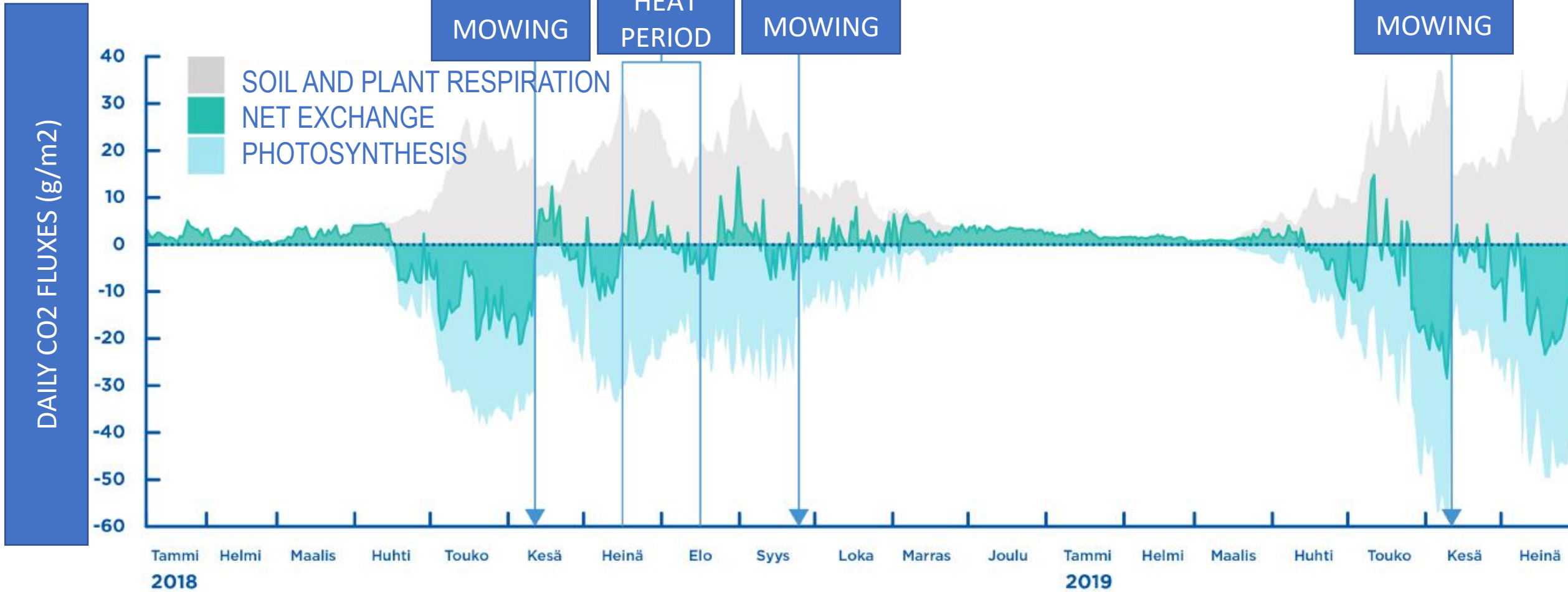


Research questions:

- **Soil and plant processes:** How to support carbon sequestration and the formation of stable carbon forms?
- **Farming practices:** How to improve farming practices that enhance soil carbon sequestration, soil health and productivity, biodiversity, nutrient retention, and nutritional quality of agricultural products?
- **Verification:** How to quantify and verify the carbon sequestration and other climate impacts?
- **Economics and steering:** How to promote science-based practical solutions of climate-smart agriculture with the means of economics and policies?



CONTINUOUS MEASURING OF CARBON BALANCE ON A HAY FIELD IN SW FINLAND



Carbon Farming Schemes in Europe

Summary - Carbon Farming Schemes in Europe – Roundtable 9th October, 2019

” Laura Höijer (Baltic Sea Action Group) introduced the Finnish Carbon Action Platform. It aims to accelerate and scientifically verify soil carbon storage and develop financial and other control tools to enable widespread adoption. 100 pilot carbon farms are involved in the scientific process, as well as food chain companies that translate the results into specific actions. ”


Key Messages:

- The high interest in result-based carbon farming in Europe was reflected in contributions from 75 stakeholders participating in person and more than 350 online views via webstreaming.
- The Roundtable’s ten presentations on existing EU initiatives demonstrated examples of possible approaches, coverage, and practical workability of result-based carbon farming.
- Roundtable discussions highlighted opportunities for result-based carbon farming schemes, including the lessons learned from existing schemes, the infrastructure under the Common Agricultural Policy on which the schemes can build, the potential for carbon farming schemes to deliver win-win solutions with multiple co-benefits, including providing economic benefits to European farmers
- At the same time, challenges and possible solutions to be addressed were highlighted, including effective but affordable Monitoring, Reporting and Verification (MRV), the need to coordinate with the existing policy context (e.g. CAP, international climate agreements), and the importance of enabling factors, such as training for farmers and consultants.
- The Roundtable insights will contribute to the project’s next steps: five “case studies” and the development of guidance on how to implement result-based carbon farming in the EU.

A video recording of the Roundtable is available to view online: <https://webcast.ec.europa.eu/carbon-farming-schemes-in-europe-roundtable#>. The [background document](#) provides more information and speaker profiles. The presentations are available [here](#).

You can download the presentations at the link <https://nx5846.your-storageshare.de/s/tye6wTXwSe7fjMG>

It is possible also to watch the recording of the event on the webpage <https://webcast.ec.europa.eu/carbon-farming-schemes-in-europe-roundtable>




CARBON ACTION platform

Carbon Action, initiated by BSAG, started as an ambitious pilot and was built into a full platform. The platform contains several funders and projects, and enables close cooperation among the projects. The platform brings together farmers, advisors, researchers, companies and decision-makers.

Funders:

Companies:



Carbon Farming Schemes in Europe

Report: <https://www.ecologic.eu/16816>

Carbon Action
with other EU
level projects
/ platforms





"4 per 1000 Initiative" Day

Madrid (España) - Diciembre 11, 2019



Agenda of the Day: Move from pilot project to large-scale change



The chair Mr Wolfgang Zornbach commented Carbon Action platform: *could be a template for many other countries in the world*

See: <https://4per1000day2019.sciencesconf.org/> & <https://www.youtube.com/watch?v=MH4xDUryzLY>

18.12.2019

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Carbon Action platform multiple benefits

General presentation
Carbon Action Platform researches and develops ways to accelerate soil carbon sequestration and methods to verify the effects scientifically. It introduces climate-friendly, regenerative farming practices to farms in Finland. Carbon Action brings together scientists, farmers, decision makers and companies to work together for sustainable agriculture (Fig 1). It aims at multiple benefits: improved yield, biodiversity and resilience, climate change mitigation and reduction of emissions to Baltic Sea and other water bodies.

Implementation

- Objectives
 - Research and develop ways to accelerate and scientifically verify soil carbon storage
 - Promote and experiment multi-beneficial regenerative cultivation practices improving soil health on farms
 - Develop financial and other steering mechanisms for the widespread adoption of these solutions in Finland and elsewhere
 - Mobilize the actors needed for systemic change

Communication & Media

100 pilot carbon farmers (selected agricultural holdings)

Decision makers (Policy-makers and other stakeholders)

Companies (Large food and other value chain actors)

Science (Carbon unit quantification system)

Fig. 1 Carbon Action stakeholders © BSAG

Fig. 2 Carbon Action pilot farms © BSAG

Action highlights

- 100 pilot carbon farmers (Fig. 2): intensive trainings have started, farmers have chosen their 'carbon-pathway'. Training of advisors have started
- Science: Carbon unit quantification system for verification under development (Fig. 3)
- Decision-makers: theme well-noted in the new government programme and during Finland's presidency of the Council of the EU (2019)
- Companies: the biggest dairy in Finland Valio has together with BSAG, started carbon farming training for their dairy farmers. Other major food chain companies also on the platform

Contact

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The platform contains several funders:

BSAG, FINLAND, BUSINESS FINLAND, SITRA, MTK, etc.

Fig. 3 Carbon unit quantification system © Jari Liski / FMI

MARIN CARBON PROJECT

Co-operation with international networks

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CARBON FARMING LAUNCHES IN MARIN



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- WHAT'S NEW
- ABOUT MCP

FARMERS

- WHAT'S IT ALL ABOUT?
- YCF RESOURCES
- CASE S



CARBON FARMING

This section introduces the issues Australian farmers may face in the future - how climate change may affect agriculture, the

QUICK LINKS

https://carbonfarmingconference.com.au

- Sovellukset
- Helsinki_sähköposti
- Maatalouden ympäri
- RefWorks
- Voluntary Guidelines
- Kellokortti.fi - nykyai
- Biologia:näkösyvyys
- slackbot | Hiiliviljelijät
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Scaling Carbon Farming and Regenerative Agriculture in California



IT'S TIME.

Farmers - low carbon

Carbon Farming

North Sea Region
Carbon Farming
European Regional Development Fund
EUROPEAN UNION



about FCCT's exciting new crowdfunding project and how you

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Imagine that the food you bought came from

boundaries and die
6th Nov 2018

New IPCC special r
12th Oct 2018

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Carbon Farming