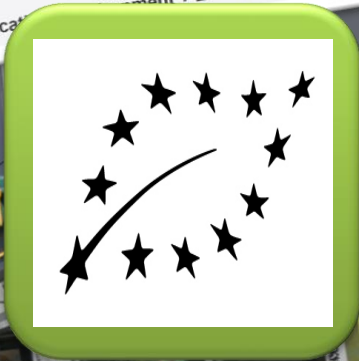




Beyond sustainability:
Five shades of green for Europe's Farm-to-Fork strategy
Rogier Schulte, Lenora Ditzler, Kari Koppelmaki, Loekie Schreefel
Wageningen University and Research, Netherlands





Unlike the US, Europe is setting ambitious targets for producing more organic food

Forbes
It's Time to Redesign Our Food System: Circular: New Report

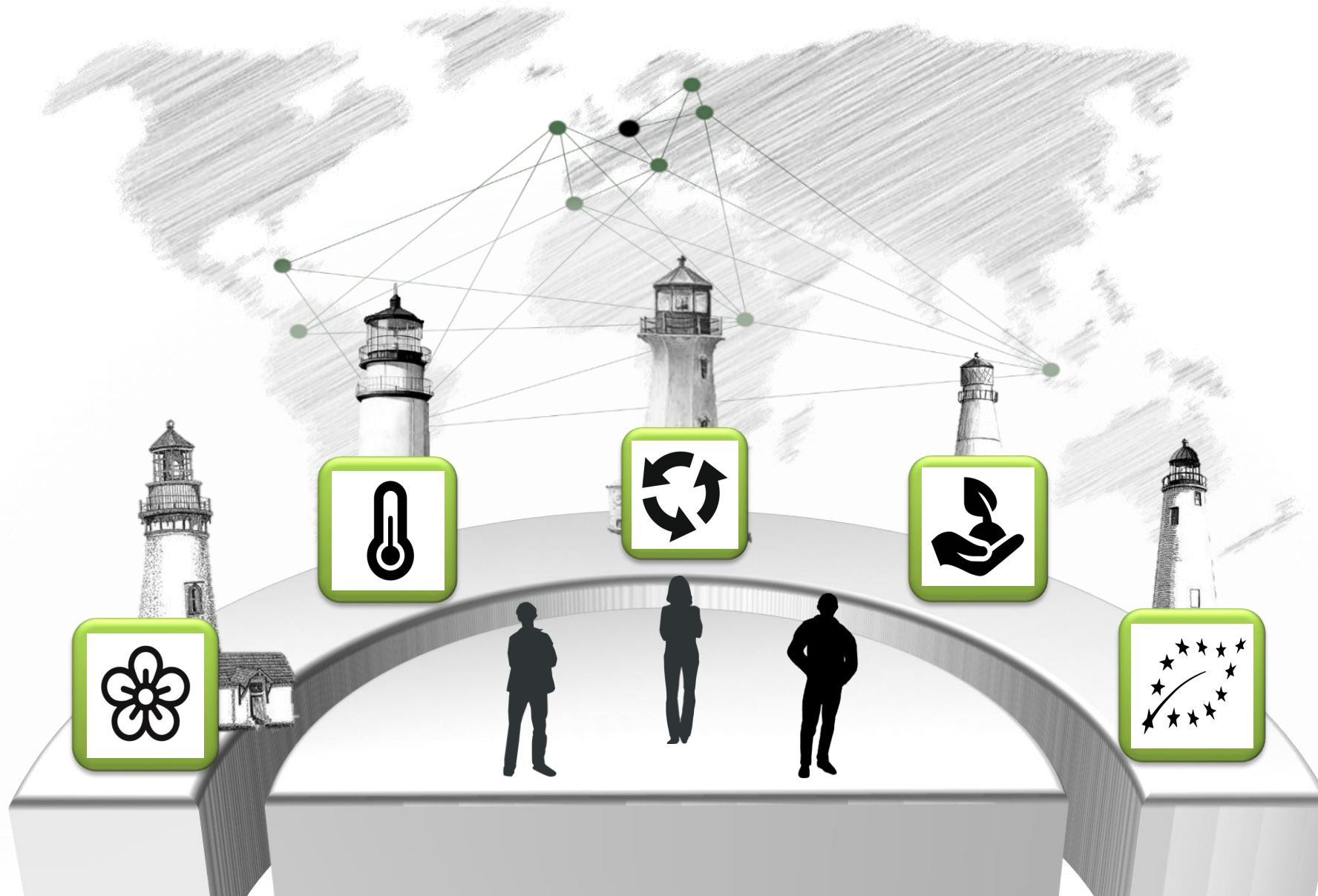


Farmer... in carbon farming but must be market-led

Agroecology Is the Solution
World H...
SCIENTIFIC AMERICAN
Coronavirus Health Mind & Brain Environment Technology Space & Physics Video Podcasts Opin



GLOBAL NETWORK OF LIGHTHOUSE FARMS



Mariana
Debernardini



Vivian
Valencia



Lenora Ditzler



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European Journal of Agronomy

journal homepage: www.elsevier.com/locate/eja



Redefining the field to mobilize three-dimensional diversity and ecosystem services on the arable farm

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^c Agroecology, Environment and Systems Group, Instituto de Investigaciones Forestales y Agropecuarias de Bariloche (IFAB), INTA-CONICET, Modesta Victoria 4450 - CC 277 (8400), San Carlos de Bariloche, Río Negro, Argentina

^d Agroécologie et Intensification Durable (AiDA), Centre de coopération Internationale en Recherche Agronomique pour le Développement (CIRAD), Université de Montpellier, 34000 Montpellier, France

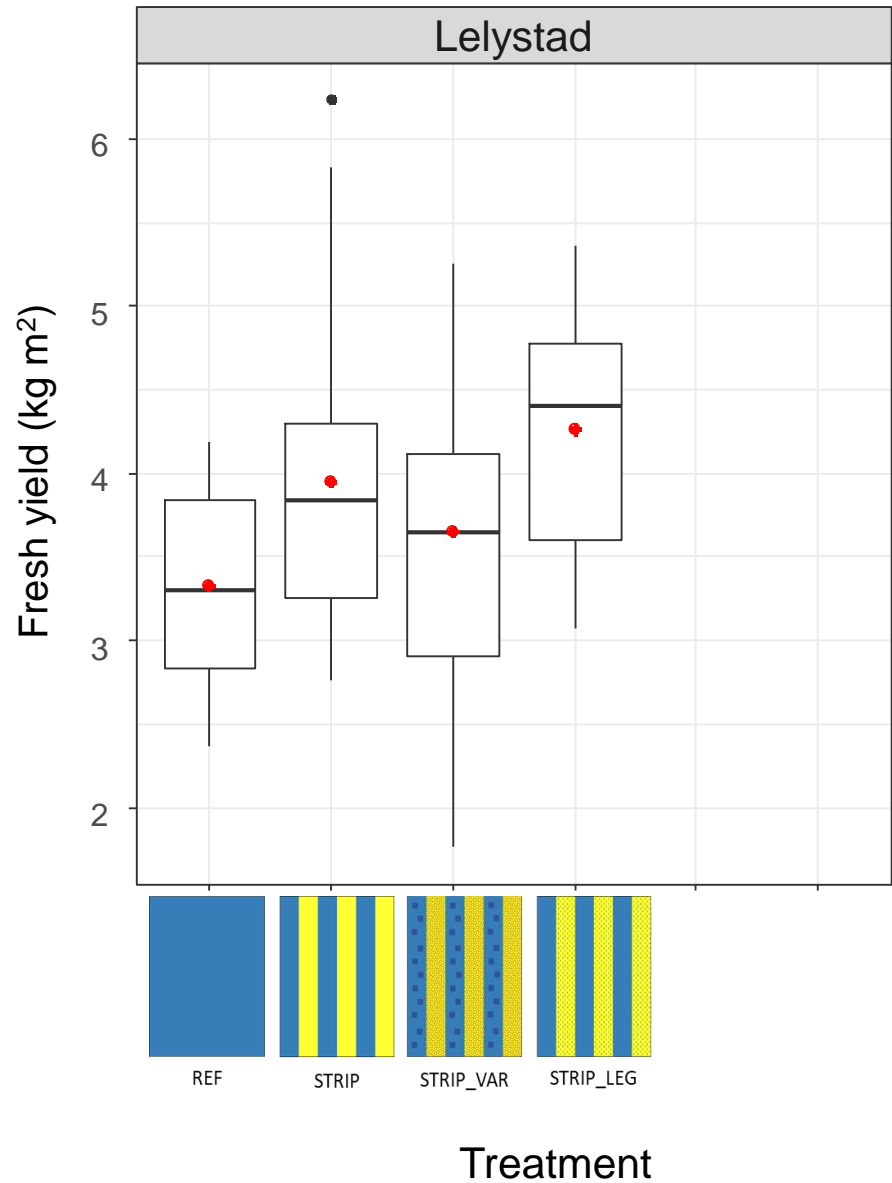
^e Groningen Institute of Evolutionary Life Sciences, Groningen University, PO Box 11103, 9700 CC Groningen, the Netherlands



Lenora Ditzler



Potato 2018-2020



Lenora Ditzler



Empty rectangular box for notes.



Empty rectangular box for notes.



Empty rectangular box for notes.



Empty rectangular box for notes.



Bespoke design

Lessons learnt

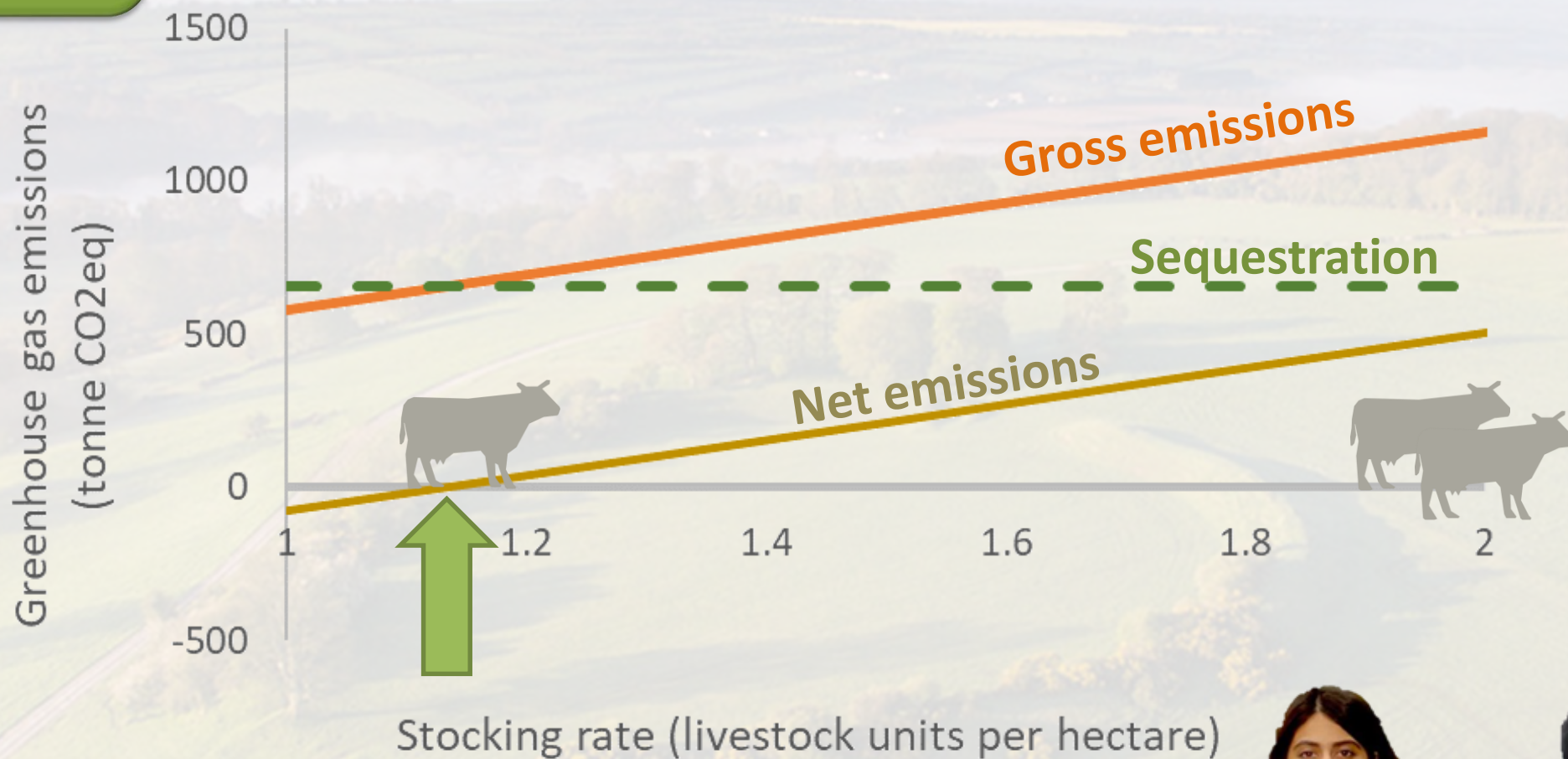








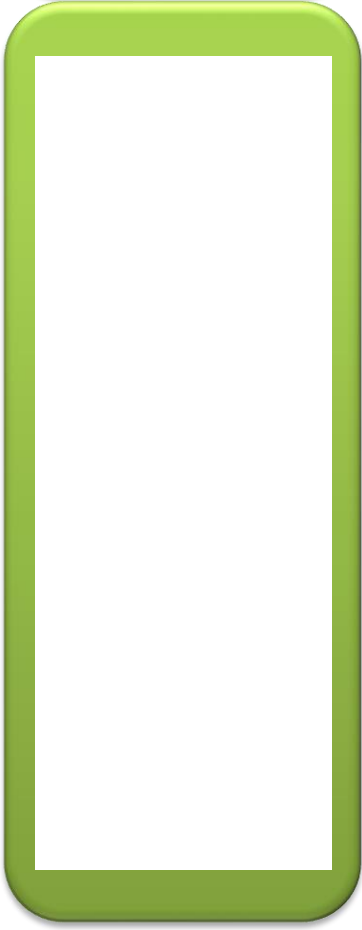
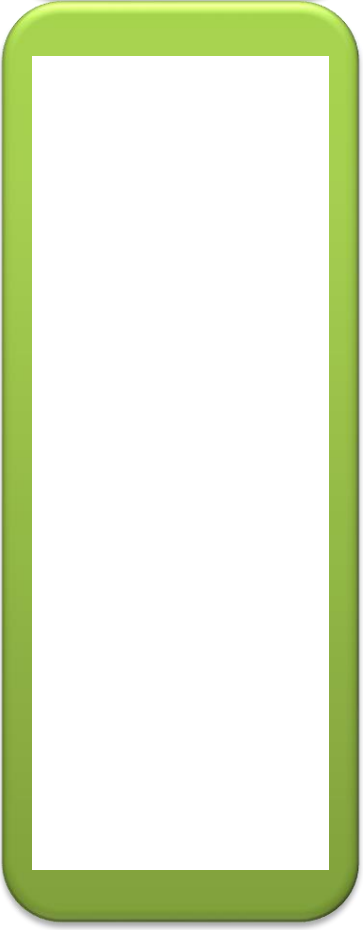
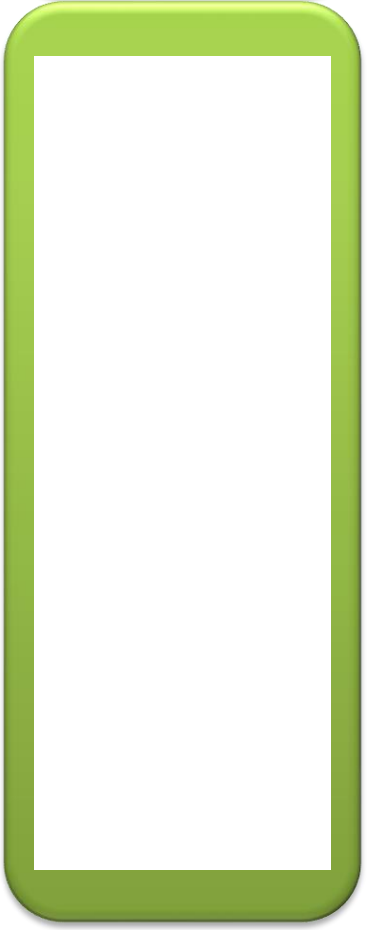
Carbon neutrality in relation to stocking rate



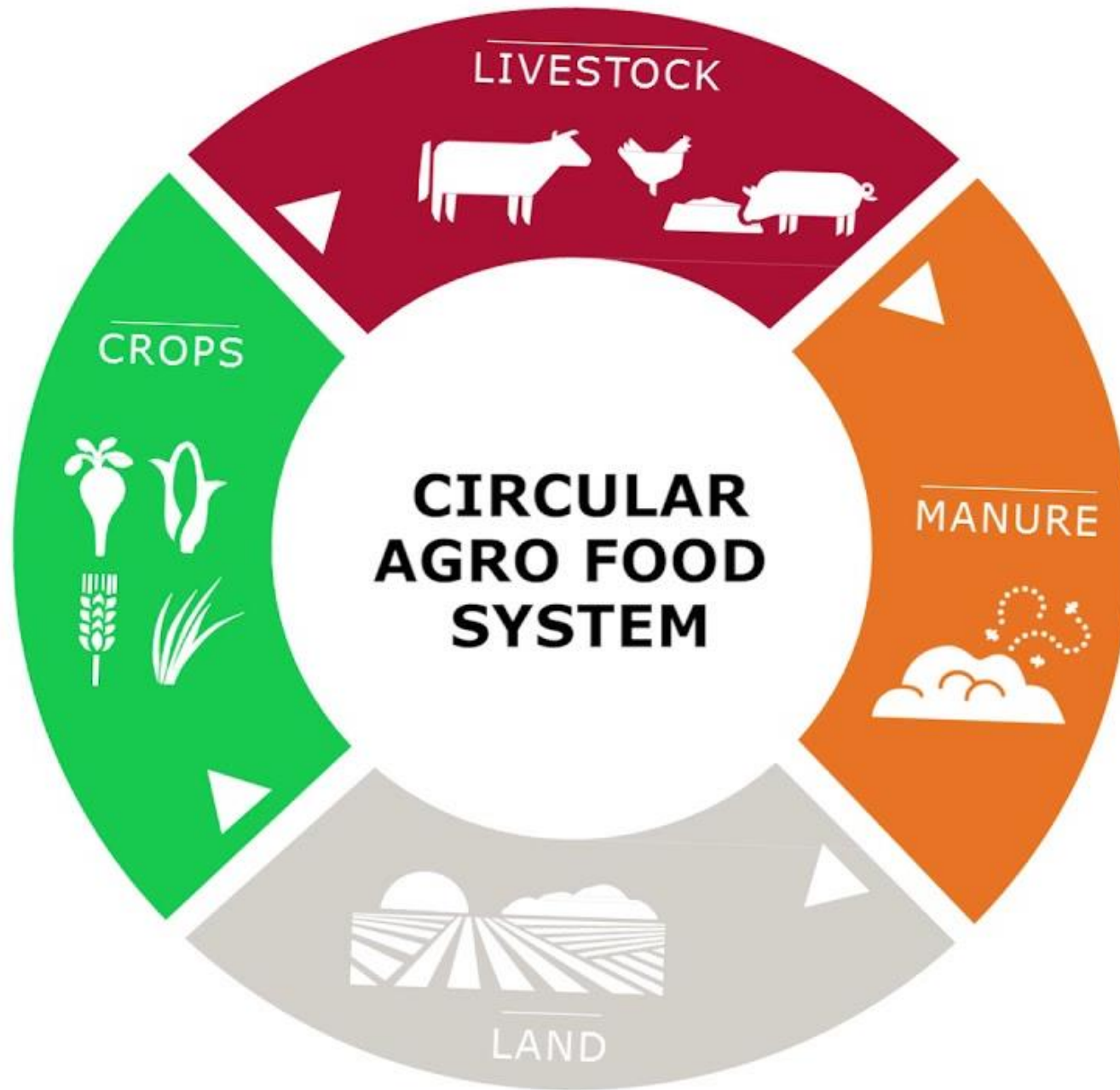
Ghina Haroon



Tharic Galuchi



Lessons learnt







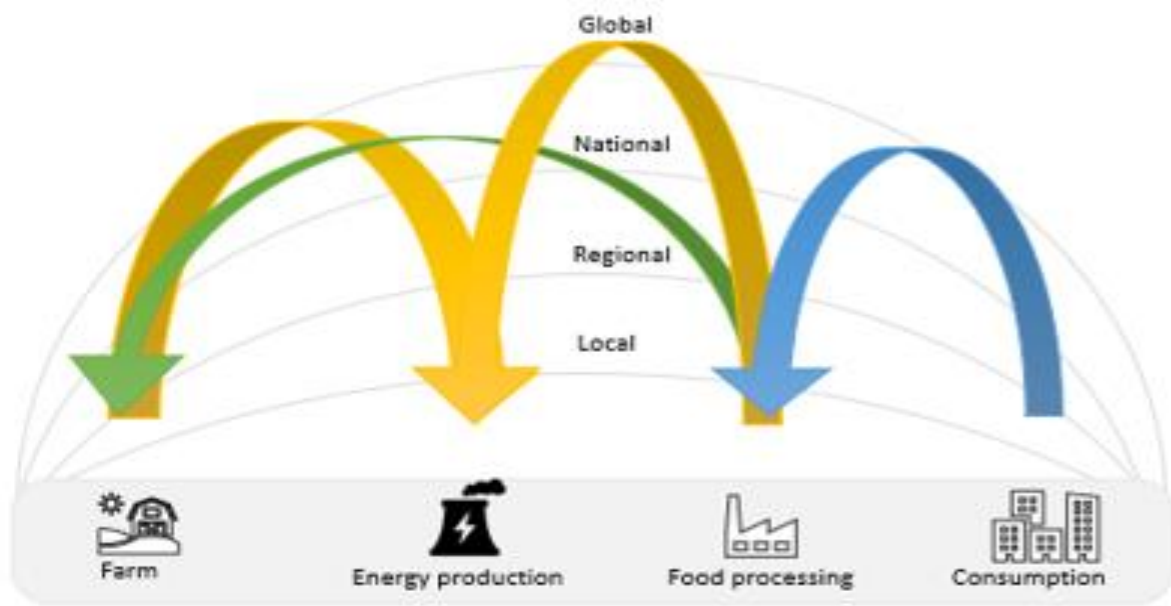




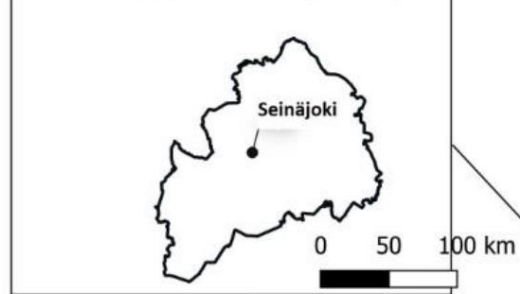




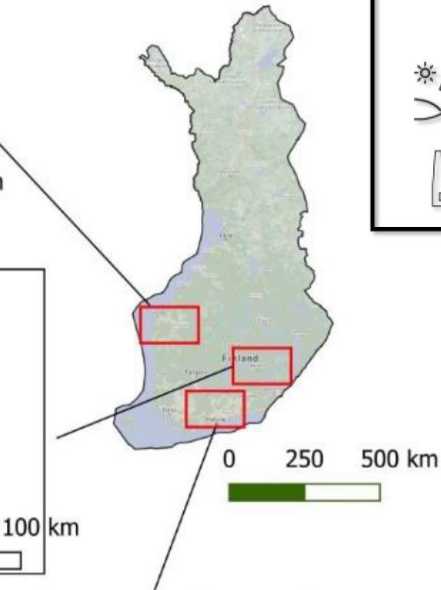
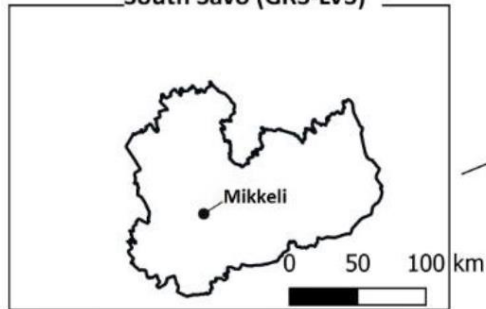




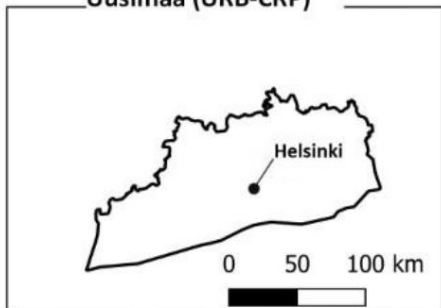
South Ostrobothnia (INT-LVS)



South Savo (GRS-LVS)



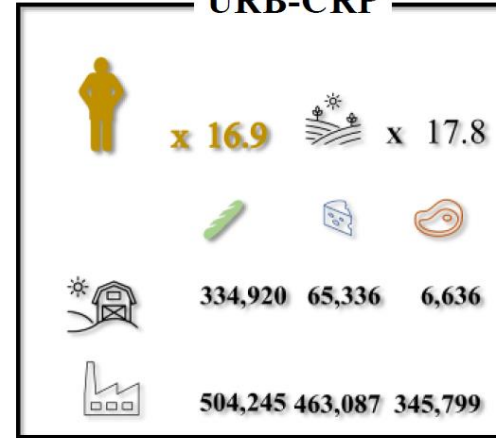
Uusimaa (URB-CRP)



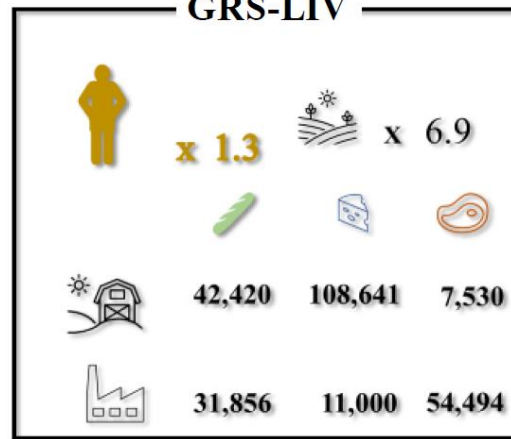
INT-LIV



URB-CRP



GRS-LIV



Population
100,000

Utilized agricultural land
10,000 ha

Primary production kg t yr⁻¹

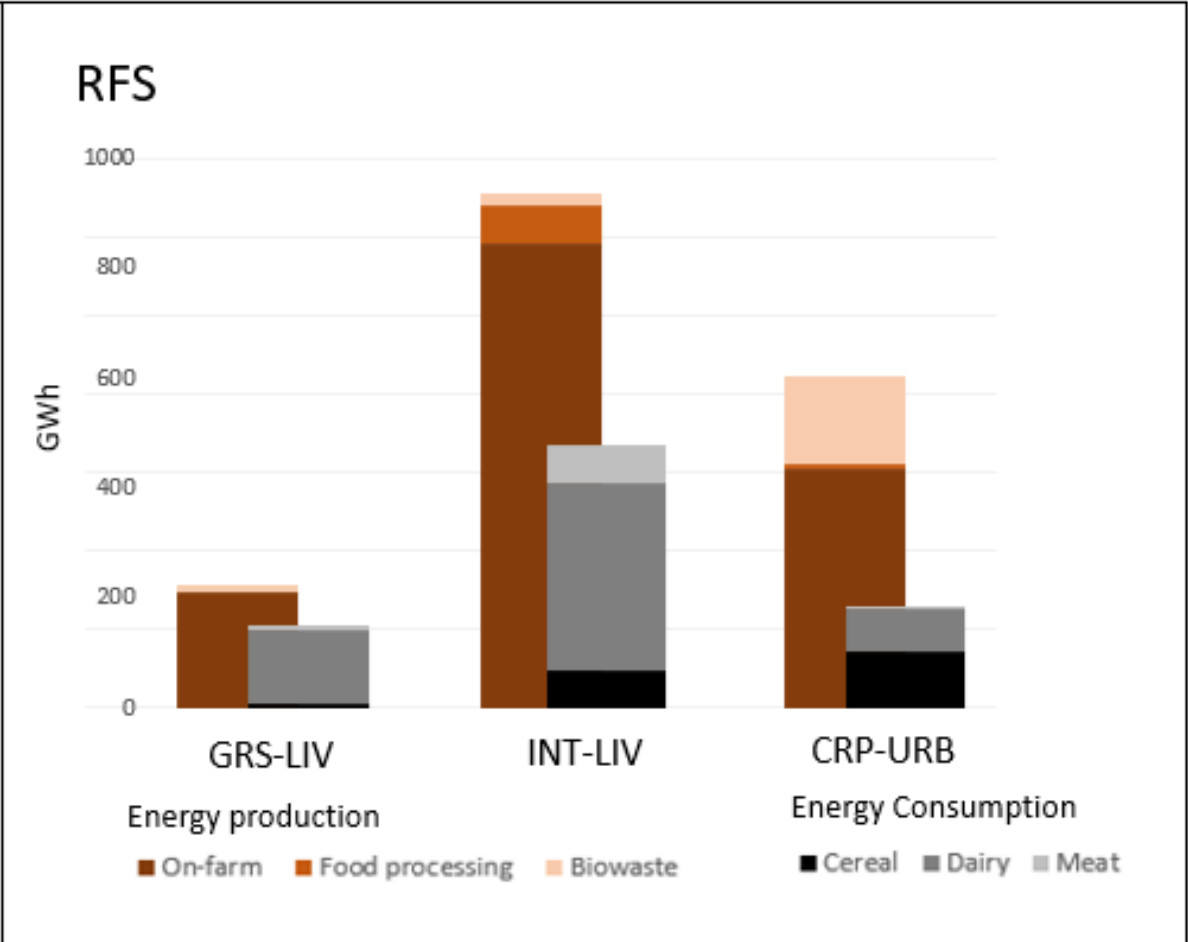
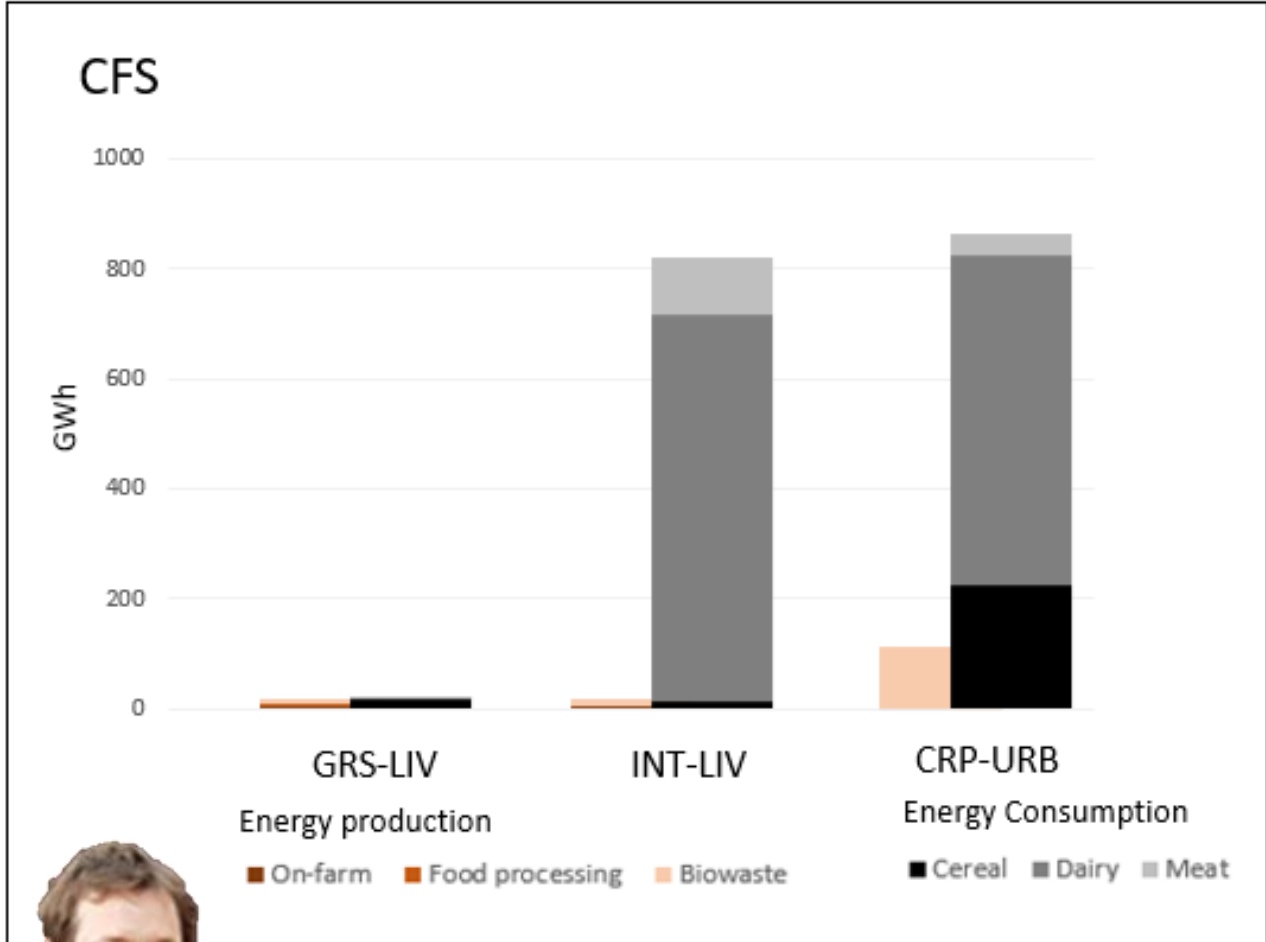
Cereals for food
 Dairy

Food processing € t yr⁻¹

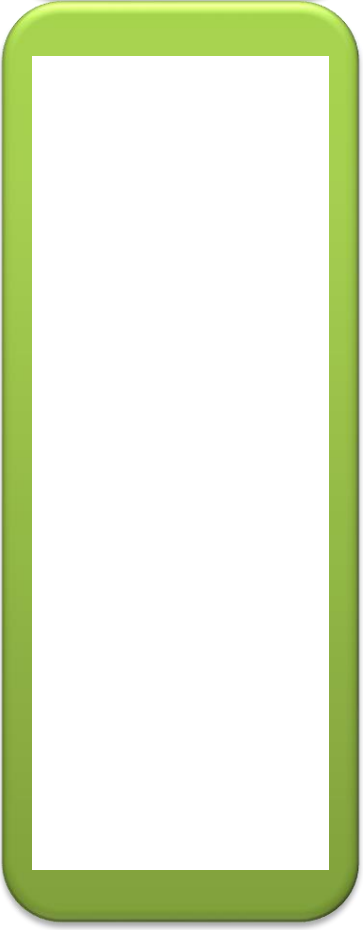
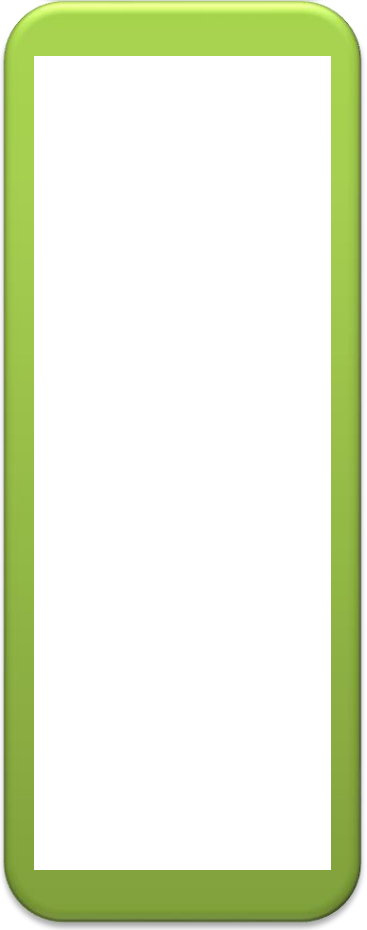
Meat and eggs



Kari Koppelmaki



Kari Koppelmaki



Concerted effort



Enabling policies



Bespoke design

Lessons learnt





The rise...
and fall...
and rise...
of
regenerative
farming

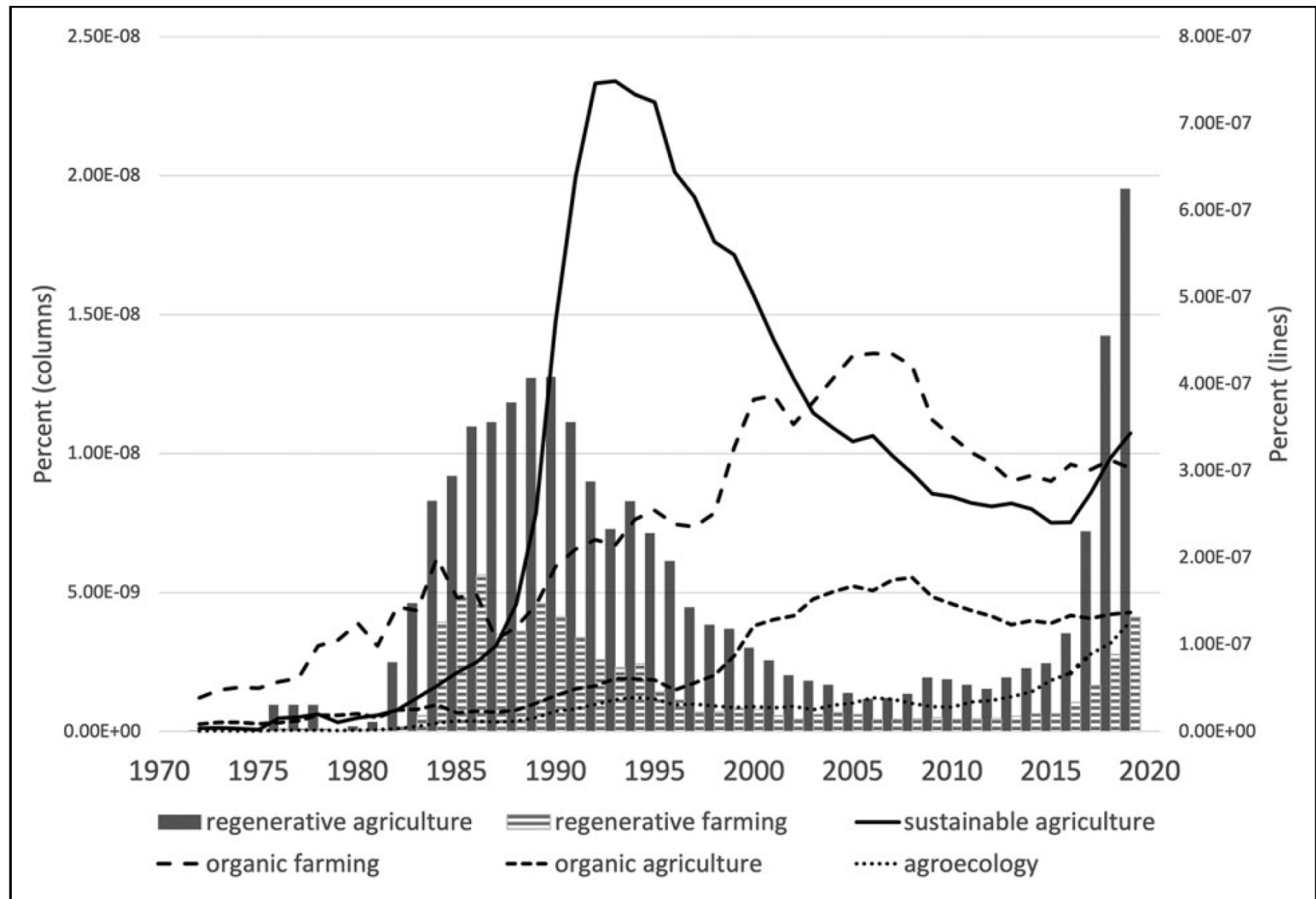


Figure 2. The frequency of key terms in books (3-year rolling averages). Source: Google NGram Viewer, Corpus 'English 2019' which includes books predominantly in the English language published in any country.

Source: Giller et al., 2021:

<https://journals.sagepub.com/doi/pdf/10.1177/0030727021998063>

In search of a scientific definition

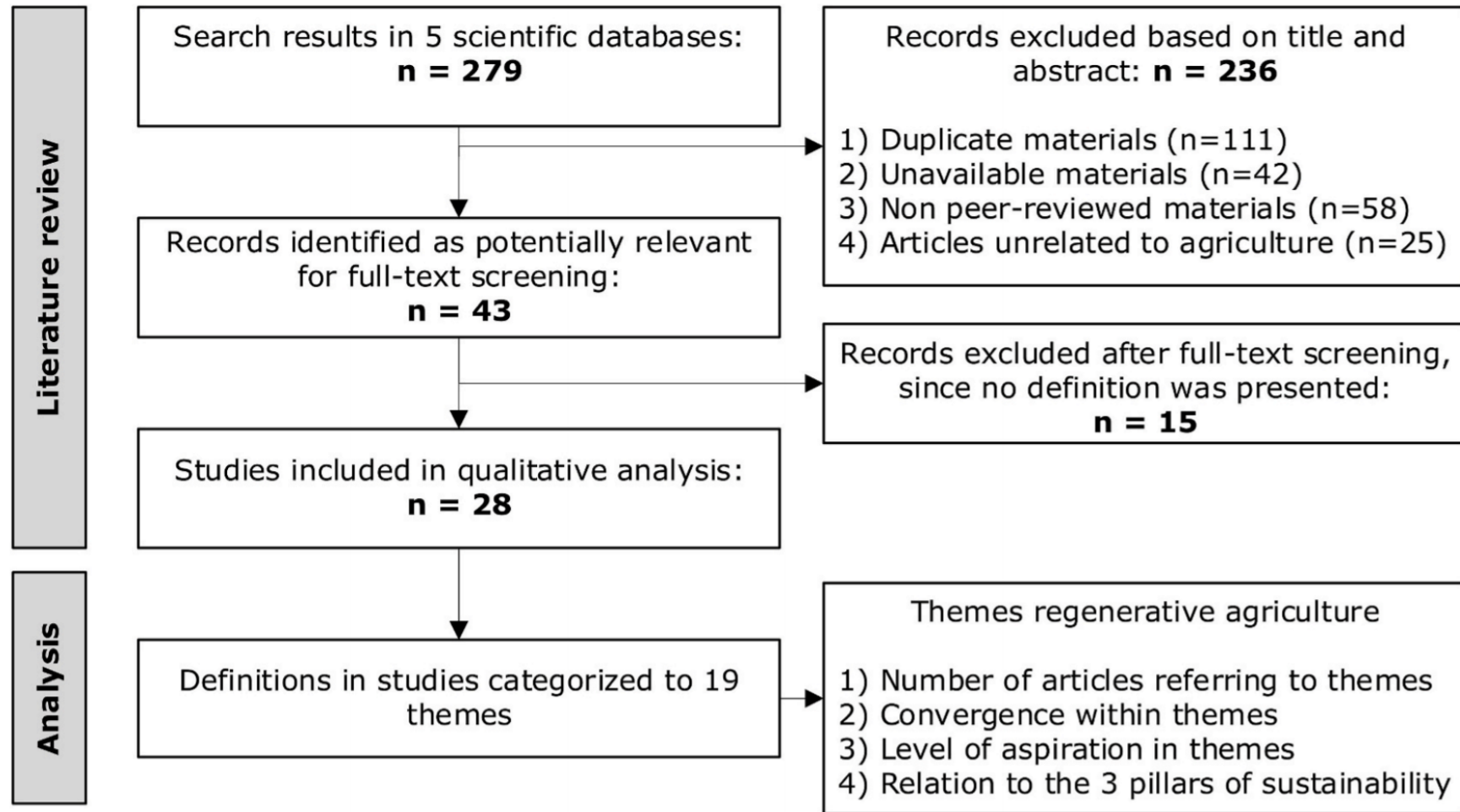
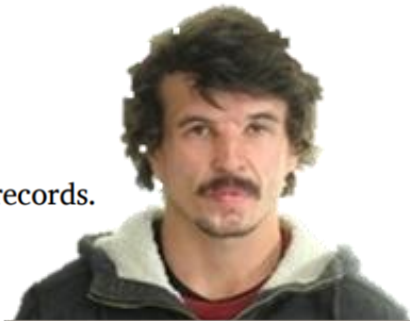
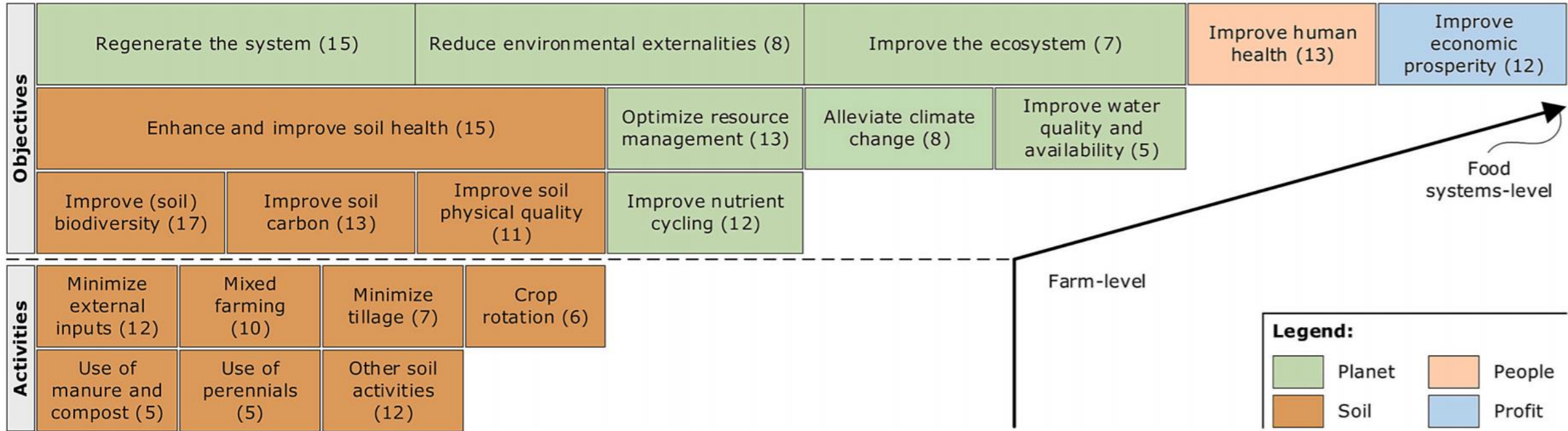


Fig. 1. Illustration of the research methodology to analyse existing definitions of regenerative agriculture, in which 'n' represents the number of search records.

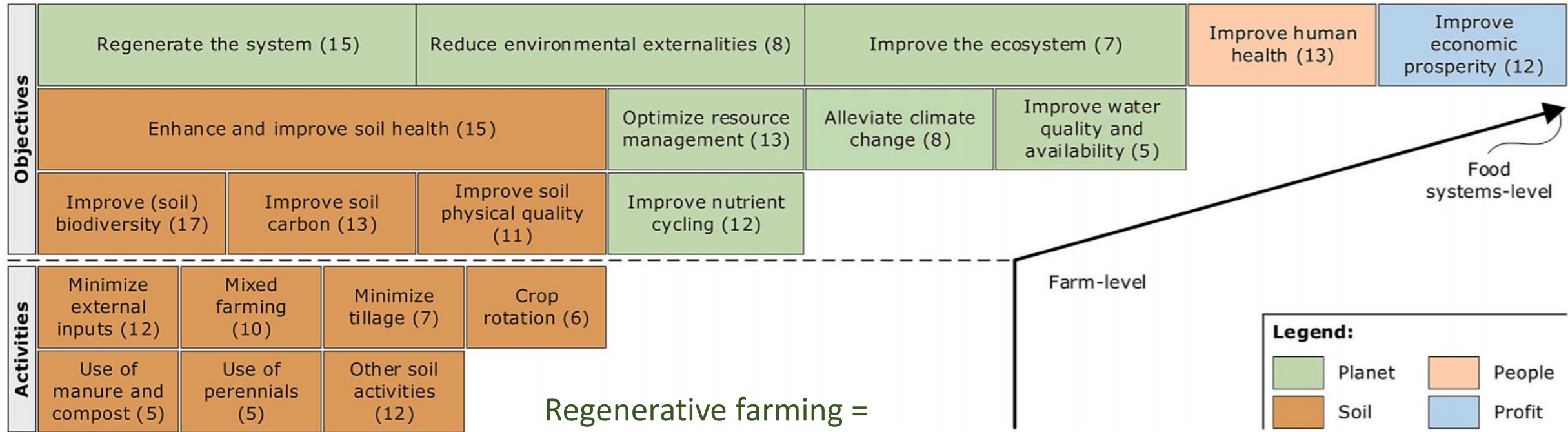


In search of a scientific definition



Loekie Schreefel

In search of a scientific definition



Regenerative farming =

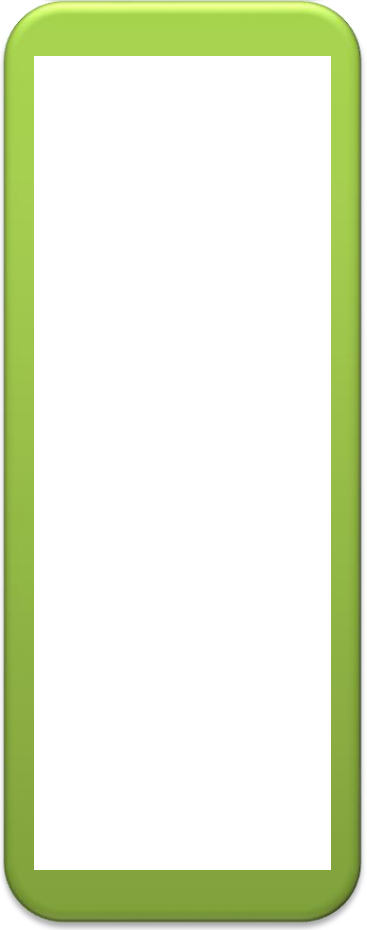
an approach to farming that uses soil conservation as the entry point...

...to regenerate and contribute to multiple provisioning, regulating and supporting ecosystem services...

...with the objective that this will enhance not only the environmental, but also the social and economic dimensions of sustainable food production.



Loekie Schreefel



Transparent MRV



Concerted effort

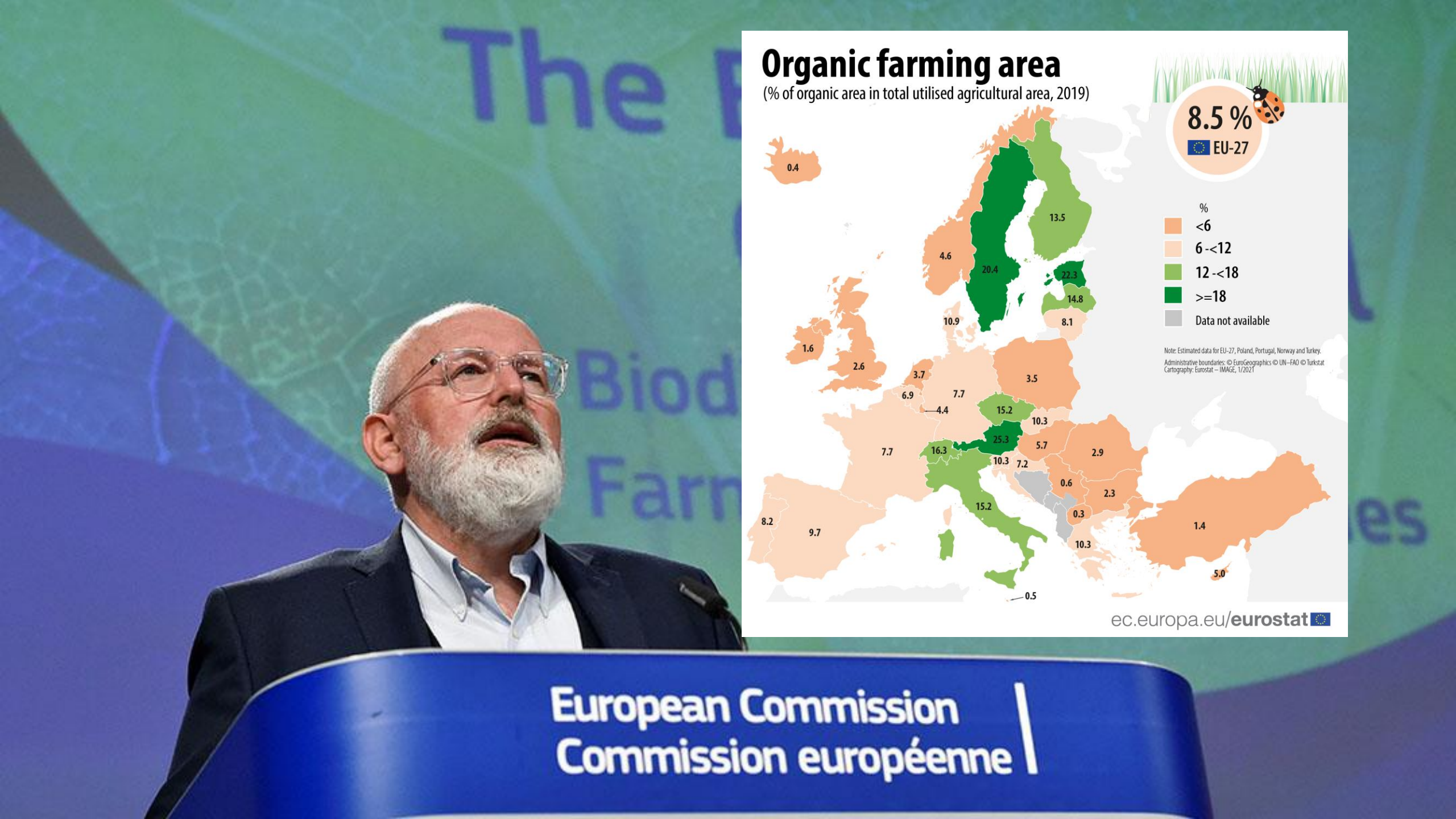


Enabling policies



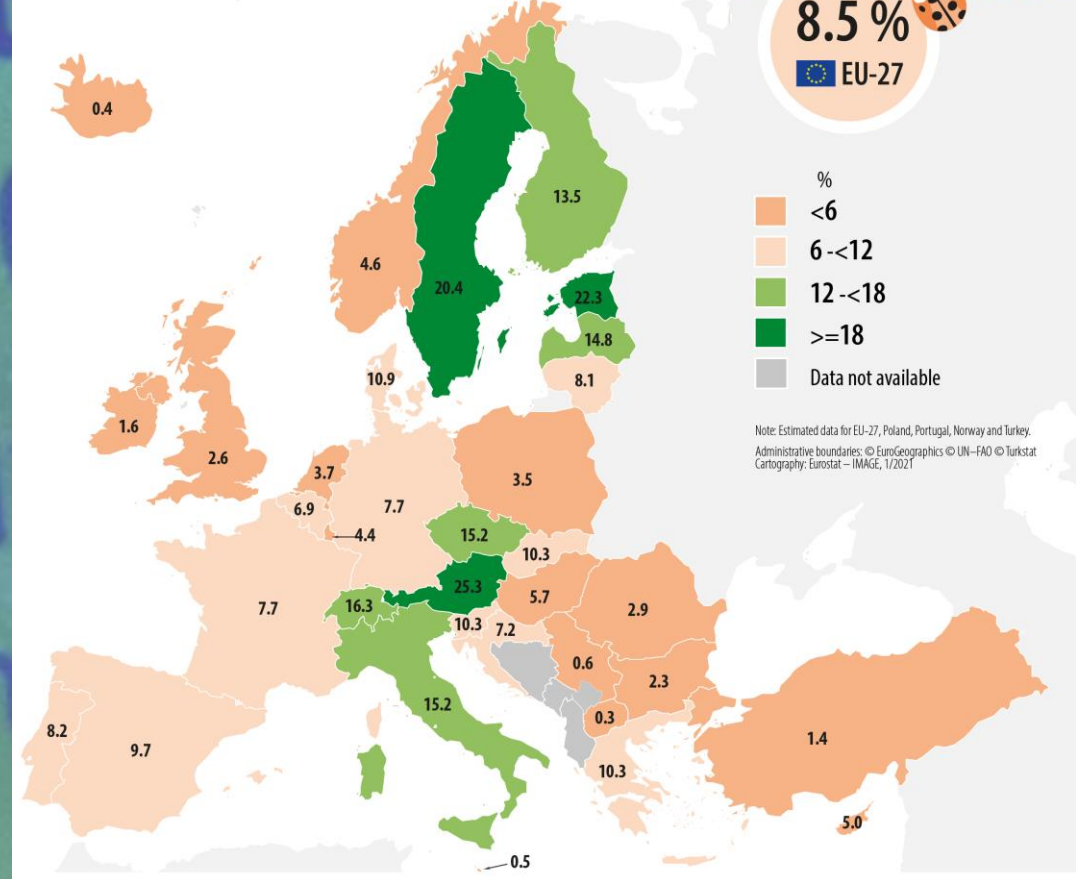
Bespoke design

Lessons learnt



Organic farming area

(% of organic area in total utilised agricultural area, 2019)



8.5 %
EU-27

- <6
- 6 - <12
- 12 - <18
- >=18
- Data not available

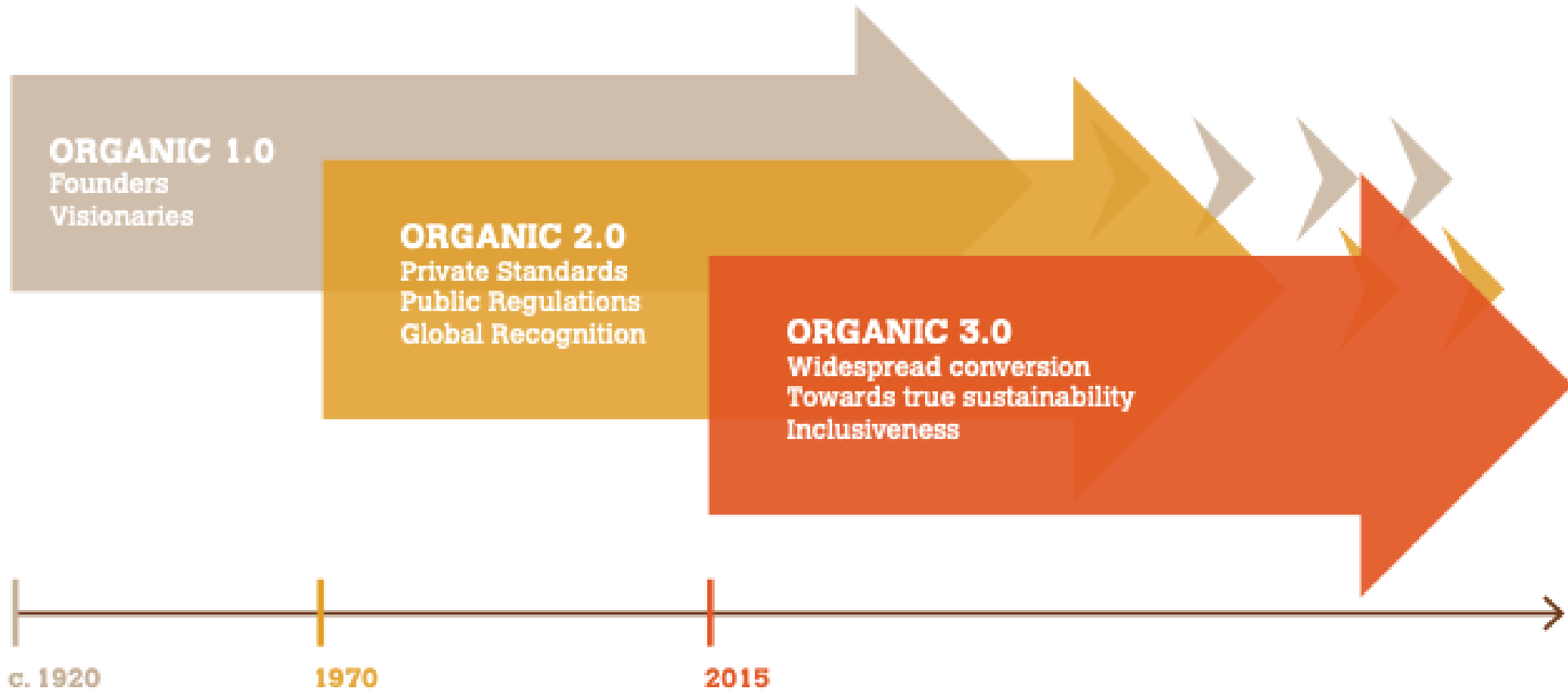
Note: Estimated data for EU-27, Poland, Portugal, Norway and Turkey.
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat - IMAGE, 1/2021

ec.europa.eu/eurostat

European Commission
Commission européenne



Is regenerative the same as organic?



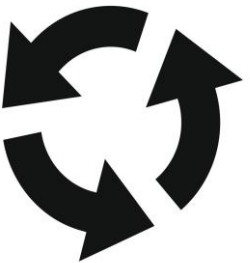
Source: IFOAM: https://www.ifoam.bio/sites/default/files/2020-03/summary_organic3.0_web_1.pdf



Flexible implementation



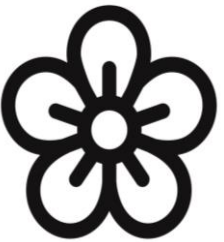
Transparent MRV



Concerted effort



Enabling policies

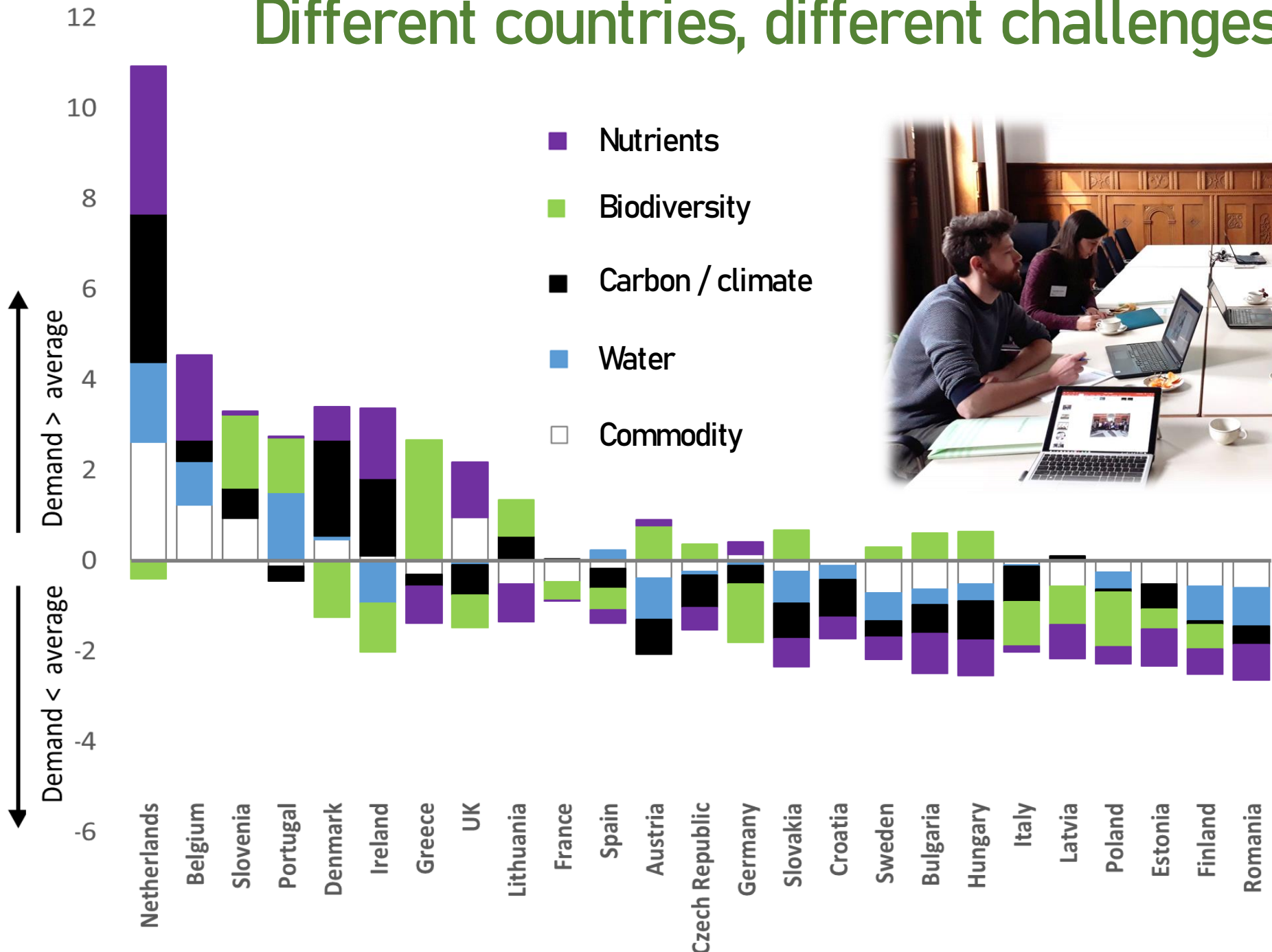


Bespoke design

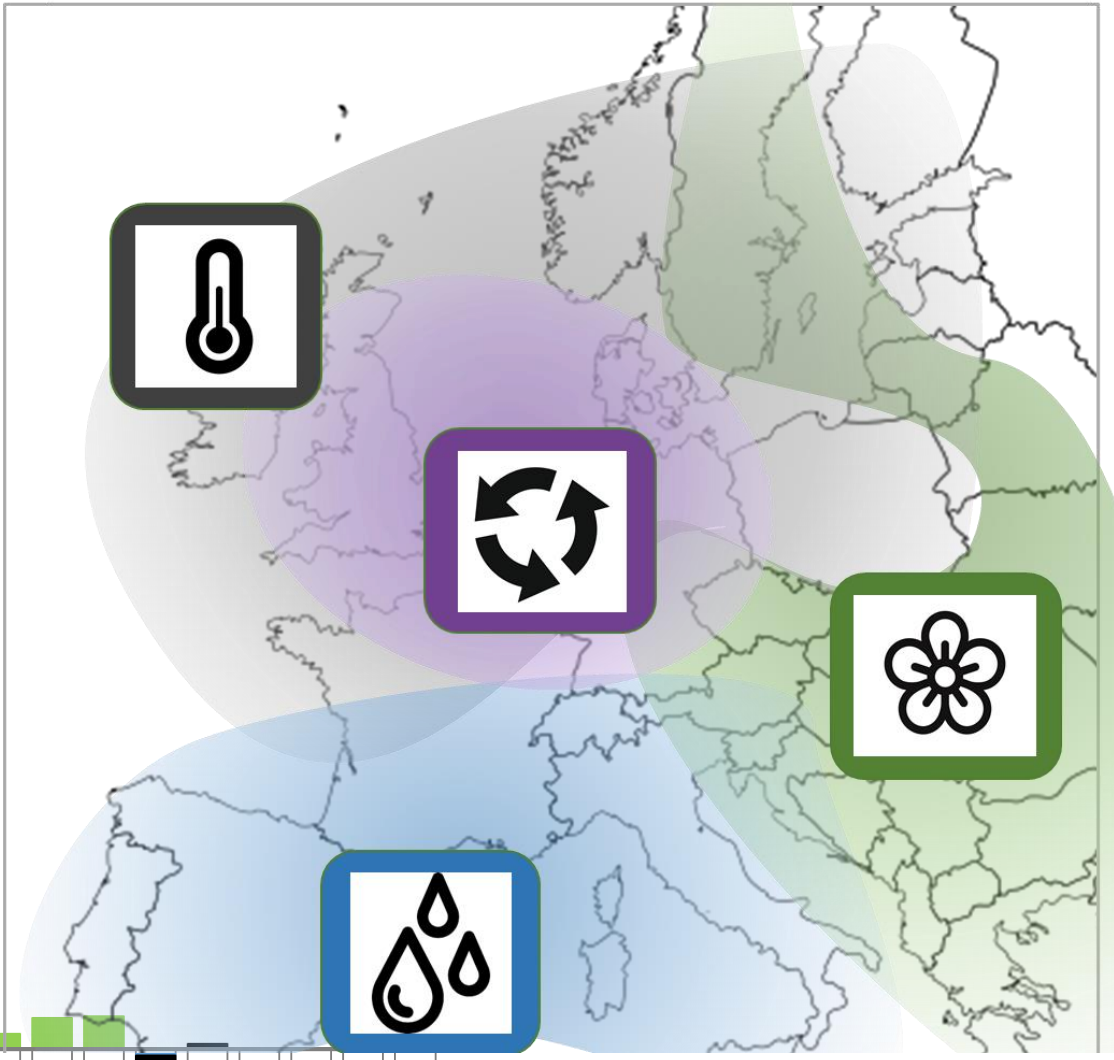
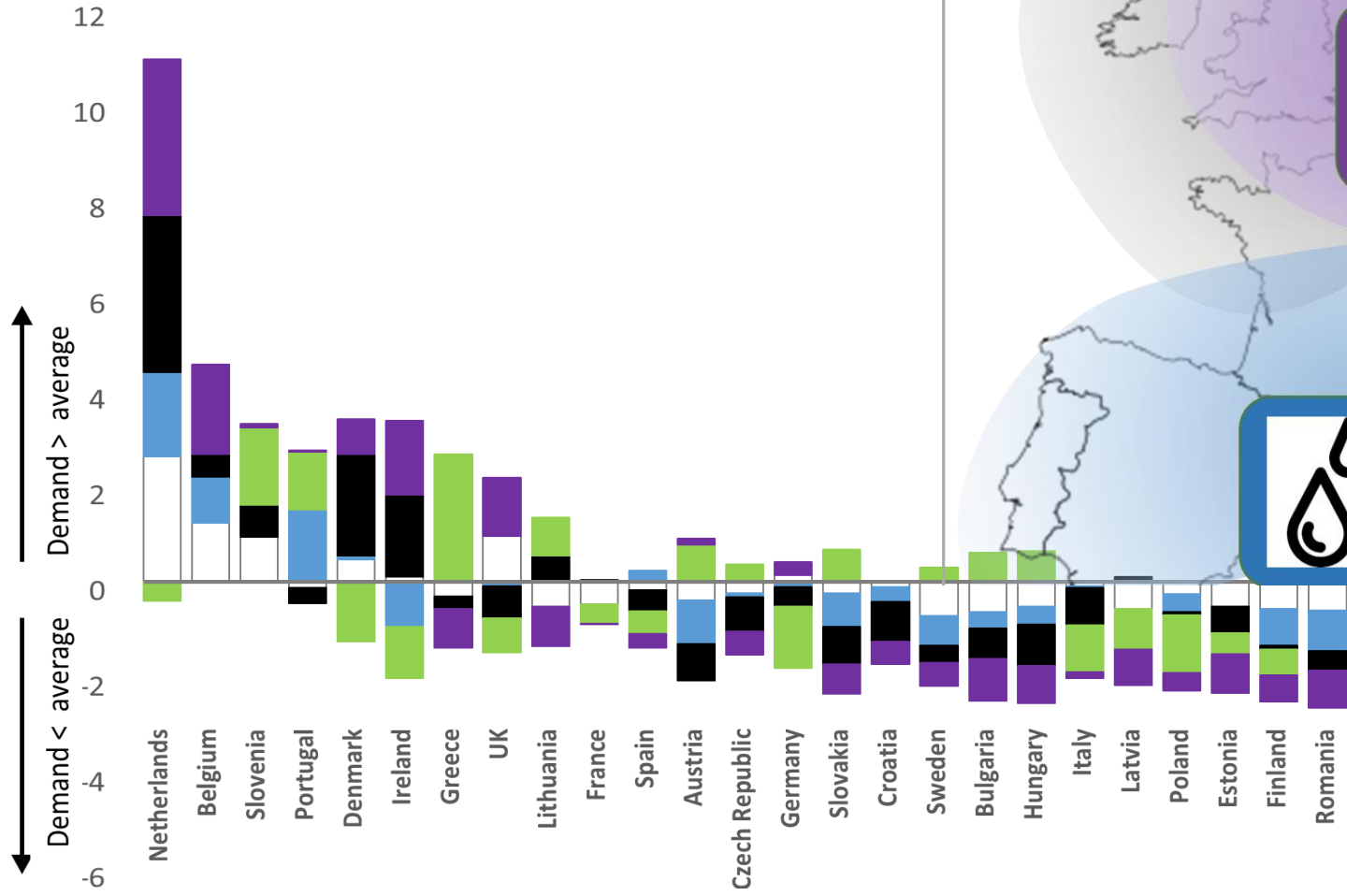
Lessons learnt

Different countries, different challenges

Sustainability challenge (vis-a-vis EU average)



Societal demand for soil functions (Z-score)



Lessons learnt



Bespoke design

Enabling policies

Concerted effort

Transparent MRV

Flexible implementation