











Resilient EU agri-food systems & rural areas



Resilient Agricultural Systems Insights from SURE-Farm

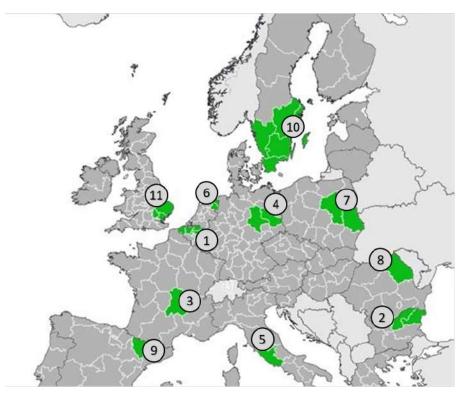
Miranda.Meuwissen@wur.nl

& The SURE-Farm consortium

Agricultural outlook, 9 December 2021



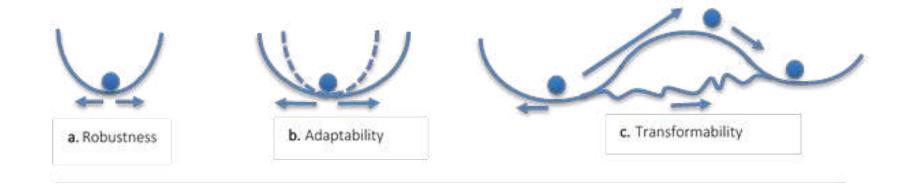
Farming systems face different challenges



- 1 Intensive dairy farming in Flanders, Belgium
- 2 Large-scale arable farming in Northeast Bulgaria
- 3 Extensive beef cattle system in the Massif Central, France
- Large-scale corporate arable farming with additional livestock activities in the Altmark in East Germany
- 5 Small-scale hazelnut production in Lazio, central Italy
- 6 Intensive arable farming in Veenkoloniën, the Netherlands
- 7 Fruit and vegetable farming in the Mazovian region, Poland
- 8 Small-scale mixed farming in Northeast Romania
- (9) Extensive sheep farming in Northeast Spain
- (10) High-value egg and broiler farming in Southern Sweden
- 11) Arable farming in the East of England, UK



Three resilience capacities



Resilience of a farming system as its ability to ensure the provision of the **System functions** in the face of increasingly complex and accumulating economic, social, environmental and institutional **Shocks and Stresses**, through capacities of robustness, adaptability and transformability



"How do we measure resilience?"

Schouten (Minister of Agriculture, Nature & Food Quality)

Resilience =
Latent property
of system.

Complex &
multidimensional

The SURE-Farm approach: 5 systematic steps

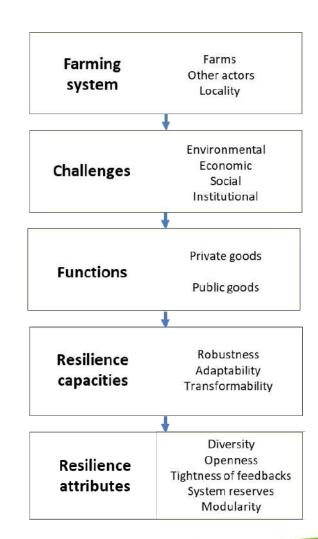
1. Resilience of what?

2. Resilience to what?

3. Resilience *for what purpose*?

4. What resilience capacities?

5. What enhances resilience?















"How to study these capacities?"

Study past trajectories

Assess current
crises
(e.g. Covid
lockdowns)

Discuss future scenarios





"How to build resilience?"



"How do we recognize the future proof systems?"

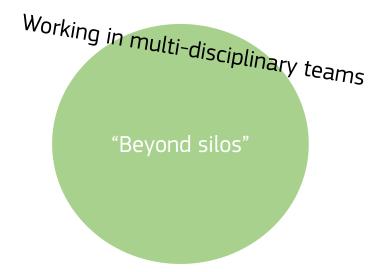
Time is ready

Bringing knowledge together

- **1.** Resilience of what?
- **2.** Resilience to what?
- **3.** Resilience for what purpose?
- **4.** What resilience capacities?
- **5.** What enhances resilience?

Discussing zones with different functions







Farms

Other actors

Environmental

Economic

Social Institutional

Private goods

Public goods

Adaptability

Transformability

Diversity Openness

Tightness of feedbacks

System reserves Modularity

Locality

Farming

system

Challenges

Functions

Resilience

capacities

Resilience

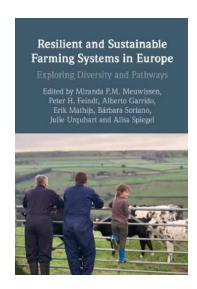
attributes

Further reading



EuroChoices, 2020, Special Issue, **Towards more resilient agricultural systems in Europe**, Vol 19(2), 76 p.

https://doi.org/10.1111/1746-692X.12226.



Meuwissen, M.P.M., Feindt, P.H., Garrido, A., Mathijs, E., Soriano, B., Urquhart, J., Spiegel, A. (eds), 2022. **Resilient and sustainable EU-farming systems; exploring diversity and pathways**. Cambridge University Press, forthcoming.

see also surefarmproject.eu

