

Ecological outlook/perspectives:

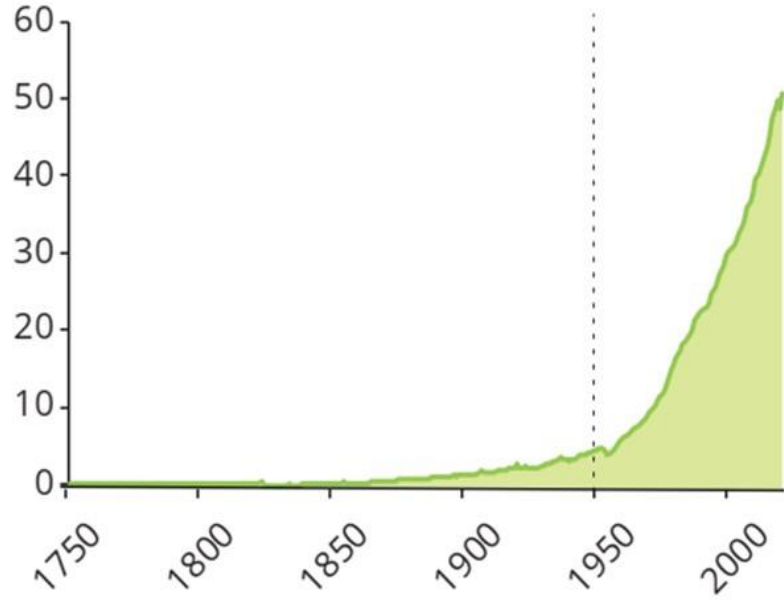
The role and future impact of agroecology on biodiversity and ecosystem services

András Báldi MAE

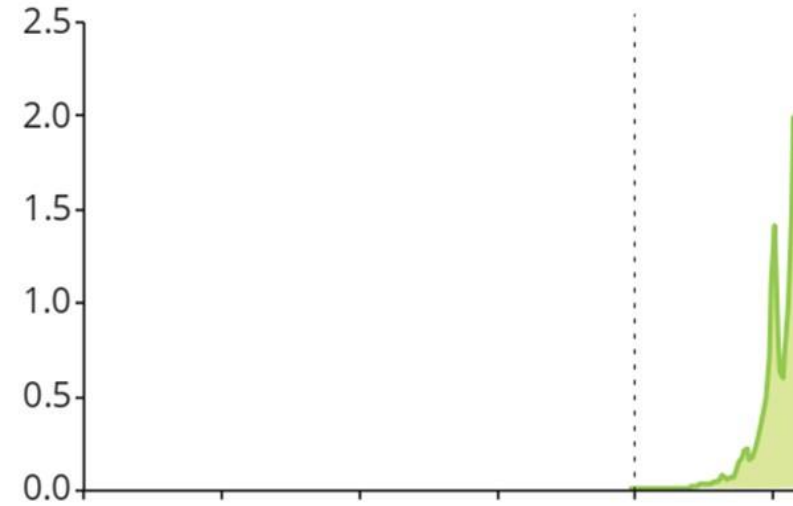
Centre for Ecological Research

BioEast foresight conference, Ljubljana, 27 Sept 2021

Real GDP
Trillion USD

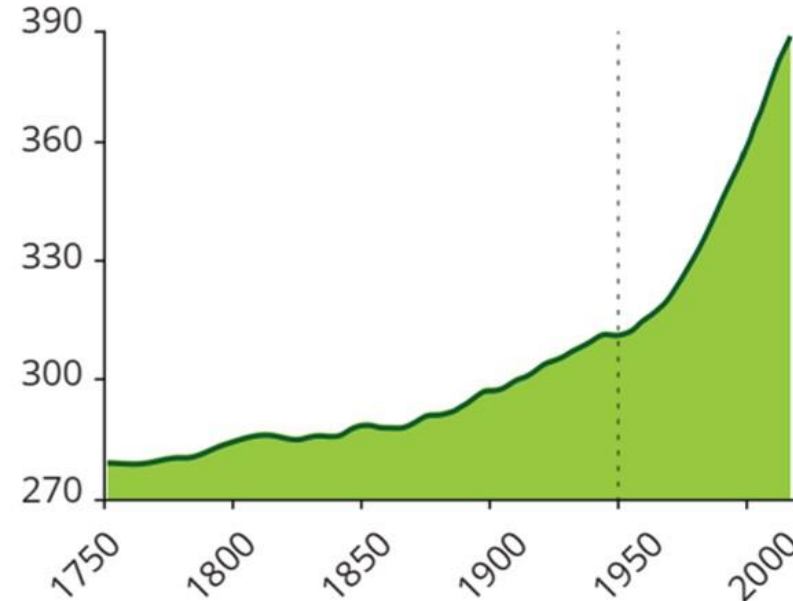


Foreign direct investment
Trillion USD

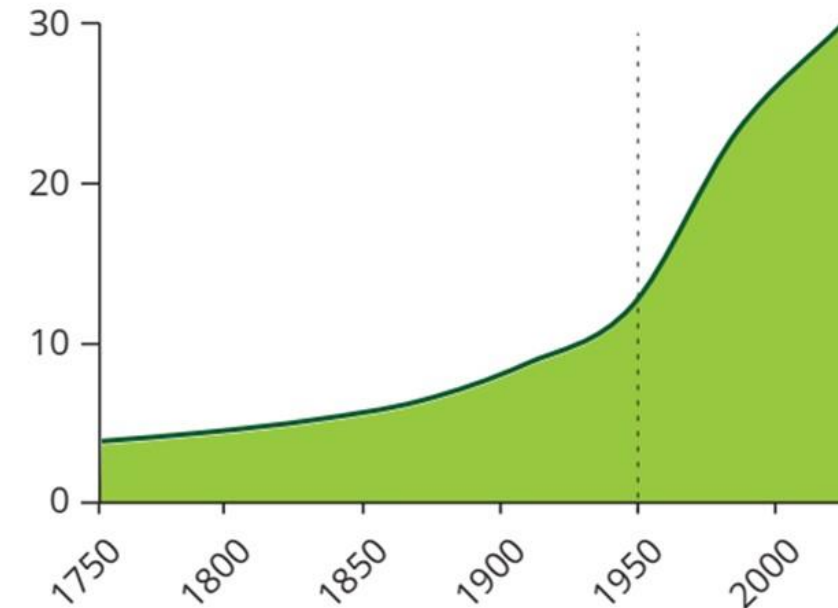


More and more....

Carbon dioxide
ppm



Terrestrial biosphere degradation
%



Common farmland birds in Europe

Population index (1990 = 100)

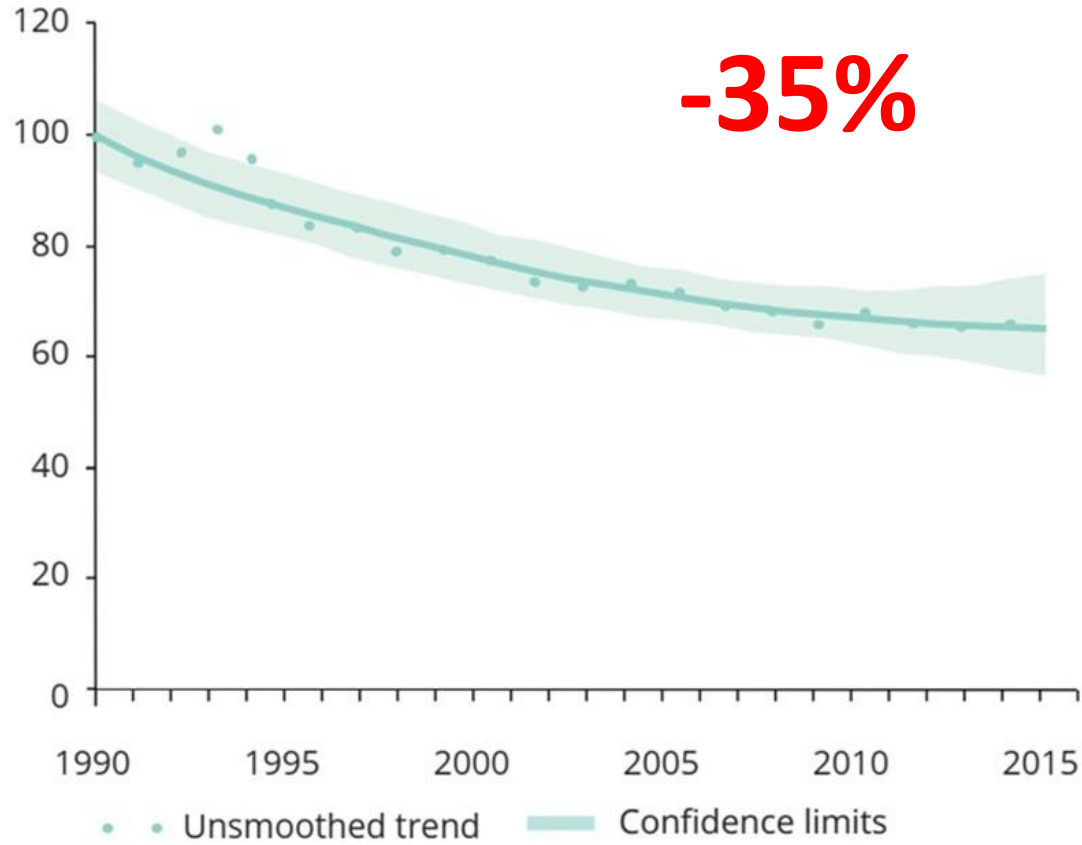
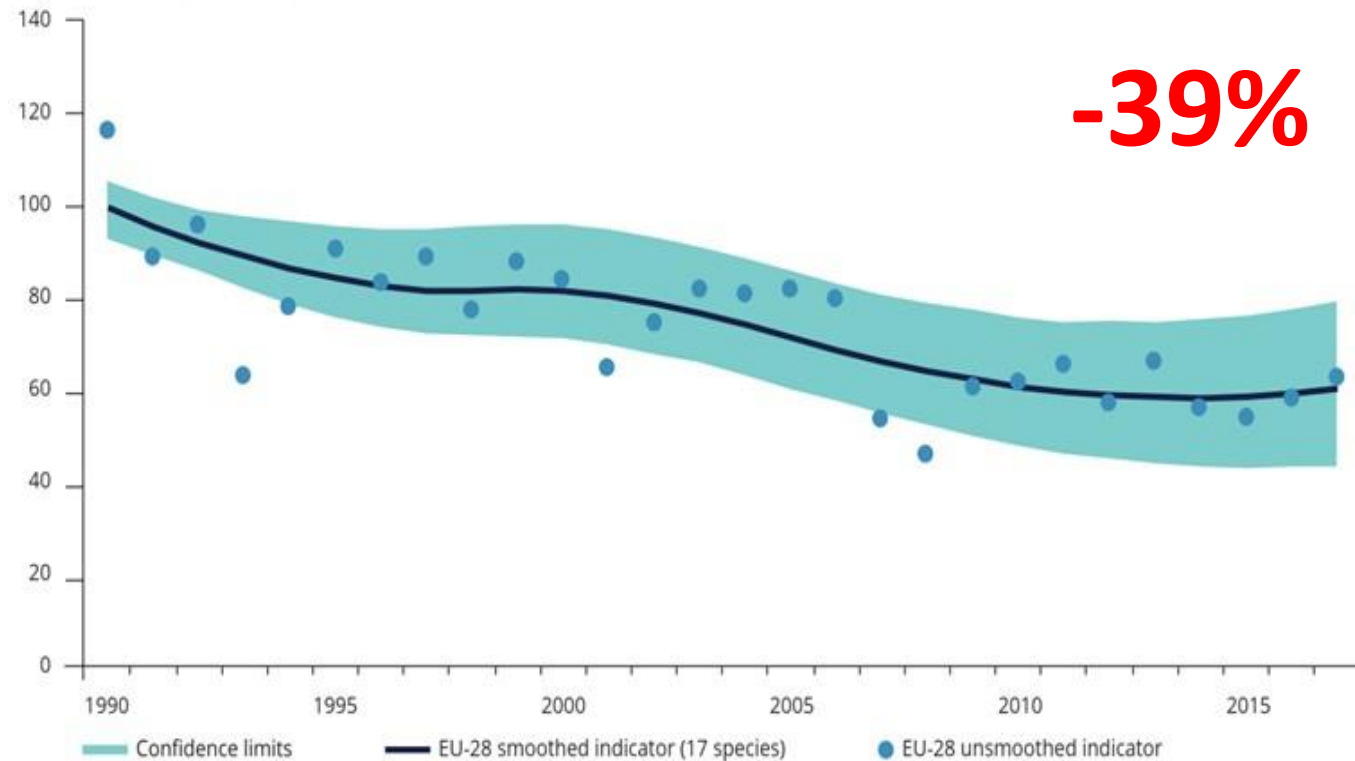


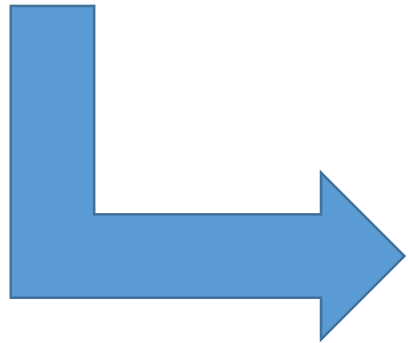
FIGURE 3.6 Grassland butterflies population index, 1990-2017

Population index (1990 = 100)



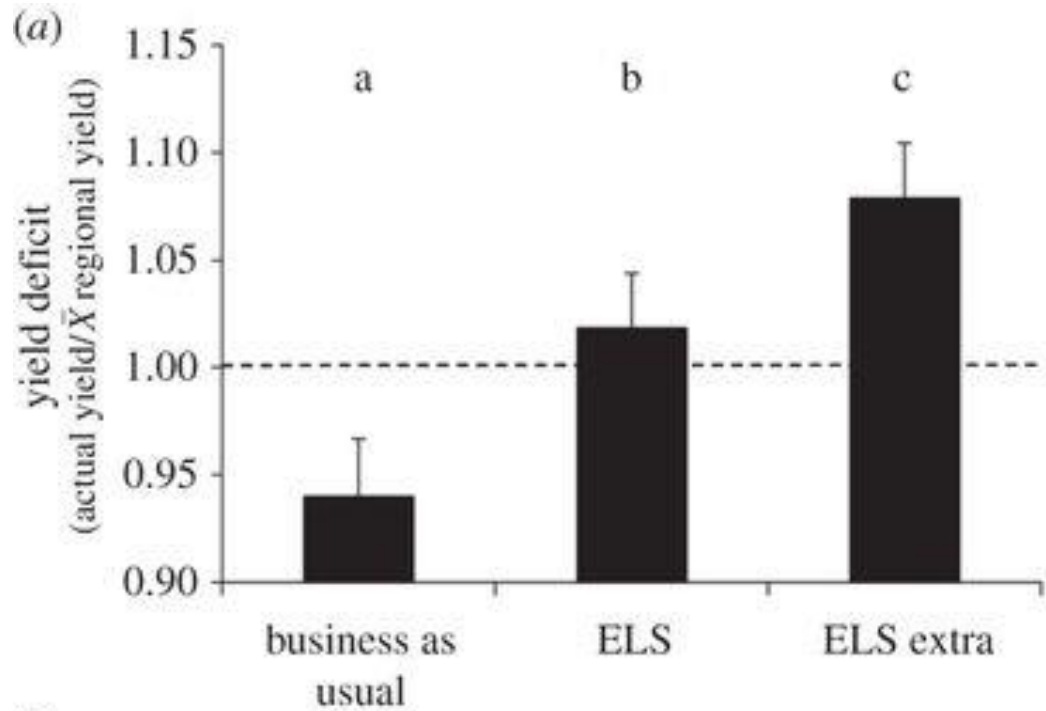
Agroecology:

Harnessing nature to do the hard work for us, such as pollinating crops, controlling pests, decompose materials, plus capture carbon, etc.



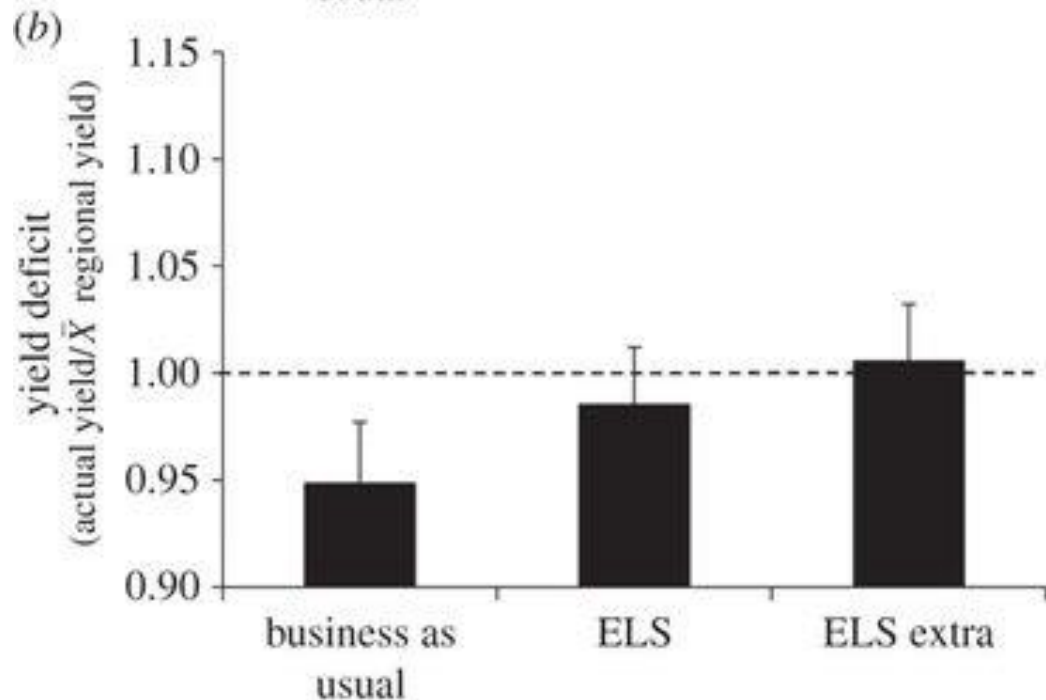
Ecosystem functions and biodiversity behind it need to be **restored** for effective agroecology.

Does it work? Or just a dream?



- UK farm, six years
- Entry Level Scheme: 3% wildlife friendly habitat
- Extra ELS: 8%

Yield in the cropped area was significantly enhanced by ELS and was further increased by creation of habitat on 8% of land (ELSX).



No differences for **the whole field**.

Removal of 8% of land from production resulted in **no net loss** of yield at the field level, as per unit area productivity was increased.

Knowledge gap in Europe, and in V4 countries

- Search in Web of Science for articles after 2010:
<agroecolog* or "agro-ecolog*">
- 8,669 articles, 51% is from 4 countries: USA, China, France, Brazil,

Poland 55

Czech Rep 44

Hungary 38

Slovakia 25

Kiskunság Wild Flower Fields Experiment



Does it work? Or just a dream?

- It have to work to achieve a transformational change to secure future well being.
- Transformational change, IPBES Global Assessment 2019.
- Food system: 5th foresight of the EU Standing Committee of Agricultural Research (Brunori et al. Resilience and Transformation 2020).

Does it



- It have to secure fu
- Transform
- Food syst
of Agricul
Transform

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- **Ecosystem services can enhance productivity, context specific knowledge is needed, and have to be applied.**



Hummingbird Hawkmoth at Kiskunság Wildflower Field

Thank you for your attention!