

Challenges and transitions points to boost agroecology in the EU and how BIOEAST countries could contribute to this transition

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ISARA, Lyon, France

The challenges of today's agriculture and food systems in Europe

Agriculture and nitrate in groundwater



Health - fruits and vegetables in EU containing multiple pesticide residues



Non decreasing total pesticide sales in the EU



EU agriculture impacts the climat



Decreasing birds (farmland birds in particular)



Decreasing pollinators



Insect decline



of insect species, such as the Small Gold Grasshopper (*Chrysochraon dispar*), have significantly declined.
Fellendorf, Universität Ulm

RESEARCH NEWS | 30.10.2019

READING TIME: 3 MIN

Causes of insect decline and biodiversity loss to be found at the landscape level Insect decline more extensive than suspected

Compared to a decade ago, today the number of insect species on many areas has decreased by about one third. This is the result of a survey of an international research team led by scientists from the Technical University of Munich (TUM). The loss of species mainly affects grasslands in the vicinity of intensively farmed land – but also applies to forests and protected areas.

Threats to soil biodiversity



Agroecology in Central Eastern Europe

Agroecology in Central Eastern Europe

- Some documentation available



MAPPING AGROECOLOGY IN HUNGARY



Review

Agroecology Development in Eastern Europe—Cases in Czech Republic, Bulgaria, Hungary, Poland, Romania, and Slovakia

Jan Moudrý Jr. ^{1,*}, Jaroslav Bernas ¹, Jan Moudrý sr. ¹, Petr Konvalina ¹, Apolka Ujj ², Ivan Manolov ³, Atanaska Stoeva ³, Ewa Rembalkowska ⁴, Jarosław Stalenga ⁵, Ion Toncea ⁶, Avram Fitiu ⁷, Daniel Bucur ⁸, Magdalena Lacko-Bartošová ⁹ and Milan Macák ⁹

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- Many examples, cases, initiatives – often without being named agroecology
- Organic farming mostly mentioned for agroecology and seen as equivalent to agroecology

Agroecology in Central Eastern Europe

- Some documentation available



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→ Mapping near to be finished in Bulgaria, Croatia, Slovenia, Albania, Montenegro, North Macedonia, Serbia, Bosnia-Herzegovina, Greece, Austria, Germany, Italy (AE4EU project)

**Supporting the transition
towards agroecology in
Central Eastern Europe**

Applying existing and developing new policies



Moving towards a more healthy and sustainable EU food system, a corner stone of the European Green Deal



The new EU-wide Biodiversity Strategy will:

- Establish protected areas for at least:
 - 30% of land in Europe**
 - 30% of sea in Europe**

With stricter protection of remaining EU primary and old-growth forests legally binding nature restoration targets in 2021.
- Restore degraded ecosystems at land and sea across the whole of Europe by:
 - Increasing organic farming and biodiversity-rich landscape features on agricultural land
 - Halting and reversing the decline of pollinators
 - Restoring at least 25 000 km of EU rivers to a free-flowing state
 - Reducing the use and risk of pesticides by 50% by 2030
 - Planting 3 billion trees by 2030



Farm to Fork strategy – Biodiversity strategy



Reduce by 50% the overall use and risk of **chemical pesticides** and reduce use by 50% of more hazardous **pesticides** by 2030



Achieve at least 25% of the EU's agricultural land under **organic farming** and a significant increase in **organic aquaculture** by 2030



Reduce sales of **antimicrobials** for farmed animals and in aquaculture by 50% by 2030



Reduce **nutrient losses** by at least 50% while ensuring no deterioration in soil fertility; this will reduce use of **fertilisers** by at least 20 % by 2030



Bring back at least 10% of agricultural area **under high-diversity landscape features** by 2030

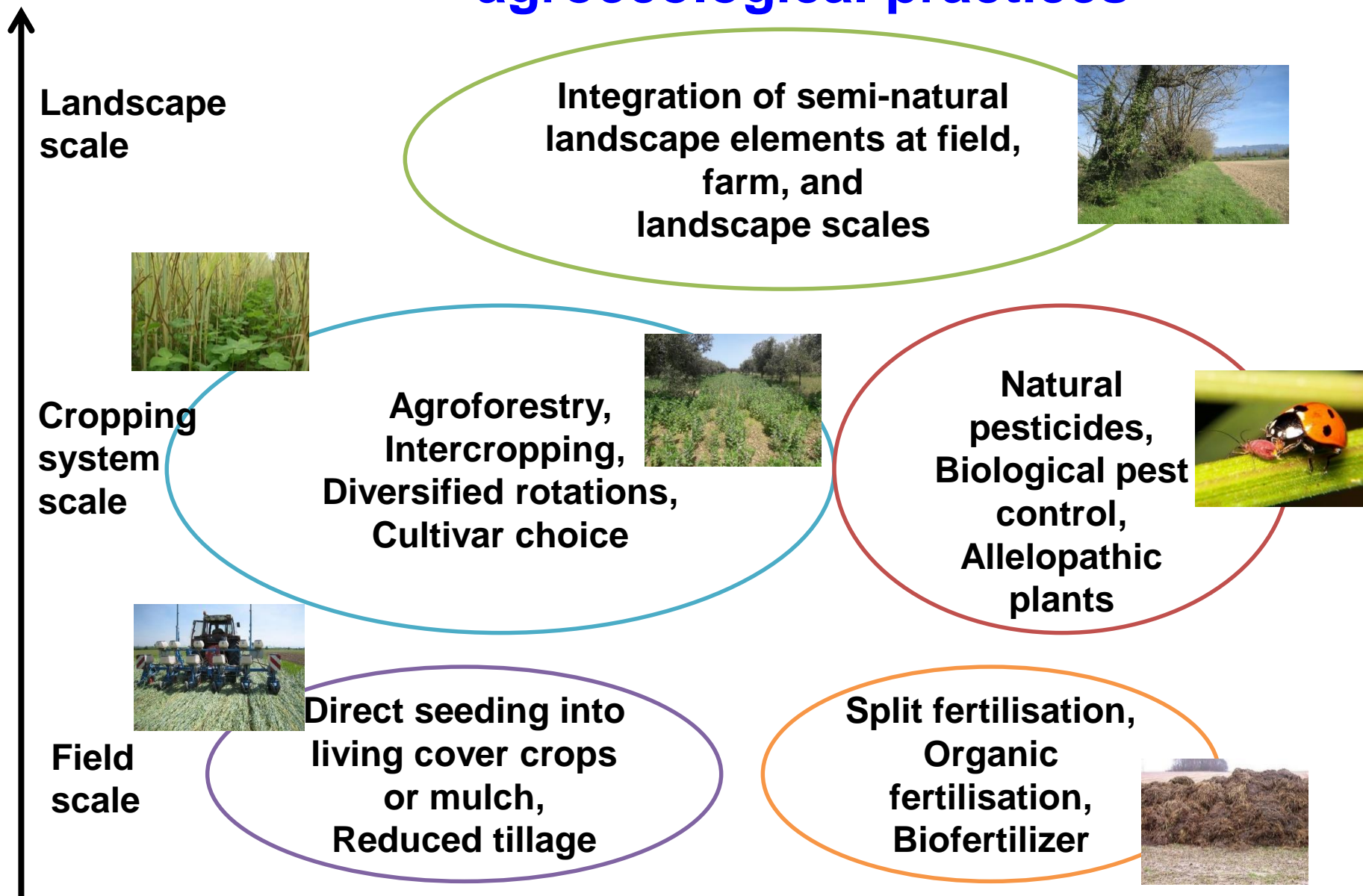
Eco-schemes



- Organic farming practices
- Integrated Pest Management practices
- Agro-ecology
- Husbandry and animal welfare plans
- Agro-forestry
- High nature value (HNV) farming
- Carbon farming
- Precision farming
- Improve nutrient management
- Protecting water resources
- Other practices beneficial for soil
- Other practices related to GHG emissions

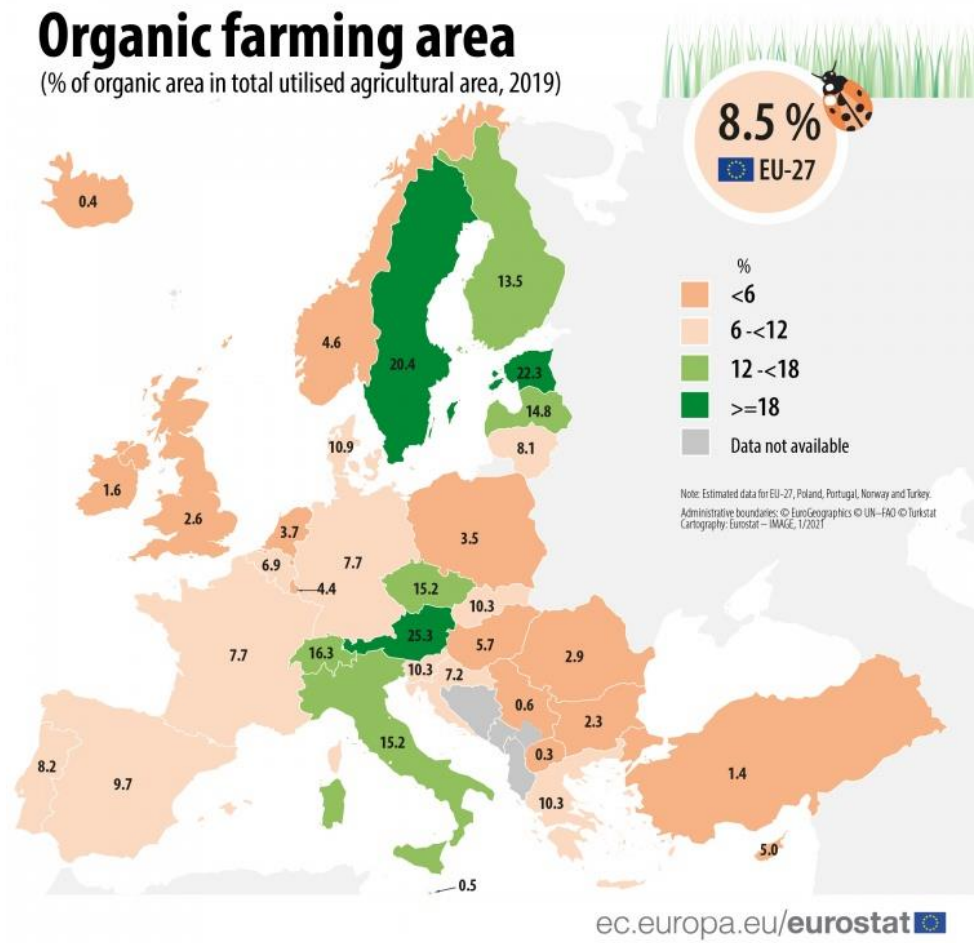
Supporting larger implementation of agroecological practices

Scale of application of agroecological practice



Supporting and enlarging organic agriculture and elements of traditional agriculture in Central Eastern Europe

- Currently only 8.5 % under organic in EU (0.3-25.3% in countries)



Data: 2019

(EU Commission – Eurostat 2021)

Supporting and enlarging organic agriculture and elements of traditional agriculture in Central Eastern Europe

- HNV (High Nature Value) farming – often in areas with traditional agriculture in Central Eastern European countries



- In all agricultural landscapes: programmes for conservation of species and habitats at field, farm and landscape level

Pesticide reduction plans and programmes

- Farm networks, demonstrations farms, lighthouse farms
- Example France: Ecophyto plan and programme. Exists in similar form also in other countries.

Écophyto : objectif 30 000 exploitations agricoles !

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ÉCOPHYTO 

Supporting farmer–supply chain actor groups for transition towards agroecology

- To engage in a multi-annual project for transition to agroecology
- As example: GIEE in France (Environmental and economic interest groups). Recognized by the French state and funding.



- In January 2021, 753 groups with about 12 000 farms. Groups in average 20 farmers (10 to >100)

Funding more research in agroecology

- Very low percentage compared to funds for conventional agriculture research. More interdisciplinary research is needed.
- Research that provide more evidence on economic performance of agroecology



The economic potential of agroecology: Empirical evidence from Europe

Jan Douwe van der Ploeg^{a,*}, Dominique Barjolle^b, Janneke Bruil^c, Gianluca Brunori^d, Livia Maria Costa Madureira^e, Joost Dessein^f, Zbigniew Drąg^g, Andrea Fink-Kessler^h, Pierre Gasselinⁱ, Manuel Gonzalez de Molina^j, Krzysztof Gorglach^g, Karin Jürgens^k, Jim Kinsella^l, James Kirwan^m, Karlheinz Knickelⁿ, Veronique Lucas^o, Terry Marsden^p, Damian Maye^m, Paola Migliorini^q, Pierluigi Milone^r, Egon Noe^s, Piotr Nowak^g, Nicholas Parrott^t, Alain Peeters^u, Adanella Rossi^d, Markus Schermer^v, Flaminia Ventura^r, Marjolein Visser^w, Alexander Wezel^{x,1}

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(van der Ploeg et al. 2019)

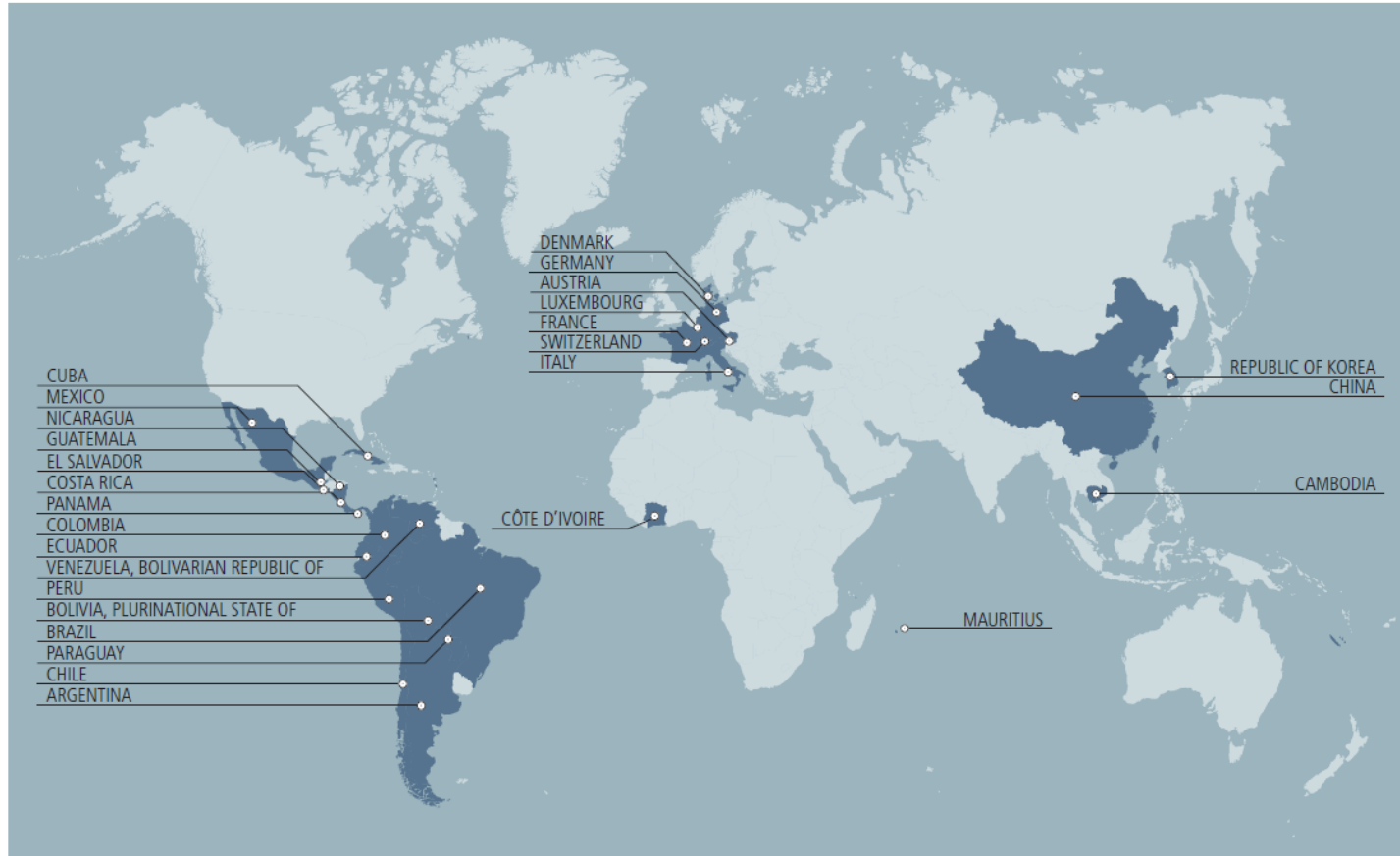
Enlarging education and training programmes for sustainable agriculture/agroecology

- Lower number so far in Central Eastern European countries



Learning from other policies for agroecology

Legal and policy frameworks on agroecology



Notes: Countries that have implemented laws, regulations and policies in support of agroecology (based on data available in FAOLEX [<http://www.fao.org/faolex/en>] in April 2018) are highlighted in dark blue. Detailed information and links to the documents can be found in the Agroecology Lex database, part of FAO's Agroecology Knowledge Hub (<http://www.fao.org/agroecology/policies-legislations/en>).

(from FAO 2019)

Other policies

- **Agroecology Project in France, 2012**

→ **Law for agroecology in 2014**



<http://agriculture.gouv.fr/sites/minagri/>



**The goal:
Sustainable farming
and food systems**



Thank you for your attention

Alexander Wezel

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