

## Workshop Invitation: Joint Event by ATB and MED

### “Advancing the Transformation to **Agroecology** through Emerging **Technologies**: Addressing Research Gaps and the Contribution of Digital Technologies”

We are excited to invite you to the joint workshop organized by ATB and MED, titled “Advancing the Transformation to **Agroecology** through Emerging **Technologies**: Addressing Research Gaps and the Contribution of Digital Technologies”. This workshop is part of the Horizon Europe **D4AgEcol** project, will focus on the role of innovative digital technologies in accelerating the shift towards agroecological farming systems.

**D4AgEcol** is a HE Coordination and Support Action to harness the potential of digital tools and technologies to enable Agroecology. The consortium, consisting of 12 partners from 8 European countries, is exploring the barriers and opportunities associated with various digital tools and technologies, aiming to develop a roadmap for digitalisation as

#### Background

Agriculture in Europe is in transition towards a greener agriculture, where agroecology, can make a great contribution. To what extent can the current trend on digitalisation help to foster that process (e.g. reduce use of chemical substances, reduce emissions from agricultural systems, enabling biodiversity in agricultural landscapes or improving animal welfare)? According to Gliessmann the transition of the agri-food sector to agroecology can be described in five levels (see Figure 1). During the Digital Tool Scoping Workshops we already assessed the possible contributions of available technologies (TRL9) like commercially available robots, or sensor systems in animal husbandry. Now we want to explore how upcoming and emerging technologies can contribute and identify research needs on how to unlock their potential and get them “to the next level”.

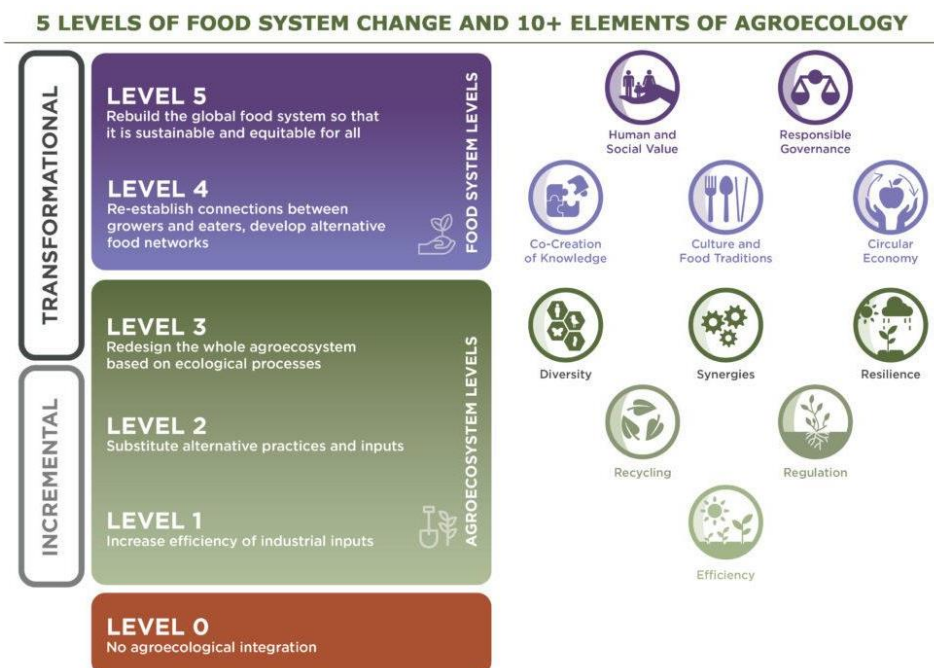


Figure 1: 5 Levels of Food System Change by Gliessmann, Source: <https://www.agroecology-pool.org/methodology/>

## Workshop Overview

The workshop is expected to be about 2 hours long and split in two parts: The first will present the project D4AgEcol and other research activities. After the presentation of the project D4AgEcol, 3-5 projects can be presented by the University of Evora (and potentially also others), which focus on new upcoming technologies, which can have an impact on the transition towards agroecology.

The second part of the workshop will feature a discussion in a world café format with the aim to identify research needs and key aspects to a roadmap for advancing research and innovation in this sector.

## Discussion of Research Needs and a Roadmap for Research and Development

After the presentations, we aim to engage in a lively discussion on the question 'What is still missing from a scientific perspective?' with key topics, including:

- What contributions can current emerging technologies make to agroecological agriculture?
- What research questions remain to enhance these technologies and make AE systems feasible?
- What additional research is needed to close knowledge gaps and fully transform today's agricultural systems?
- What is the potential role of AI in supporting this transition?

The insights gained from our discussions will play a crucial role in creating a scientific basis for policy roadmaps on both national and European scale that aim to transform European agriculture into an agroecological system. We look forward to your participation and an exciting exchange of ideas!

Best regards,

Andreas Meyer-Aurich  
ATB, Coordinator of D4AgEcol



Fátima Baptista  
MED, Director



## Agenda

Where: Conference Room of the Regentes Agrícolas Building, Herdade da Mitra,  
University of Évora

When: 14th. January 2025

Participation is free, but registration is mandatory via the following link until January

13th: <https://forms.gle/QLowtNTTBvSU1pvu9>

| Thursday 14. January 2025 |   |  |
|---------------------------|---|--|
|                           | Start of Emerging Technologies Colloquium   |  |
| 15:00                     | Welcome & Introduction  | Andreas Meyer-Aurich; Friederike Schwierz  |
| 15:10                     | <b>Impuls: Digital Tools and Technologies as Accelerator of Agroecology – Insights of the HE Project “Digitalisation as Enabler for Agroecology”</b>  | Andreas Meyer-Aurich   |
| 15:20                     | <b>Part I Digital Innovations to enhance agroecology</b><br>Technology Pitches (5' each)<br>- Precision agriculture<br>- Conservation agriculture<br>- Agro-silvo-pastoral systems<br>- Circular economy<br><br>- Biodiversity monitoring<br>- Digital innovation in Forestry | - Rafael Marques da Silva<br>- Gottlieb Basch<br>- Elvira Sales-Baptista<br>- Vasco Fitas da Cruz/Teresa Batista<br>- Rui Lourenço<br>- António Reis Pereira |
| 15:50                     | Introduction group work and set up  | Friederike Schwierz  |
|                           | <b>Part II</b><br>World Café  | All  |
| 17:05                     | Collection of results   | Group Moderators   |
| 17:20                     | End of Meeting  |  |
|                           |   |  |

