The Agroecology TPP

DIALOGUES

#1

11•07•2024
14-17 hrs
CEST

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DOING SCIENCE DIFFERENTLY

Background on Transdisciplinary Research

Transdisciplinary research[1] stands apart from disciplinary science in several ways, with at least five distinct characteristics that define its approach and impact. These characteristics shape how problems are identified, solutions are developed, and the overall effectiveness of the research.

1. Integration of disciplines

Unlike disciplinary research that defines problems from the perspective of a specific field (e.g. soil science, agronomy, water management, etc.), transdisciplinary agroecology adopts a more cross-disciplinary approach to understanding and tackling food system challenges.

2. Level of collaboration

Analogous to Arnstein's Leader of Citizen Participation (1969), transdisciplinary research can be structured along a hierarchy based on the intensity of engagement and collaboration among participants. This hierarchy follows this range: Informing (lowest level) • Consultation (second lowest-level) • Collaboration (mid-level) • Partnership (top-level).

3. Problem-solving orientation

The incorporation of relevant perspectives and the solution-oriented nature of transdisciplinary research contribute to its increased saliency, legitimacy, credibility, and effectiveness. Solutions derived from transdisciplinary projects should directly address real-world issues.

4. Innovation

By fostering creative thinking and collaboration across different fields, innovation enables the synthesis of new ideas and approaches that surpass the limitations of single-discipline research. The dynamic integration of knowledge and techniques sparks unique insights and technologies essential for tackling intricate challenges like climate change, global health crises, and sustainable development. Innovation not only propels scientific discovery but also amplifies the impact of transdisciplinary efforts in addressing pressing global issues.

5. Impact orientation

Transdisciplinary agroecology is inherently solution-oriented, and it distinguishes itself through an explicit normative focus. This means that the research is not just about understanding a problem but is actively oriented towards finding solutions to it.

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[1] **NOTE:** This is a background document in preparation for the Agroecology TPP's 1st Dialogue to be held on 11 July 2024. Its content will inform the discussions of the workshop but **is not meant for external distribution**. This material is a draft and subject to further revision from the outcomes of the Dialogue.

Indicator framework for assessing transdisciplinary agroecology

Generally, there is a lack of a holistic performance framework to assess agroecology in practice (Geck et al., 2023). The same is true for attempts to understand the degree of transdisciplinarity in a given research project or program. Hence, for understanding the depth of transdisciplinary research, a new set of indicators is essential. The following framework is a starting point for reflection on how the listed indicators provide a structure to assess the various facets of transdisciplinary projects.

Characteristics	Indicators
1. Integration of disciplines Assesses the degree to which various academic disciplines are effectively integrated within agroecological research. It looks at how different theoretical and methodological approaches from distinct fields are combined to provide a more comprehensive understanding of the research subject.	**a. Diversity of disciplinary contributions**: The variety and range of academic disciplines represented in the research. **b. Depth of interdisciplinary engagement**: The extent to which different disciplinary perspectives are deeply integrated in the research process. **c. Cross-disciplinary methodologies used**: The use of methodologies or approaches that are explicitly drawn from or adapted across various disciplines.
2. Collaboration level Focuses on the depth and breadth of collaboration among actors from different sectors during agroecology research. It evaluates how academics, practitioners, policymakers, and community members work together, their level of engagement, and the quality of interactions in the research process.	**a. Actor diversity**: The range of stakeholders involved (academics, practitioners, policymakers, community members). **b. Quality of interactions**: The extent to which collaborations are meaningful, inclusive, and mutually beneficial with shared power and responsibility. **c. Frequency and consistency of collaborative activities**: Regularity and consistency of interactions and collaborations among actors and stakeholders.
3. Problem-solving orientation Gauges the extent to which agroecology is oriented towards addressing real-world problems and developing practical, applicable solutions. It assesses the research's relevance to real-life issues and its potential to contribute to problem-solving in practical contexts.	**a. Relevance to real-world problems**: The extent to which the research addresses current and practical real-world issues decided in partnership with key actors. **b. Practical solutions proposed**: The number and feasibility of practical solutions generated by the research. **c. Adaptability of research findings**: The ability of research outcomes to be adapted to different contexts or issues.
4. Innovation Assesses the novelty of the research methods and approaches, especially those that go beyond the norms of traditional disciplines. It looks at how agroecology offers new perspectives, techniques, or methodologies to address the research questions.	**a. Novelty of research methods**: The degree to which new or unconventional research methods are employed. **b. Creative integration of knowledge**: The extent to which the research creatively synthesizes knowledge from different fields. **c. Pioneering approaches**: The presence of ground-breaking or trailblazing approaches in the research.
5. Impact and application Examines the tangible outcomes of agroecology in terms of its impact on policy, practice, and societal change. It considers how the findings have been applied or have the potential to be applied in real-world settings and the extent to which the research has influenced or could influence policy-making, industry practices, or societal norms.	**a. Policy influence**: The extent to which research influences or informs policy decisions and frameworks. **b. Practical implementation**: The degree to which research findings have been implemented in practical settings or contributed to practice changes. **c. Societal impact**: The measurable effects of the research on societal challenges, public awareness, or community development.

Source: Inspired by (OECD, 2020), further developed by the authors

References

Arnstein, S. A. (1969). A Ladder Of Citizen Participation. *Journal of the American Institute of Planners* **35**, 216-224.

Geck, M. S., Crossland, M., and Lamanna, C. (2023). Measuring agroecology and its performance: An overview and critical discussion of existing tools and approaches. *Outlook on Agriculture*.

OECD (2020). "Addressing societal challenges using transdisciplinary research." OECD, June 2020, Paris.