Agroecology and Safe Food System Transitions

Research Brief

HOW TO MEASURE AGROECOLOGY? A RAPID APPRAISAL APPROACH BASED ON FOCUS GROUP DISCUSSIONS

KEY TAKEAWAYS

Agroecology offers ample promise for transforming Asia's agri-food systems. A new, adaptable appraisal tool can effectively assess the progression of agroecology in the region, supporting policy design, donor engagement and local planning. By reconciling scientific rigor with local relevance, the tool provides actionable data that could strengthen top-down policy engagement and bottom-up community empowerment. It may also allow for a systematic tracking of the progression of agroecology. Optimally suited for the low-resource contexts of the Global South, this tool now waits to be integrated into national or regional monitoring frameworks where it can be smartly paired with remote sensing, targeted household surveys and Big Data approaches. Overall, the new tool could provide vital forward momentum for agroecology across the region.

In Southeast Asia, agroecology poses a promising solution to transform food systems in line with the Sustainable Development Goals (SDGs). Yet, practical tools to assess its actual on-the-ground adoption and impact, especially in the Global South, remain limited. Many of the existing approaches are either too time-consuming, costly or disconnected from realities on-the-ground. As a result, systematically collected data from local farming systems are often insufficient to inform policy and scale up agroecological practices. This study offers a valid alternative to resource intensive methods, by drawing upon focus group discussions (FGDs) with village committees and district extension agents.

SETTING THE STAGE

Originally founded in the ecological domain, agroecology has evolved into a broad, multidimensional concept that covers a range of social, economic and ecological principles. It is firmly anchored in a diverse sociotechnical framework that emphasizes local knowledge, co-creation, equity, and sustainability.

In Southeast Asia, agroecology could become a central component of sustainable, resilient food systems, but empirical evidence on its actual potential and advancement in local agri-food contexts is insufficient to effectively inform policy and practice. In particular, the practical assessment of progression in agroecology is methodologically challenging:

- Existing assessment tools range from quantitative monitoring to participatory impact evaluations, but they vary greatly in their intentions and contexts.
- Assessments require a careful balancing act between being locally relevant for action and the desire to generalize findings e.g., for policy-making over broader spatial or temporal scales.
- Time and monetary constraints hinder large-scale application of current procedures, especially in resource-poor contexts of the Global South.
- Qualitative and abstract agroecological principles, such as synergy, connectivity, fairness, participation and knowledge co-creation are notoriously difficult to observe or measure directly.

Given the above, an agroecology assessment tool that balances rigor, local specificity, and scalability under resource-limited contexts is urgently needed.

RESEARCH APPROACH

The study authors conducted focus group discussions (FGDs) in 16 villages in Xiengkhouang Province, Lao PDR, with the ultimate aim to develop a rapid, participatory appraisal tool. They translated the 13 principles of agroecology from the High-Level Panel of Experts (HLPE) into 21 locally contextualized indicators. These indicators were grouped under four potential "entry points for transformative action":

1. Land Use and Governance
2. Farm Management
3. Social Interactions
4. Socio-economic Situation

Two different FDG formats were tested either with village committees or district-level extension agents. The participants assessed the intensity of agroecology principles under the local context using a structured set of questions, rating various indicators with accompanying justifications. This allowed for iterative improvements of the method and permitted a gradual finetuning of the exact formulation or order of questions and an improvement of time management, amongst others.

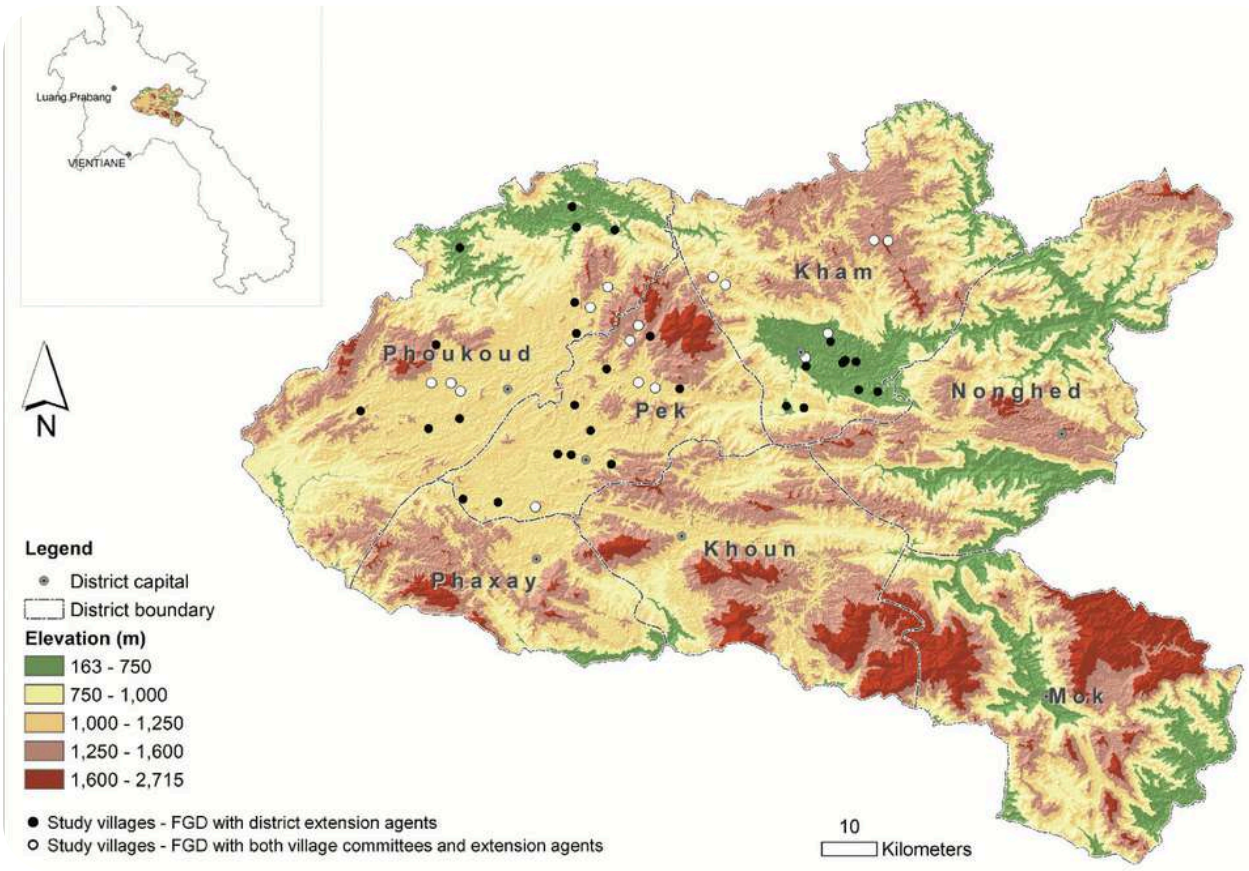
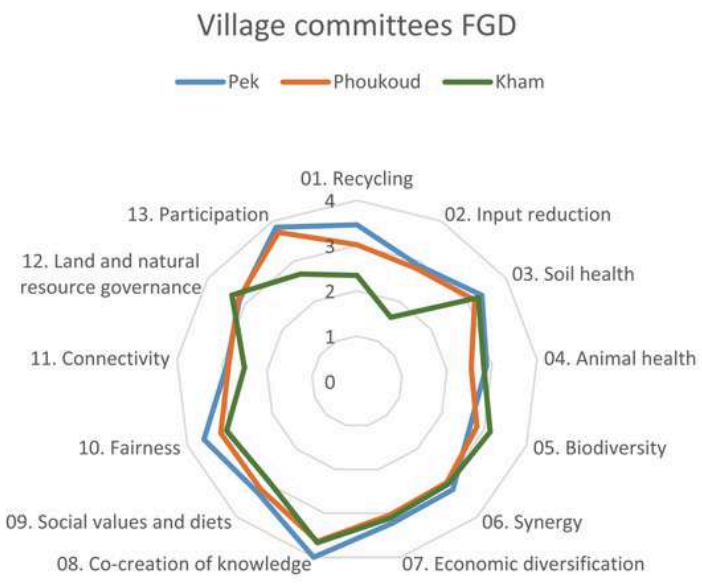


Figure 1: *Map of Xiengkhouang Province with study site locations.*

CORE FINDINGS

Implementation of the participatory appraisal tool in the 16 Lao villages yielded the following insights:

- Villagers generally found themselves at an intermediate level of agroecological transition. Across samples, a diversity of practices, farming systems, and local community engagement was observed.
- Comparable results emerged across both village- and district-level FGDs, confirming the reliability and validity of the new assessment method.
- FGDs effectively captured a wide range of local knowledge and perceptions in a short period and at minimal cost, underlining their substantial scalability under low-resource contexts.
- The tool identified entry points for transformative action in diverse settings e.g., through improving land governance or enhancing social cohesion.



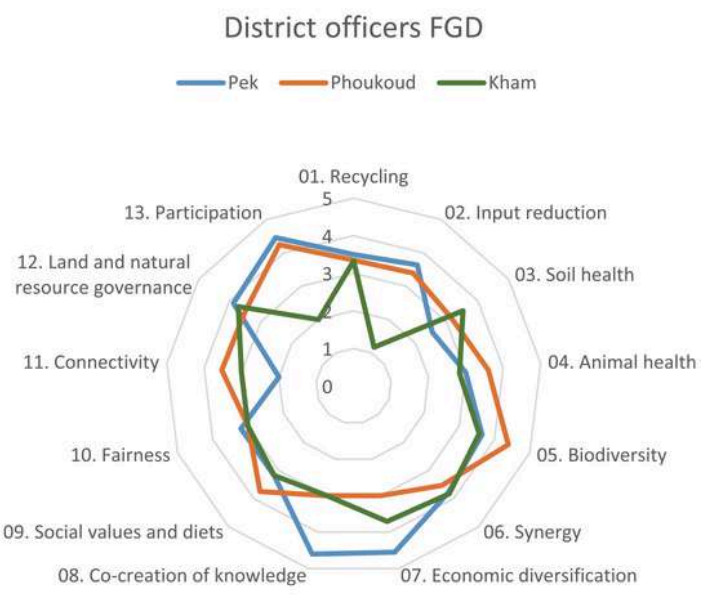


Figure 2: *Agroecology scores along the 13 HLPE principles of agroecology. Upper panel: 16 villages of Pek, Phoukoud and Kham districts assessed through focus group discussions with village committees. Lower panel: 45 villages assessed through focus group discussions with district extension officers. The average village scores in each district are presented using a range from 1 to 4 from low to high level of alignment with agroecology principles*

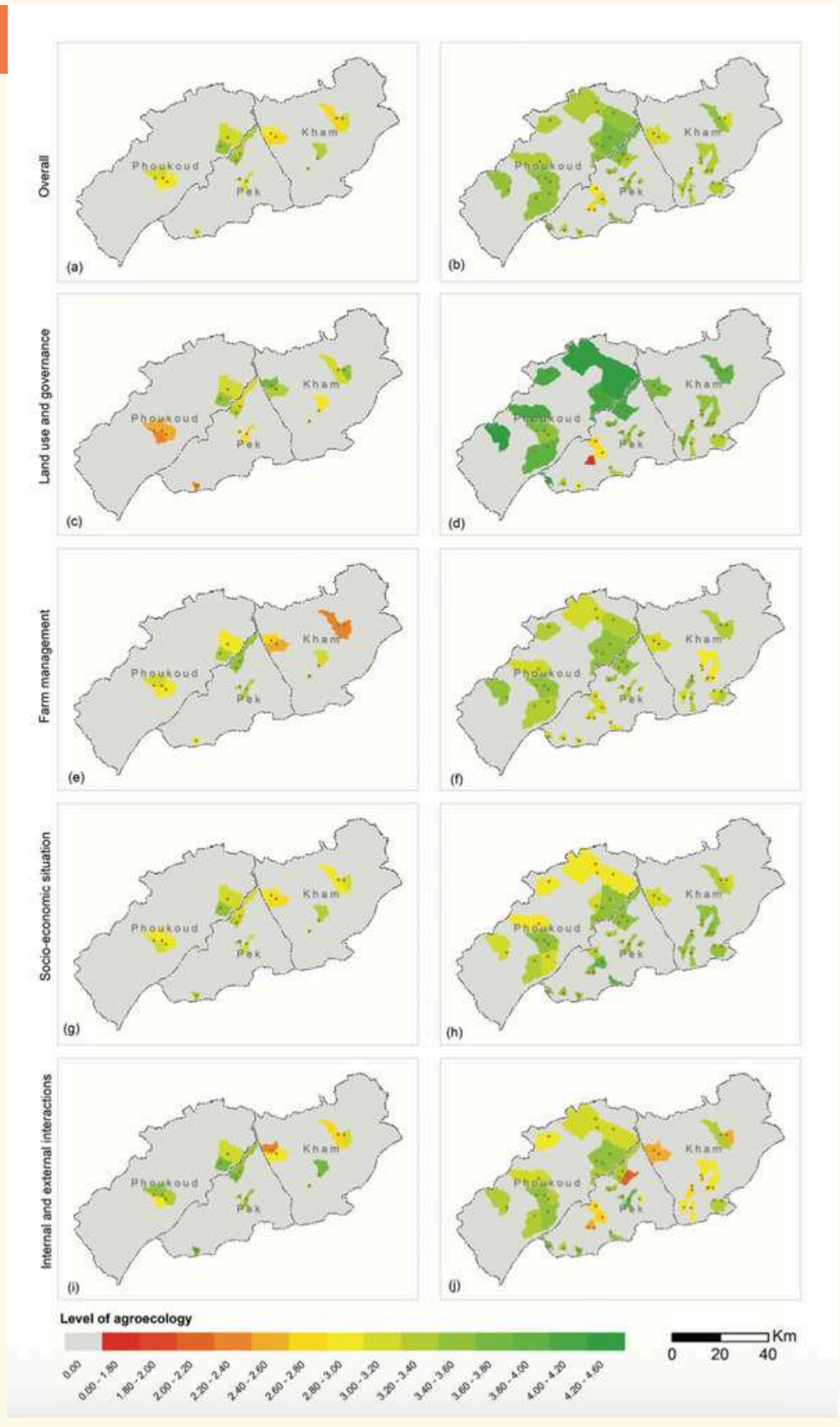
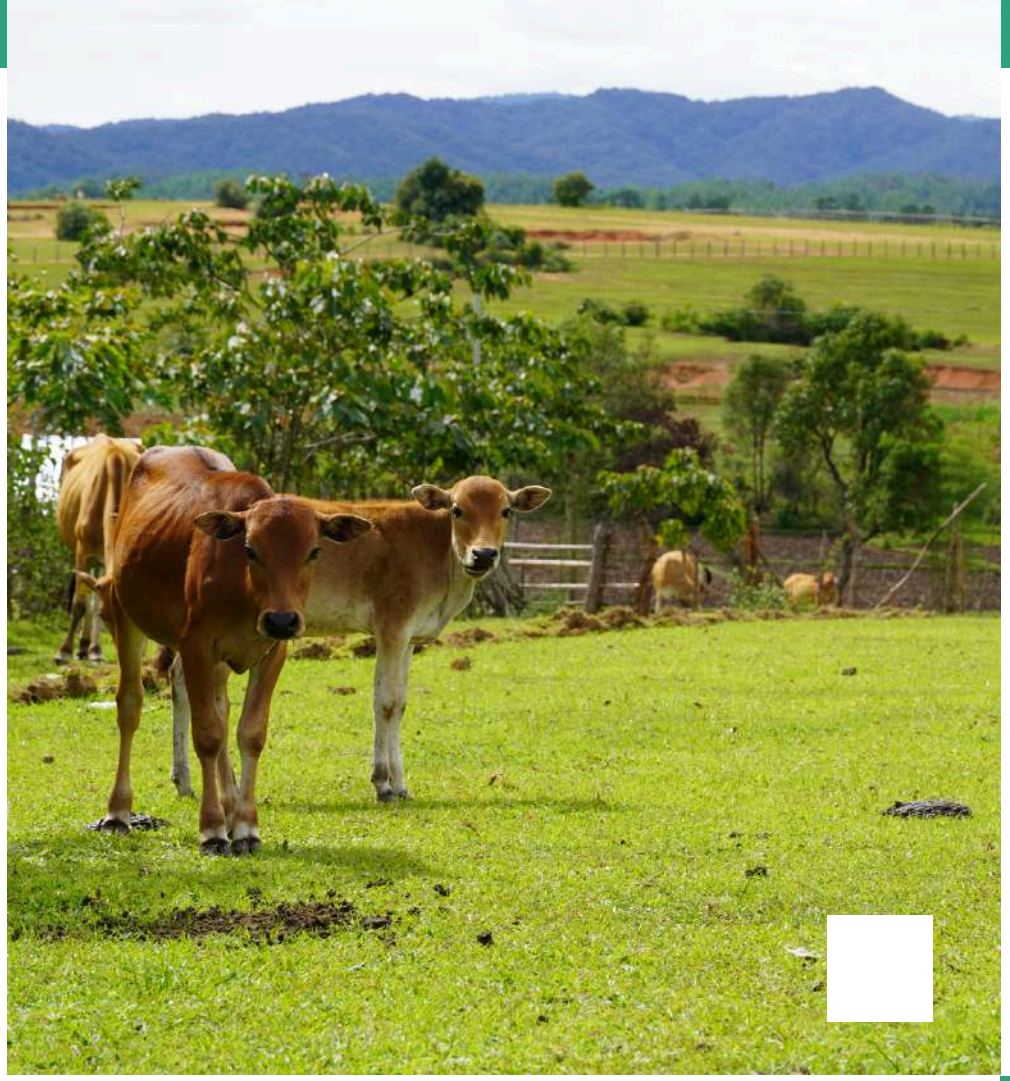


Figure 3: Mapping agroecology scores in three districts of Pek, Phoukoud and Kham. Maps (a), (c), (e), (g), and (i): results from focus group discussions with village committees (16 villages). Maps (b), (d), (f), (h), and (j): results from focus group discussions with district extension officers (45 villages).



KEY ADVANTAGES

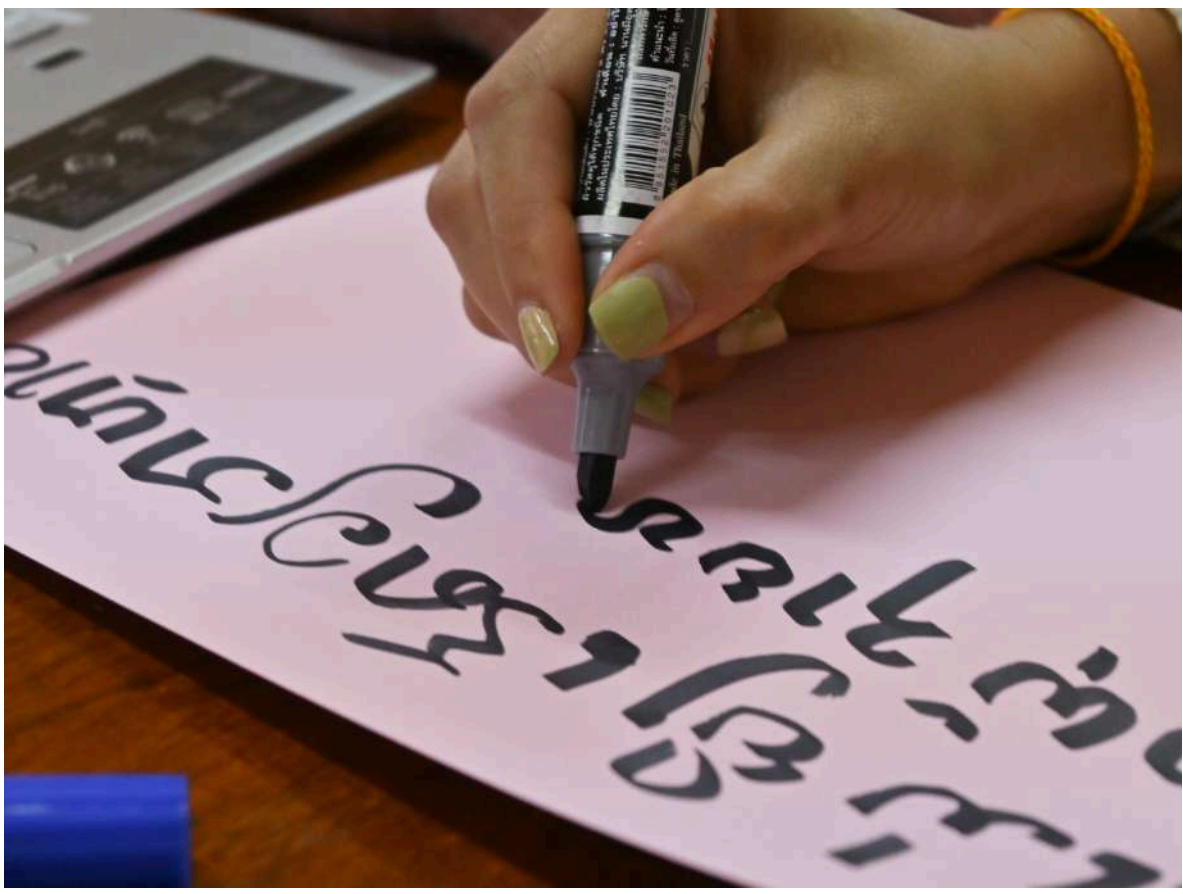
FGD-based approaches thus posed a promising alternative to current agroecological assessment methods such as household surveys. They offered clear advantages in the following domains:

- **Time and cost efficiency:** The new assessment method yielded valid, actionable insights at minimal resource expenditures.
- **Community engagement:** The method promoted ownership and knowledge co-production i.e., elements that are critical for legitimacy and local buy-in.
- **Adaptability:** The tool could easily be adapted to local contexts, which is essential for diverse settings like those found in Xiengkhouang Province.
- **Scalability:** The method potentially can be used in provincial or national assessments when tactically integrated with remote sensing or larger datasets.

KEY CHALLENGES

Meanwhile, the appraisal tool also presented notable challenges:

- **Normative framework bias:** Global principles had to be carefully translated into locally understandable terms especially for aspects that required a finder understanding e.g., farm management or household-level decision-making.
- **Insensitive to intra-village diversity:** Aggregated scores sometimes masked significant variations within communities.
- **Difficulties to reach consensus:** Participants sometimes found it difficult to reach agreement on complex concepts like equity or participation.
- **Challenging data interpretation:** FGD-derived ratings had to be supported by confidence indices and facilitator notes to avoid misinterpretation.



IMPLICATIONS OF THE FINDINGS

The rapid, participatory appraisal tool, centered on FGDs provides actionable data that may be useful for policy advocacy and support. It can empower local actors, enhancing the legitimacy and ownerships of different stakeholders that are involved in the agroecological transition. The tool also allows for a mapping of the agroecology status or tracking related trends over time or space, with an efficient use of human and financial resources. It thereby poses critical in guiding adaptive management and long-term planning.

Yet, the following elements are to be carefully considered:

- Indicators need to be carefully localized; their relevance and practicality for a target research area should be properly evaluated during the design stage.
- Mixed methods balance resource use and usefulness of results. While FGDs offer speed and breadth, deeper household-level surveys can capture fine-grained insights. Meanwhile, remote sensing and spatial analysis carry value for agroecology assessment over larger territories.
- Regardless of attendance biases, a good preparation of meetings helps to minimize their impacts on the quality of the rating.
- While the averaging of data creates the impression of homogeneous practices at the village level, intra-village variations should be recognized, valorized and actively leveraged instead of being dismissed as noise.
- Training facilitators is crucial to success: Well-trained facilitators will play a central role in guiding discussions and interpreting results accurately.

RESOURCE

This research brief is a summary of:

How to measure agroecology? A rapid appraisal approach based on focus group discussions

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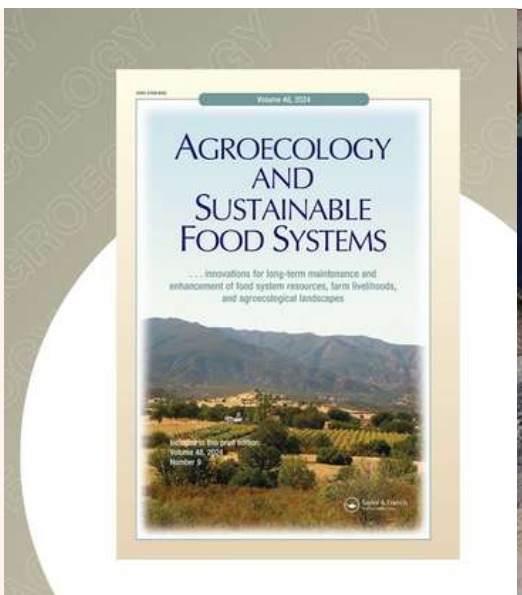

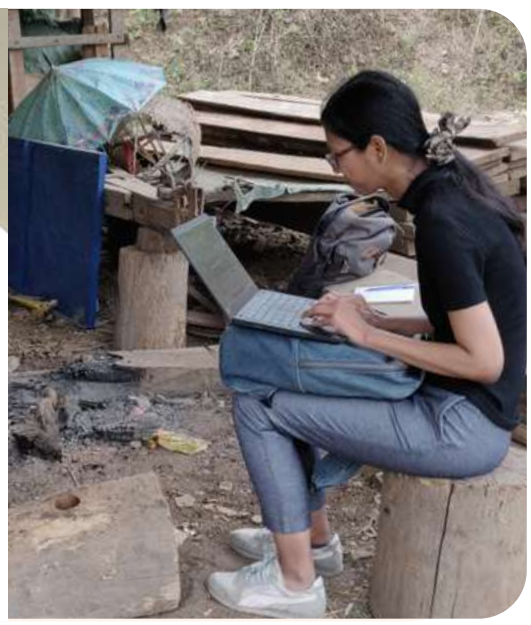

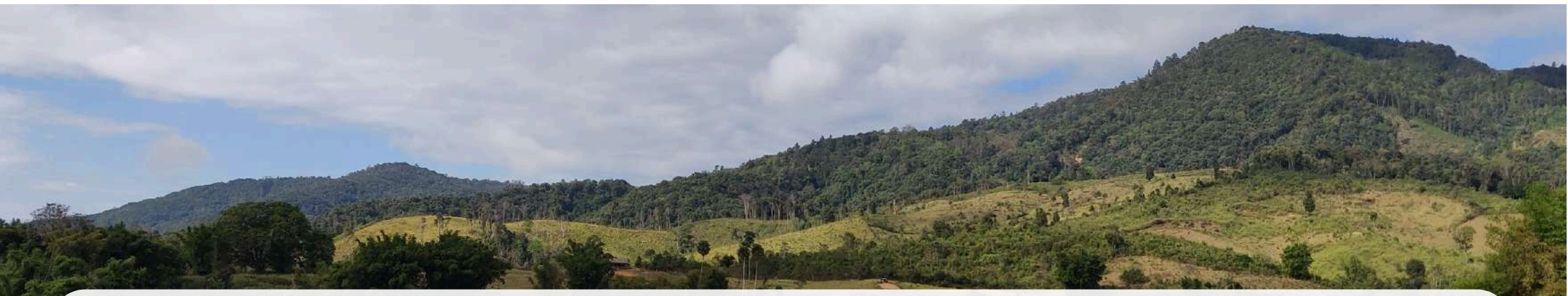

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