



Agroecological transitions towards healthier food systems in Southeast Asia (ASSET)

Agricultural production systems in Southeast Asia are increasingly shifting towards conventional models that rely on chemical inputs and capital investment, with intensive, specialised monocultures adopting the principles of the Green Revolution, such as the use of high-dose fertilisers, improved varieties, and GMOs for certain crops, as well as the use of insecticides and artificial insemination. Although these models increase production, they also lead to soil degradation, a decline in biodiversity, water scarcity, and increased health risks. In response to these challenges, innovative agroecological systems are emerging to reconcile agricultural production, environmental conservation and long-term sustainability.

General presentation of the project



General objective

The Agroecology and Safe Food System Transitions (ASSET) project aims to harness the potential of agroecology to support the transition of agrifood systems in Southeast Asia, by creating synergies between local and regional initiatives (ASEAN)¹.



Intervention strategy

The project builds on the results of the Support to agroecological transition in South-east Asia (ACTAE) initiative, which was implemented in the same four countries from 2015 to 2019. It supports the interventions already launched in favour of agroecological transition through pilot projects and aims to extend this transition on a larger scale through an integrated approach. The project is structured around two operational components:

- Stakeholder engagement, focusing on the impact assessment of agroecological and healthy food system transitions, involving the relevant stakeholders.
- Scaling up innovations in agroecology and healthy food systems from local to regional levels.



Expected results

- R1. The Agroecology Learning Alliance in South-East Asia (ALiSEA) network, which brings together NGOs, the private sector, researchers and peasant farmers' organisations around agroecology, is strengthened and gains recognition at regional level.
- R2. ALiSEA evolves into a resource and knowledge hub at aligning stakeholder engagement and initiatives, with the objective of implementing ASSET at the regional level.
- R3. A communication and capacity-building strategy is developed to reach a broad audience, including consumers and citizens in the process.



Partners

GRET with the scientific coordination provided by CIRAD. It brings together 27 partners and is part of the DeSIRA² initiative.



Timescale

72 months (2019–2025).



Budget

EUR 12 million, of which EUR 7 million financed by the European Union and EUR 5 million by the French Development Agency.



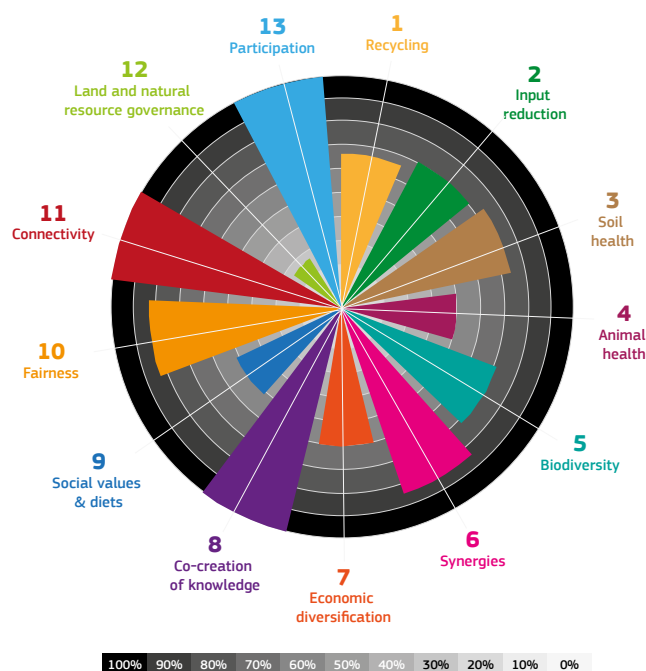
Intervention area



2 The DESIRA (Development Smart Innovation through Research in Agriculture) initiative is led by DG INTPA and aims to foster innovation in agriculture and the transformation of partner countries' food systems to make them more resilient to the effects of climate change.

1 <https://www.cirad.fr/les-actualites-du-cirad/news/2020/science/asset-systemes-agroalimentaires-durables-en-asie-du-sud-est>

Agroecological classification of the project according to the 13 principles of the HLPE



1 Recycling

The project is based on the principle of closing biomass and water cycles, promoting the adoption of integrated agricultural practices. It encourages the use of biointensive production methods that optimise resources and promote recycling, with the aim of strengthening farmers' self-reliance, reducing investment costs, and limiting sources of pollution. The project promotes the use of alternative soil amendments, such as manure and compost, to enhance soil fertility and support agricultural production. It also encourages the cultivation of cover crops which, through decomposition, contribute to soil improvement. Agricultural residues are recycled as mulch for crop land, and these biomass recycling practices help increase soil carbon stocks. In addition, the project promotes the recycling of waste water as part of its integrated farming approach. However, it does not appear to promote the recycling of other agricultural by-products for purposes such as bioenergy or timber-based construction.

2 Input reduction

An essential characteristic of the project is its commitment to reducing the use of agrochemical inputs. It aims to promote a genuine agroecological transition of agricultural and food systems, thus offering an alternative to the Green Revolution production model that has been widely adopted across the region since the 1990s (characterised by the intensive use of fertilisers, improved varieties and GMOs, insecticides, and artificial insemination). The project identifies environmental pollution caused by agrochemicals produced from this production model, as well as the preservation of farmers' living conditions threatened by pollution and the expansion of large rubber or eucalyptus plantations as key challenges. The project clearly aims to reduce the use of these agrochemicals

and water, implement practices adapted to the effects of climate change, and produce healthy, high-quality food while maintaining a high level of productivity. Although the reduction of post-harvest losses and the optimisation of seeds are not specifically mentioned, they are nevertheless in the spirit of the project.

3 Soil health

The project aims to improve soil health by promoting soil conservation practices. It supports innovations related to conservation agriculture, which involves practices such as no-till farming, permanent soil cover, and crop association. These practices help maintain good soil structure (reducing erosion), adequate water retention capacity (making water available to plants), and sufficient nutrient levels (ensuring fertility), in order to restore the soil's ecological functions. The project also promotes the agroecological protection of crops by controlling pests and diseases through biological and biophysical methods, which maintains productivity while reducing the use of pesticides. In addition, it encourages organic farming systems to preserve the health of soils, ecosystems, and people.

4 Animal health

The project supports animal health by adopting an integrated approach. Among the six research areas covered by the project, one—entitled “One Health”—advocates the systemic and integrated management of animal, plant, human, and environmental health. Within this framework, the project is developing tools such as observatories and indicators to assess animal health and well-being, among other dimensions. However, it does not appear to include the introduction of new varieties of domesticated honeybees to promote pollination.

5 Biodiversity

The project is strongly committed to the preservation and restoration of biodiversity in seeds, species, and landscapes. It recognises that biodiversity loss, driven by the homogenisation of agricultural practices and landscapes, is a key issue that must be addressed. To this end, the project aims to strengthen agrobiodiversity at different scales: at the plot level (through seed diversification and the valorisation of local species), at the farm level (through crop diversification), and at the landscape level (through the reorganisation of production systems). Its objective is to maximise the use of genetic resources and ecosystem services available through biodiversity, while supporting the ecological restoration of degraded systems into more diversified ones. The project also encourages crop rotation and promotes healthy and diverse diets, in connection with a variety of environmentally respectful agricultural production systems.

6 Synergies

The project strengthens synergies between the different biological components of production systems, both at farm and landscape level. At the farm level, the project encourages agroforestry by promoting the planting of trees in farming and

livestock systems, as well as the cultivation of fodder under trees. It also supports mixed crop-livestock systems and the System of rice intensification (SRI), which increase productivity by enhancing agroecosystem services. At landscape level, the project is committed to the preservation of forest areas and reforestation actions. These diversified practices help maintain and diversify production, offering environmental, social, and economic benefits, while promoting carbon sequestration in the soils. Finally, the project strengthens the adaptive capacities of producers and agroecosystems in response to climate change, with an emphasis on research in this area.

7 Economic diversification

The project actively supports the economic diversification of producers. By encouraging the diversification of production systems at the farm level, it creates opportunities to diversify livelihoods and increase incomes. In addition, the project seeks to integrate and add value to products derived from these agroecological practices within markets, although market development remains less advanced than support to production systems. It also supports job creation and strengthens the entrepreneurial capacities of small-scale farmers. Furthermore, it conducts action-research on technical, organisational, and institutional innovations related to value chains and territorial development in key pilot sites.

8 Co-creation of knowledge

Co-creation of knowledge is a fundamental principle of the project. A community of practice on communication has been established by the APAARI³ association, bringing together the focal points from the 27 partner organisations to discuss outreach activities, thus ensuring effective visibility of ASSET and its results to external audiences. In addition, the orientations proposed by the ALiSEA platform are developed in a participatory manner, drawing on evidence of agroecological system performance and on farmers' empirical assessments, which allows for a deep understanding and a shared vision of the transitions to be undertaken. The project aims to evolve ALiSEA into a knowledge platform that capitalises, mutualises, and shares the knowledge and evidence associated with these transitions. This promotes a common and broader understanding of concepts, practices, innovations, as well as improved implementation of agroecological principles. Moreover, this allows for the dissemination of information to a broader audience, including decision-makers, farmers, and development practitioners. Thanks to ALiSEA, stakeholders engage with and learn from each other about the agroecological transition, thereby contributing to the increased visibility of agroecology.

³ Asia-Pacific Association of Agricultural Research Institutions - Project member association and leader of a sub-component

9 Social values & diets

The project integrates social values and respects diets adapted to local contexts and traditions. It reinforces the governance of the ALiSEA platform through a bottom-up approach by organising consultation meetings in each country to elect a steering committee responsible for defining the national strategy and the corresponding action plan. This approach allows for the integration of the cultural and dietary specificities unique to each context and tradition, within a regional dynamic.

10 Fairness

The project is committed to promoting fairness by seeking to transform systems to make them more inclusive. Gender balance is consistently sought in the support provided to ALiSEA's governance. Moreover, the project raises awareness and builds capacities to foster the inclusion of women and young people. The evaluation of the project's performance incorporates criteria of equity and dignity, such as gender, health, and farmers' livelihoods. The project also supports the development of a financial plan to ensure the sustainability of ALiSEA. The results generated by the project aim to raise awareness and increase stakeholders' understanding of the importance of agroecology in promoting food sovereignty, social well-being, climate change adaptation, and economic development.



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11 Connectivity

The project is strongly committed to the principle of connectivity. ALiSEA, largely supported by the project, is a regional platform dedicated to agroecology that brings together a wide range of actors such as farmers' organizations, research institutes, NGOs, governments, private sector actors, etc., in the Mekong region. Moreover, the project aims to strengthen the links between producers and consumers to meet citizens' demand for healthy and environmentally friendly food products, while also promoting the local economy. This requires strengthening the entrepreneurial skills of producers and raising consumer awareness of the benefits of integrating agroecological food systems into local markets, particularly through mass media, social networks, newspapers, etc.

13 Participation

The project places strong emphasis on inclusive participation, contributing to policy development by building on innovative, farmer-led experiences. Dialogues are held at local, national, and regional levels to share knowledge derived from action research focused on innovative farming practices. The objective is to integrate these findings into new policies, thereby bringing about significant institutional and political change. The project is also linked to initiatives such as FAO's Scaling up Agroecology and the Global Knowledge Product, both of which support the development of new policies. Additionally, the project strengthens the advocacy and policy engagement capacities of ALiSEA members and stakeholders to promote agroecology and influence public policy.

12 Land and natural resource governance

The project shows limited commitment to the principle of governance. However, it promotes discussion of results, evidence, and impacts across all levels of involvement, following a bottom-up approach through policy dialogues. These discussions take place at the local level, within pilot sites; at the national level, through working groups associated with ALiSEA; and at the regional level, through intergovernmental initiatives linked to ASEAN. These dialogues focus on agroecological initiatives, covering aspects such as the assessment of household economy, food quality, natural resource preservation, and the evaluation of greenhouse gas emissions.

SUCCESS FACTORS/CHALLENGES

- + The project operates at multiple levels (local, national, regional) by adopting a bottom-up and participatory approach, where territories and countries contribute to defining the practices to be promoted and influence policies. Support for platforms committed to agroecology facilitates this approach and strengthens analysis and understanding.
- + The project adopts an integrated approach by combining its interventions along the three pillars: technical-economic (agricultural and market practices), political (advocacy for public policies) and societal (citizen awareness-raising).
- The project does not take vulnerability into account when targeting the groups and individuals it supports.
- The project offers limited support for processing, storage, and access to market.