

Climate-smart, Tree-based, Co-investment in Adaptation and Mitigation in Asia (Smart Tree-Invest)



A farmer in Buol, Central Sulawesi, Indonesia, admiring a cacao flower.

GRANT RESULTS SHEET

Climate-smart, tree-based agriculture can strengthen smallholders' adaptive capacity to climate and socio-economic changes by improving livelihoods and preserving the environment.



Introduction

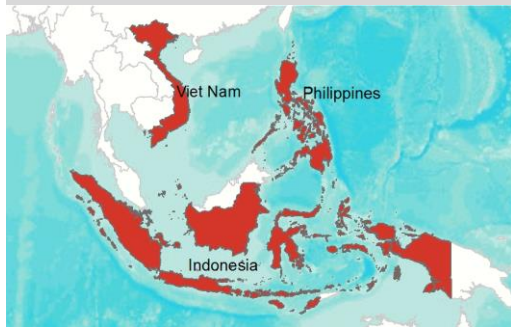
Owing to their vulnerability weak adaptive capacity, smallholder farmers in the Asia and the Pacific region are exposed to climate change, environmental and socio-economic shocks. Agricultural land is projected to expand by no more than 12 per cent globally but will need to increase overall food production by 70 per cent. Existing intensification methods to increase yields have generally depleted environmental resources. Climate-smart, tree-based agriculture can simultaneously strengthen smallholders' adaptive capacity and promote mitigation actions, by intensifying agricultural production while preserving the environment. A diverse range of tree species under agroforestry practices is usually found in agricultural landscapes that provides multiple economic and environmental benefits. The grant mainstreamed climate-smart, tree-based agricultural good practices into the climate adaptation and mitigation programmes of governments, NGOs and the private sector in Indonesia, the Philippines and Viet Nam.

Goals and objectives

The goal of the programme was to improve the livelihoods and resilience of smallholder farmers through the promotion of climate-smart, tree-based agriculture. Specific objectives included: (i) assess climate change vulnerability of farmers and identify solutions to reduce vulnerability; (ii) enable local communities to devise climate-smart, tree-based adaptation best practices; and (iii) integrate gender-responsive, culture-sensitive climate change mitigation and adaptation actions into policies and programmes.

Beneficiaries

Direct beneficiaries included about 400 smallholders (one-third of them women) in less productive environments who were vulnerable to environmental degradation and climate change. Additional beneficiaries included about 250 farmers who were



Facts at a glance

Grant implementing agency

World Agroforestry Centre (ICRAF)

Theme

Co-investment for ecosystem services

Benefiting countries

Indonesia, Philippines and Viet Nam

Programme cost

IFAD: US\$1.5 million

ICRAF: US\$750,000

Effectiveness and duration

2014-2017

Linkages to IFAD investment project

Rural Empowerment and Agriculture Development in Central Sulawesi – READ (Indonesia)

Integrated Natural Resources and Environmental Management Programme – INREMP (Philippines)

Sustainable Rural Development for the Poor Project in Ha Tinh and Quang Binh Provinces – SRDP (Viet Nam)

involved in replication through co-investment with local partners, and policymakers.

Main activities

The programme had three main components:

Gender-sensitive assessment of vulnerability and adaptation and mitigation capacity. Participatory assessments of farmers' vulnerability (in terms of their exposure, sensitivity and adaptive capacity) as well as a series of ecological and socio-economic assessments were conducted on the role of landscapes in providing ecological, social and economic buffers against various shocks. Cluster profiles of targeted sites were also developed through gender-disaggregated analysis and by taking into account the cultural and socio-economic context. The project also used innovative PhotoVoice methods to assess farmers' knowledge, including: agricultural conditions due to climatic changes; ecological, political and socio-economic threats; and their livelihood potentials to overcome such threats.

Co-investment in provision of ecosystem services. Through the landscape vulnerability assessments, integrated by both shock, exposure, response and impact analysis and SWOT analysis, communities were able to identify local solutions on how to cope with climate-change risks, reduce vulnerability, and benefit from mitigation actions. Pilots on "co-investment in ecosystem services" schemes were established by capturing incentives from private and public funds. District and provincial multi-stakeholder working groups were established in all countries to support the pilots at the village level, and to ensure replication

Co-investment of vs payment for ecosystem services

Co-investment in ecosystem services represents an evolution from the approach of payment for ecosystem services (PES). PES treats ecosystem services as a commodity, emphasizes market transactions between ecosystem service suppliers and beneficiaries, and is therefore bound to a strict yet infeasible contract as ecosystem services are not easily quantified and directly produced by conservation efforts. Co-investment envisages that parties interested in a particular landscape become involved in and contribute to schemes by jointly investing both financially and in kind. It involves a longer-term engagement and greater awareness of the importance of ecosystem services at the community level. Once the prerequisite of co-investment has been built, market-based transactions may develop with a strong emphasis on pro-poor and fair processes.

and upscaling after the project ended. The project also carried out preparatory activities (capacity building, awareness raising, and negotiations) for stakeholders to co-invest in agroforestry-based ecosystem services and for mainstreaming the co-investment approach in policies and programmes.

Mitigation and adaptation strategies for the public and private sectors at the local and national levels. The project facilitated various regional and local events, and established working groups to gather all stakeholders, share lessons, forge linkages with IFAD investment projects, and mainstream the programme approach into policies and programmes. The Smart Tree-Invest team also facilitated development by local stakeholders of local co-investment plans and business cases.

The programme enhanced local capacity to implement co-investment ecosystem service schemes while mainstreaming this approach into policies and programmes.

Main results

Enhanced capacity of policymakers and local communities to adopt climate-smart, tree-based adaptation strategies. At the targeted sites, beneficiaries now have a better understanding of climate-smart, tree-based adaptation strategies to manage climate risks. They are able to recognize agroforestry models suitable to their local conditions, recognize and to some extent measure environmental impacts, understand better their landscapes, and connect with external agents for ecosystem service co-investment and agricultural development. Policymakers have learned how to promote better climate-smart, tree-based policies and integrate them into their development planning agenda.

Co-investment in ecosystem schemes prepared. Several schemes were developed, namely: tree-farm management learning group, participatory watershed monitoring, and tree growth monitoring (Indonesia); adoption of agroforestry in highly commercial monocropping land (the Philippines); and agroforestry-based and mixed cropping home garden and degraded sloping-land improvement with a climate-smart agriculture approach (Viet Nam). The schemes used local seedlings, re-introduced native commodities, and created market opportunities for smallholders, while addressing environmental threats.

Co-investment approach mainstreamed in policy processes and programmes. In Indonesia, the programme was instrumental in establishing a watershed working group in Buol District, Central Sulawesi, consisting of various government officers, in line with National Government Regulation 37/2012 requiring each district to establish a multisectoral forum to coordinate watershed conservation. The working group championed the adoption of the Smart Tree-Invest approach in the district development plan in 2017 and, together with an oil palm company, is involved in the co-investment of a scheme for smallholder tree farming and watershed monitoring. In addition, the programme advocated that the local government of Buol promote co-investment activities through the Village Fund. About 90 female and male smallholders have been involved in such co-investment activities since the project finished.

In the Philippines, the Mindanao Development Authority set up co-investment schemes cofinanced by private-sector companies. The programme was also able to revive the Manupali Watershed Payment for Ecosystem Services Working Group established during the IFAD-funded Rewarding the Upland Poor for Ecosystem Services programme, which had been inactive for two years. The programme was also successful in drafting the national administrative order to institutionalize implementation of payment for ecosystem services (PES) in the country. At the end of the project, the draft was under review at the Office of the President.

In Viet Nam, the grant collaborated with the Project Advisory Group in Ha Tinh and Quang Binh Provinces, which consisted of various government representatives. The Project Advisory Group helped to design co-investment activities that were integrated into the existing climate-smart agriculture policies and programmes. In addition, the project initiated collaboration between district authorities, the IFAD-funded Sustainable Rural Development for the Poor Project implemented in the

Partner

World Agroforestry Centre
(ICRAF)

Partner contact

Dr. Beria Leimona
Lead of Cluster of Activities
Adaptive Landscape Institutions
– the CGIAR Research Program
on Forests, Trees and
Agroforestry
World Agroforestry Centre
Email: L.Beria@cgiar.org

IFAD contact

Fabrizio Bresciani
Regional Economist
IFAD, Rome, Italy
Email: f.bresciani@ifad.org



International Fund for Agricultural Development
Via Paolo di Dono, 44 - 00142 Rome, Italy
Tel: +39 06 54591 - Fax: +39 06 5043463
Email: ifad@ifad.org
www.ifad.org

 ifad-un.blogspot.com
 www.facebook.com/ifad
 instagram.com/ifadnews
 www.twitter.com/ifadnews
 www.youtube.com/user/ifadTV

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two provinces, and tree-seedling companies to support smallholders in enriching their home gardens with productive trees, crops and grass. Under the scheme, the companies provide seedlings and buy the harvested fruit from the farmers. The local Department of Agriculture and Rural Development and the commune people's committees of the two provinces adopted the approach into their regulation as an example of climate-smart agricultural practice. Project experience in supporting co-investment in ecosystem services was also an input to improve the existing national PES policy under the National Forest Protection and Development Law, which is currently under review.

Lessons learned

The understanding of the local socio-economic, cultural and policy systems is a prerequisite for designing co-investment activities.

Securing multi-stakeholder support is essential to ensure the success of the scientific component and action research of the programme.

Capacity building of relevant stakeholders should be prioritized as they will be the people adopting, mainstreaming and scaling up the approach after project completion.

Developing co-investments in ecosystem schemes takes time, but its innovation will ensure smallholders' independence in practising sustainable agriculture

Knowledge generated/disseminated

The programme has developed several knowledge, communication and advocacy products that are available through the IFAD Asia portal.

A number of innovative tools developed by the World Agroforestry Centre were applied and replicated, including: (i) the Capacity Strengthening Approach to Vulnerability Assessment (CaSAVA) tool, which integrates "scientific" methodologies for landscape and community assessments with more qualitative, participatory approaches; (ii) the GenRiver ecological model to simulate watershed conditions and predict the impact of land-use changes using different scenarios and participatory approaches; and (iii) the Forest, Agroforest, Low-value Lands ecological model to simulate various land-use policy scenarios and predict the policy impacts on carbon stocks, watershed functions and smallholders' profitability. Combined, these tools enable detailed analysis of land-use policies and provide basic information for business cases, opening the way for the design and negotiation of incentive mechanisms at the landscape level.