



PROMOTING CLIMATE SENSITIVE INNOVATIONS IN THE MEKONG DELTA THROUGH DIVERSIFIED PUBLIC-PRIVATE PARTNERSHIP

| 7

In Vietnam, the Adaptation in the Mekong Delta (AMD) project promoted climate sensitive innovations along the salinity gradient, documenting and testing innovative practices in partnership with research, local government institutions, farmer organizations, and the private sector. This resulted in the identification of 130 locally relevant innovations for three agro-ecological salinity zones that provided a ground for replication guidelines and training of pluralistic extension systems, including government extension, lead farmers and public-private partnership. Additionally, the project supported integration of climate change and disaster preparedness in various existing policy planning processes at the local level, including disaster preparedness, value chain action plans and provincial socio-economic development plans (SEDP) that included climate smart innovations as well.

In this Good Practice Note, Marie-Aude Even, Francisco Pichon, Nguyen Thanh Tung and Nguyen Ngoc Quang reflect on the lessons learnt from this project. The authors highlight the importance of mainstreaming climate sensitive innovations into local planning processes and extension systems, investing in capacity development of local government organizations, mass organizations and groups. This is for fostering partnership with both rural financing institutions and value chain partners, thereby addressing not only the need to consider climate specific contexts but also the special needs and investment capacities of targeted smallholder farmers whilst promoting climate smart models.

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Cover photo: A pest monitoring station established by the AMD in Tra Vinh province © AMD

CONTEXT

In the Mekong Delta, groundwater scarcity, saline water intrusion, more frequent storms, flooding and intense droughts negatively impact agricultural production, notably rice, which is the main livelihood means of farmers in the Delta. Many smallholders need to switch to alternative livelihoods but lack access to adapted infrastructure, climate sensitive planning and practices, finance and market incentives. As a result, 70 percent of the local population is considered vulnerable to such shocks, which dramatically reduce food production and agricultural income and can bring the most vulnerable back into poverty. To address this, the Adaptation

to Climate Change in the Mekong Delta (AMD) project invested USD 49.4 million between 2014 and 2020 in 60 communes in 15 districts of Ben Tre and Tra Vinh provinces. Its objective was to 'strengthen the adaptive capacity and resilience of target communities and institutions to better contend with climate change'.

The project had two components to achieve that. Component 1 focused on strengthening the enabling environment by supporting climate resilient community planning, salinity monitoring and alert systems, participatory research and extension material to promote climate resilient and salinity adapted agricultural practices. Component 2 provided various lines of investments to facilitate public-private partnership and co-investments so as to implement the plans under Component.



Bio-mulch for crop (chili) cultivation © AMD

STRATEGY AND IMPLEMENTATION APPROACH

The first important pillar of the AMD approach involved building evidence and knowledge at the local level for improving climate resilient participatory planning and policy formulation (Figure 1).

- First, the project supported integration of climate change and disaster preparedness in various existing policy planning processes at the local level, including disaster preparedness, value chain action plans and provincial socio-economic development plans (SEDP).
- Second, the project invested in a salinity monitoring and alert system to facilitate adaptive planning and interventions at different levels.
- Third, it supported ambitious participatory action research to inform such planning with evidence-based interventions to identify and test indigenous and new climate smart farming systems adapted to salinity gradients and suitable for large-scale adoption by poor and near-poor farmers.
 - To ensure wider adoption, proven technologies are then documented in detailed replication plans and guidelines and the provincial Departments of Agriculture and Rural Development (DARD) facilitate their integration into the value chain action plan (VCAP) and SEDP. Such guidelines also form the base for training pluralistic extension systems including:
 - enterprise-to-farmer training implemented by lead enterprise (within value chain partnership);
 - 293 lead farmers integrated in Farmer Union (FU); and
 - 23 agricultural service groups established and supported to provide fee-based services.

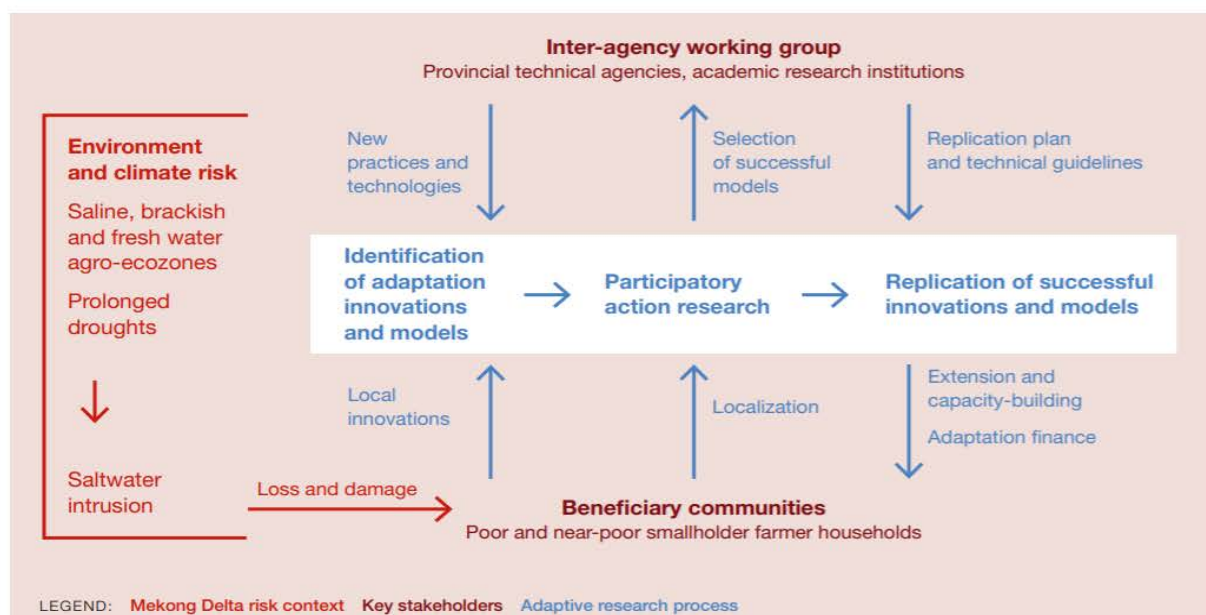


Figure 1: AMD Project Approach

The second component incentivized public-private investment so as to implement the proposed climate resilient plans through four dedicated windows, namely:

- Women Development Fund (WDF);
- Climate Change Adaptation Fund;
- Public Private Partnership Fund; and

- Community Infrastructure Investment Fund (CIF).

PARTNERS AND THEIR ROLES

Various partners co-invested in these different windows and played varied roles (Table 1).

TABLE 1 | Partners and their roles

Key investment windows	Key partners and beneficiaries	Roles
Women Development Fund (WDF)	Provincial Women Union The Provincial Women Development Fund is a grassroots financial institution that provides self-help and financial services to various women’s savings and credit groups	(i) Establish new saving and credit groups (SCG); (ii) Transform credit networks into a Microfinance Institution (MFI); (iii) Leverage capital to enable beneficiaries to invest in adapted climate resilient livelihoods; and (iv) Support access to SCG, also to CIG and CCAF.
Climate Change Adaptation Fund (CCAF)	Farmer, Youth and Women Union Manages CCAF and supports existing or new farmers Common Interest Group (CIG) to develop proposals and access CCAF	Initiate and support CIG development to identify relevant proposals and access seed fund/co-investments for farmers’ groups to invest in climate smart innovations (from USD 1450/per farmer initially, to USD 750 and even USD 375 for replication)
Public Private Partnership fund (PPP)	Ben Tre Investment and Start-up Promotion Center (ISPC) and Tra Vinh DOIT Help identify and support eligible lead firms and buyers to access the fund	Development of value chain partnership (studies, linkages) and provision of co-financing arrangement (maximum USD 100,000) to incentivize value chain actors to engage with beneficiary farmers and incentivize climate resilient practices. For instance, partnership with organic coconut enterprise helped farmers get certified and thus obtain better prices. In addition to matching grant incentives, technical assistance, capacity building of private actor and producer groups, land acquisition, farming contract management, etc., were also important to incentivize the private sector.
Community Infrastructure Investment Fund (CIF)	Village Development Board; Commune infrastructure supervision boards & and operation and maintenance (O&M) groups established and trained	Support investments in infrastructure prioritized under Outcome 1, including climate resilient roads and water infrastructure

DECENTRALISED MANAGEMENT

To ensure government ownership and community driven implementation, the project deployed a highly decentralized approach aligned with the government

implementation framework so as to mobilize different agencies and convergence of efforts of various actors at different levels (Table 2).

TABLE 2 | Implementation arrangements at different levels

Admin. unit	Project unit/support	Roles for the project
Province People Committee	Owning the project at the provincial level and managing it through the Province Steering Committee and Province Coordination Unit	Lead and manage the project and its budget in collaboration with various local agencies, including technical agencies (e.g., DARD, the provincial Departments of Industry and Trade [DOIT]), mass organizations (e.g., farmer and women unions), private sector entities and communities
Inter-province	Inter-provincial meetings each semester; Dedicated technical assistance providers	Inter-provincial coordination, identify shared technical assistance provider, inter-provincial value chain planning, mutual training, exchange visits, PCUs and technical assistance developed guidelines and software to implement the project
District People's Committee (DPC)	Provide district technical advisors in numbers proportional to the number of underlying communes, along with required support.	Coordinate project activities at the district level and integrate with the organizational structures and mandates of the line agencies (DARD, DOIT, the provincial Departments of Natural Resources and Environment [DONRE]), and mass organizations (FU, WU) at the district level
Commune People Committees (CPCs)	Commune's chairpersons, accountant and cashier received a project management allowance in line with GoV policy, and benefited from intensive trainings	Implement the climate sensitive SEDP process at the commune level, including incorporation of CC adaptation principles within value chain development
Village Development Boards (VDB)	Training and close follow-up by district technical advisors, specific committees (infrastructure, O&M, etc.)	Mobilize communities of the village in SEDP planning and implementation, including selection of pro-poor VCs and livelihood support activities, infrastructure schemes' implementation and maintenance, development of SCGs and CIGs and other community initiatives.



Job generation for poor women and youth-an outcome from PPP efforts of AMD © AMD

CAPACITY DEVELOPMENT

Several training programmes were organised to enhance the capacities of government staff to support participatory planning, engaging households and facilitating local resource mobilization. For instance, 4,843 government staff were trained and TOT/planning task forces were established to facilitate the annual planning exercise and re-train necessary future personnel for this task. The project assessment and monitoring results revealed that such a level of effort led to 87 percent of such staff becoming confident with facilitating annual climate and market informed SEDP. Such integrated planning helped mobilize other local value chain programs, such as with the OCOP (One Commune One Product program) and

organic/VietGAP/GlobalGAP certification that facilitated co-financing of CSA investments in AMD VC partnership.

KEY RESULTS

The project assessment and monitoring results revealed that the project reached 138,000 beneficiary households, and 80,981 people were trained. Meanwhile over 52,192 households replicated the technology. Over 60 percent of project households applied some climate smart practices as compared to only 30 percent of non-project households (e.g., water-saving techniques, bio-fertilizers and adaptive crop and livestock varieties, biological cushioning in livestock production, fermented feeds for cattle, adjusted cropping seasons and off-farm employment). The main



IFAD and AMD staff in a field consultation with a CIG © AMD

identified benefits of farming system packages were the inclusion of diverse products facilitating income diversification, recycling of inputs, and crop-livestock integration (local feed, bio-fertilizers), which decreased waste and cost.

The project also contributed to improved social and financial capital by forming farmer groups for enhancing farmer's access to training, savings and credit. On this subject, 1039 farmers groups enabled 33,000 farmers to access CCAF. Furthermore, 4251 new saving and credit groups were established and leveraged saving and credit. Engaging poorer households in conjunction with better-off households in groups, and supporting their financial inclusion enabled them to improve their capacity and capital resources so as to carry out CCA production and link with businesses. WDFs supported their

members to participate also in CIG to access CCAF matching grants.

Apart from these 24,923 HHs have benefited from new employment opportunities generated by farm and off-farm investments, especially from the CCA and PPP funds, which enabled 444 commune level enterprises and 38 other enterprises to increase their activities. This also enabled 12,000 HHs to benefit from improved market, and also created 1,953 new full-time jobs and 1,783 new part-time jobs.



A woman with her newly procured cow using the funds from the Saving and Credit group © AMD

CHALLENGES

The project faced a few challenges during its implementation. These are discussed below.

Delayed salinity monitoring system: The project had difficulties with managing the international contract to implement the planned salinity monitoring system. As an alternative, the project provided districts with portable salinity meters that were used to develop local advisory and radio broadcasts; and developed public-private partnership with RYNAN technologies to pilot automatic in-field monitoring for salinity and pest advisory. Both options led to improved management of salinity intrusion in affected areas but could not cover all the areas.

High level of both climate and non-climatic shocks threatening adaptation capacities: In addition to major saline

intrusion events in 2015, 2016 and 2019, the project had to deal with the devastating effects of the Asian swine fever, several pest and disease outbreaks and the COVID-19 pandemic, which, together with salinity intrusion, contributed to a reduction in investment capacities and more difficult repayment management for supported rural financial institutions.

Difficulties in attracting private partners while targeting the poorest: The project showed that public-private partnership was not feasible in all communes targeted for poverty reasons. It notably had difficulties with convincing larger enterprises to get involved and therefore mostly worked with commune enterprises. The participation rates of the poor and near-poor HHs in the PPP were also much lower (23%), and the project struggled to link CCAF-funded groups with PPP-funded enterprises.



A salinity monitoring buoy in Tra Vinh province (supported by the AMD) © AMD

LESSONS LEARNT

Strengthening implementation capacity in local government structure and mass organisations

Investing in the development of local capacities is crucial for ownership, efficiency and sustainability of project interventions. In this case, implementation was mainstreamed in the local government structure and mass organizations (women and farmers union) and this facilitated community ownership of the project and its sustainability. Early attention to exit strategy and post-project sustainability helped the project to strengthen such local implementation modality. For instance, the CCAF fund was finally fully decentralized and implemented by mass organizations (WU, FU), which also absorbed and supervised lead farmers in local mass organizations. Also, the project decided to engage with DOIT to implement the PPP fund and to support activities, as such activities are part of their mandate.

At the end of the project, a comprehensive exit strategy was signed by PPCs, providing clear commitments of different implementation agencies to continue and institutionalize specific activities, such as climate informed planning, value chain plans and implementation of CCA models. An ASAP co-financing grant of USD 12 million was instrumental for supporting government and farmer organizations implement such innovative approaches – down to the lowest level.¹

Capacity development of both implementers and beneficiaries through trainings and peer-to-peer learning

Capacity development was required to assist government executing agencies (province people committee, district, communes, village development board) implement new processes, such as value chain and climate sensitive planning, public-private partnership and co-financing instruments as well as to learn about climate change, value chain and targeting. Developing capacities of CIG and SCG and linking them to farmers' and women's unions was central to increasing the efficiency of agricultural production and household income of smallholders, by linking them to value chain lead firms and supporting them to access rural finance.

Regular exchange between participating provinces and shared technical assistance and guidance development was also important to ensure peer learning and to improve local capacities. IFAD's regular supervision missions were also considered instrumental in systematically reviewing progress and helping projects address challenges building on a wider portfolio of experiences in Vietnam and beyond.

Multi-stakeholder partnerships to ensure adoption of climate resilient technologies

The project completion report suggested that public-private partnerships were crucial to ensure adoption of climate resilient practices

¹ The Adaptation for Smallholder Agriculture Programme (ASAP) is IFAD's main programme for channelling climate and environmental finance to smallholder farmers. The programme is incorporated into IFAD's regular investment processes and is subject to rigorous quality control and supervision systems.



IFAD and AMD staff in a field visit to the coconut fibre processing enterprise, which is a project partner in the PPP instrument © AMD

but can benefit from an even more systematic approach to ensure that innovations are fully relevant and adoptable by farmers. The report has recommended:

- i) ***An effective joint coordination mechanism*** which shall include both provincial management agencies, project districts and communes, as well as research institutes, independent experts and the private sector in order to get breakthrough solutions and ensure higher applicability. This shall also help ensure that validated technologies are integrated into both SEDP and VCAP to facilitate convergence of resources to implement them;
- ii) ***Stronger participation of farmer organizations in participatory research and extension*** so as to

ensure that technologies are relevant to their constraints and needs. In addition, systematic consideration of cost-benefit, market potential and affordability needs to be considered for different target farmers. Partnerships with farmer unions and women unions is key to mobilize and support groups as well as to enhance farmer to farmer learning through trained lead farmers; and

- iii) ***Expanding financing options*** beyond the project window and WDF to also include Vietnam banks, and commercial banks so as to leverage potential value chain finance and capacities. Value chain partnerships were shown to generate additional value for farmers and could also

help co-finance farmers' investments and capacity development in adopting relevant climate resilient practices. However, in order to attract businesses to invest in the priority VCs, the project needs to facilitate inter-communal and inter-district collaborations if sufficient scale for key value chain products is to be achieved.

Importance of non-financial support

Besides financial support, other non-financial support such as technical assistance, capacity building, land acquisition, farming contract management, etc., are also equally important. Such support shall not only target the lead enterprise but also groups linked to the lead enterprise. Vocational training helped target households get employed within PPPs and this can also help the lead enterprise acquire a qualified workforce. For the selected VCs, synchronous and adaptive infrastructure development is extremely important as it can contribute to reduced transaction cost to reach more remote areas (through road, bridge, market infrastructure, etc.) as well as production risks, thanks to adapted water infrastructure and salinity monitoring equipment. This requires a high level of commitment from the PPCs and DPCs in integrating resources from different programs and projects. Finally, support to integrated planning helped mobilize other local value chain programs, such as with the OCOP (One Commune One Product program) and organic/VietGAP/GlobalGAP certification that facilitated co-finance of CSA investments in AMD VC partnership.

Dedicated efforts to ensure that the public-private partnership benefits the rural poor

The project showed that value chain development is not feasible in all communes based on poverty grounds. Therefore, the project had to give higher priority to key products that have both market potential and poverty reduction potential. For instance, in Tra Vinh, specific support to indigenous niche value chain enabled 50% of the beneficiaries of the PPP Funds to come from an ethnic minority. For the poorest communes and villages without potential VCs, the project should give priority to supporting the poor HHs to diversify their livelihoods. Also, vocational training helped targeted households get employed within the PPP.

Second, engaging poorer households with better-off households in groups and supporting their financial inclusion enabled them to improve their capacity and capital resources to carry out CCA production and link with businesses. Both WDFs supported their members to participate in CIGs and 1,031 SCG members accessed CCAF matching grants as well.

Adaptive and inclusive approach that considers climate variability, local mitigating capacities and farmers socio-economic conditions

Not all promising farm innovations were replicable and adoption levels depended on the farming zone and the supporting infrastructure, as well as the technical and financial capacities of farmer HHs. To further improve scalability, the innovations need to match not only specific agro-ecological conditions (i.e., salinity levels and mitigation from infrastructure) but also

suitability for targeted households, reviewing their affordability, market potential, and productivity potential.

As practices are often dis-adopted if yields are not higher in 'normal' years, it is important to consider impacts of climate adapted practices in both normal and bad conditions. It is also crucial to develop – in parallel – good quality climate advisory services and capacities of extension agents and lead farmers if they are to be used to guide farmers on most relevant CSA models depending on climate and salinity forecasts. Also, it was seen that investment in participatory research and extension was crucial to build capacities of government extension agencies to help them identify and scale better adapted innovations.

END NOTE

The Government of Vietnam has requested a follow-up loan from IFAD to build further on capacities and processes developed to address some remaining challenges and to scale results. In addition to facilitating district and provincial program mobilization, the design of the new Climate Smart Agricultural Transformation Project in the Mekong Delta (CSAT) was embedded into the national policy framework and the integrated Mekong Delta Master Plan that may further facilitate resource mobilization while enhancing the 'Delta integrated' approach. As per new policy, loans can only finance infrastructure. Therefore, the new project builds on local institutions and capacities already developed and integrates value chain planning and partnerships, including for infrastructure investments that incentivize public-private co-financing in order to decrease transaction costs (i.e.,

roads, market infrastructure, producer aggregating capacities, etc.), and de-risk public and private investments (water infrastructure, salinity monitoring, adapted CSA, insurance etc). Partnership with the Dutch Fund for Climate and Development (DFCD) will also facilitate mainstreaming of climate adaptation and financing of a number of non-sovereign operations in key value chains. CSAT was designed with an ambitious target to leverage close to USD 50 million contributions from the private sector to support bankable models for responsible farming in the Mekong Delta landscape, and to contribute towards restoration of the long-term resilience of the Delta for environment and local communities.

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The Asia-Pacific Islands and Rural Advisory Services Network (APIRAS), the Asia-Pacific Association of Agricultural Research Institutions (APAARI), in close collaboration with the Research and Extension Unit of the Food and Agriculture Organization (FAO) of the United Nations are committed to strengthen agriculture innovation systems in Asia-Pacific for transforming agri-food systems.

In 2020, APIRAS and APAARI carried out a Joint Rapid Appraisal (JRA) to scope the innovation environment to identify and document initiatives aimed at strengthening Agricultural Innovation Systems (AIS), in a context of the TAP-AIS project.

The [JRA study](#) revealed three main barriers that constrain development of an effective AIS in the Asia-Pacific. These include: a) lack of sufficient partnerships among actors in the AIS, b) inadequate investments and lack of policies that could steer the research and extension agencies to engage with other AIS actors, and c) lack of sufficient capacity development initiatives aimed at enhancing functional capacities of AIS actors. Publication of this series of Good Practice Notes is an attempt by APIRAS and APAARI to document cases that have tried to address development of an effective AIS through addressing the above constraints.



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