Roots of Resilience: Scaling Impact Through Market Integration and Innovation

The global efforts to achieve net-zero emissions are significantly lagging, resulting in more severe climate change and heightened risks for countries and communities. This has created a growing gap between current adaptation measures and the necessary transformations. To address this adaptation deficit, we need to establish demand-driven climate information systems, develop market-based co-investment strategies for adaptation, enhance sustainability programs led by industries, and implement supportive policies—especially for the most vulnerable sectors, such as agriculture and the environment. Importantly, although adaptation is vital, there may be times when its costs exceed the benefits. In such cases, it may be wiser to use risk transfer solutions instead. To keep production systems resilient, we must develop integrated strategies that combine risk management and risk transfer approaches.

The proposed project aims to enhance the resilience of vulnerable communities and perennial plantations by developing demand-driven climate information services, market-driven adaptation and mitigation solutions, and financial strategies tailored to specific industry and regional needs. The proposed project will be implemented in the Southeast Asia region, specifically in Vietnam, Cambodia, Laos, Indonesia, Papua New Guinea, Timor-Leste, and the Philippines. These countries are highly vulnerable to climatic variations and changes.

Project goal

The project will focus on perennial plantation systems (coffee, cocoa, cashew nut) and small-scale agroforestry systems, which are highly vulnerable to climate variations and have limited adaptation options. Furthermore, working in cooperation with industry partners and leveraging solutions and tools to enable private sector financing of climate adaptation in these countries and communities (Fig. 1 below).

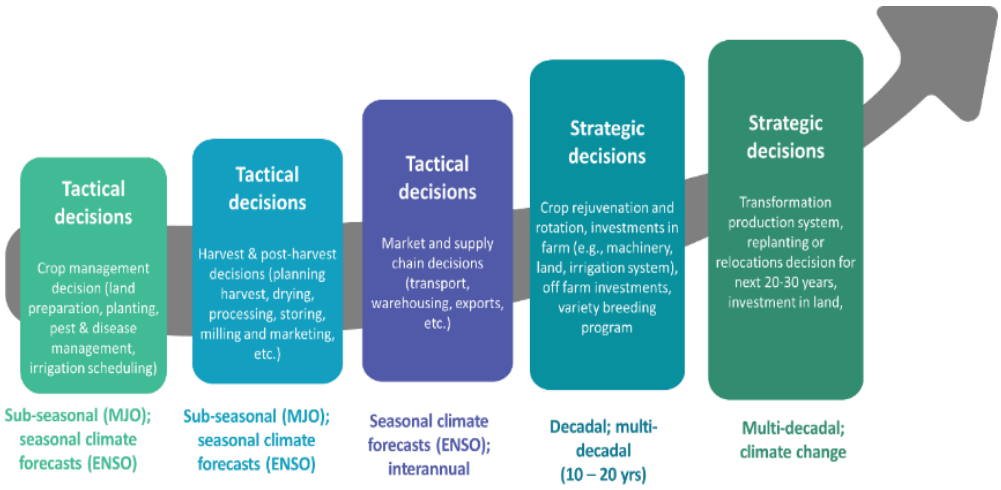
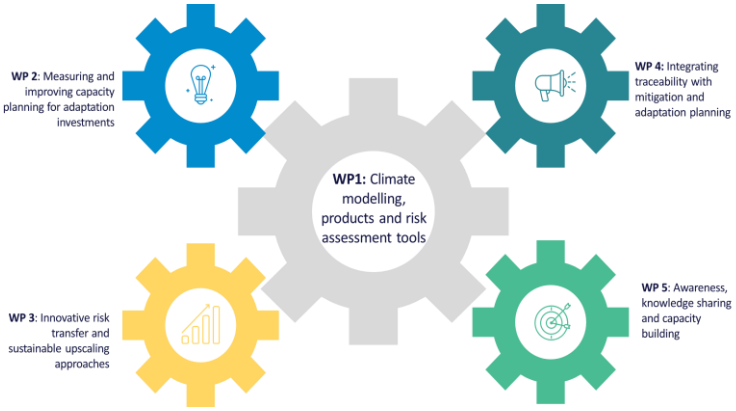


Figure 1 is an example of tactical and strategic decisions related to the perennial plantation systems (e.g., coffee), highlighting the need for climate information requirements at different scales. Importantly, unlike annual crops, smallholder producers have fewer options for adaptation due to the longer economic lifespan of their crops, often remaining productive for 20–30 years, the difficulty in quickly switching to alternative cropping systems, and the substantial capital investment required – making them more less adaptable than other production systems.

Importantly, greater involvement of industries, farmers (including women and disabled persons), supply chain actors, and agribusinesses, through market-driven processes would empower them to take ownership in developing more tailored, market-driven adaptation and risk transfer solutions. This approach would also create greater opportunities for the implementation, adoption, and scaling up of these solutions.

Project framework

The project will be implemented through five integrated work packages (Fig. 2 below). Each work package will consist of a R&D component, tools and products, trialling and piloting innovation and upscaling innovation (Fig. 3 below).



Key project outcomes

- A fully customised demand-driven climate information system, developed in collaboration with industry and national/regional hydro-meteorological services, has built regional capacity and improved the availability, quality, and accessibility of climate information, early warning systems and related tools.
- A deeper understanding of climate-related loss and damage has led to the development of tailored, market-driven co-financed adaptation plans and, importantly,
- avoided maladaptation. The upscaling plans embedded in the project have significantly enhanced the resilience and adaptive capacity of both perennial plantation systems and small-scale agroforestry, benefiting the communities and regions.
- Significantly improved synergies between climate change mitigation and adaptation have led to reduced environmental footprints due to the establishment of improved frameworks for traceability systems and the expansion and strengthening of industry-wide sustainability initiatives.
- Improved financial resilience through more sustainable insurance programs has been adopted at the industry and or regional levels. Importantly, financial institutions, including banks and insurers, have increased capacity to integrate climate risk and traceability aspects into their products and services, improving their support for perennial plantation production systems and supply chains.
- A skilled and adaptable workforce capable of harnessing data to make effective decisions where industry, farmers, including women and disabled persons, and institutions (such as National Hydrology and Meteorological agencies) have enhanced awareness and capacities regarding the development and use of climate products, the importance of adaptation strategies, and the use of insurance as a risk management tool for farm businesses.

Project partners include Asian Development Bank (ADB) (lead organisation) and the University of Southern Queensland (UniSQ), World Meteorological Organisation (WMO), Food and Agricultural Organisation (FAO) (implementing partners). National (ministries) agencies and local NGOs are anticipated delivery partners.

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