

## SDC-funded project in Asia spearheads sustainable innovations in food systems

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Pictures: International Rice Research Institute



The global demand for rice and agricultural products is facing multiple challenges, including a growing world population that is projected to reach 9 billion in 2050. This creates a great demand for food amidst natural resource depletion and climate change. In Asia, rice production is dominated by smallholder farmers, who farm less than 5 hectares. For example, in the Mekong Delta of Vietnam alone there are 1.4 million smallholder farmers. Efforts on sustainable innovations for smallholder rice farmers must be in place.

To address this challenge, SDC and IRRI have had a long partnership through a research for development project “Closing Rice Yield Gaps in Asia with Reduced Environmental Footprints” (CORIGAP). The main aim is to improve food security and gender equity and alleviate poverty through optimizing productivity and sustainability of irrigated rice production systems. An agro-ecology approach underpins the project activities.

Implemented in six countries -- China, Indonesia, Myanmar, Sri Lanka, Thailand and Vietnam, SDC continues to support the delivery of CORIGAP. The key approach is adaptive research with farmer groups through close collaboration with national partners of those six countries to strengthen national or regional programs on "best management practices" for environmentally sustainable rice production.

### Winning through partnerships

Large scale adoption of best management practices is taking place in the six countries through strong collaborative networks and engagement with key players involved in policy development and implementation. Adoption has been accelerated through the uptake of best management practices by national partners in their country’s rice programs.

Currently, the project has reached 758,196 farmers across six Asian countries, surpassing the target of 500,000 smallholder

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farmers by 2020. Among these, about 132,000 farmers have adopted sustainable practices and increased their rice yield by 11-20%, and profit by 13-25%. The alignment of CORIGAP with other significant donor activities at IRRI also strongly facilitated pathways for adoption of project outputs. After the successful implementation of the first phase (2013-2016), the second phase of the project (2017-2020) expanded the reach into the national programs of Philippines and Cambodia.

### **Trailblazing towards sustainable food systems using agro-ecological approaches**

A report in 2018 from RAMSAR documented that 35% of wetlands have been lost since 1970, with greater rates of loss since the year 2000. The rate of loss of wetlands and the consequent effects on the conservation status of wildlife is of high concern in tropical and sub-tropical habitats. Consequently, in these tropical environments, rice systems provide important human-modified wetlands for both wildlife conservation and food production, but only if these wetland habitats are managed well. Important risks are over-use of pesticides and inefficient use of fertilizers and water. The rice production practices promoted by CORIGAP are addressing these risks.



### **Wildlife studies**

A variety of wildlife studies under the CORIGAP project aim to provide indicators of the health of agro-ecosystems and in turn promote the positive ecosystem services that wildlife can provide. These include research on:

1. Arthropod predators of insect pests as a functional biodiversity indicator
2. How amphibian community responses to sustainable rice practices
3. Bat communities and activity over rice fields and their role in insect pest suppression
4. Bird communities in intensive lowland rice systems
5. Refinement of ecological engineering technique for insect pest management

### **Habitat management at a landscape scale**

To characterize current food systems and guide in finding a balance for livelihood, nutrition, and environment in a rice-based food systems, a subproject funded by SDC was added in October 2019 entitled “Co-designing Myanmar’s Pathways for Agroecological transition towards Sustainable Food System (CoMPASS)”. CoMPASS will be implemented in three years with the support of SDC to integrate agroecological practices at a landscape scale in Myanmar.