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Farmers’ and academia’s views”

## Climate-smart villages in Southeast Asia: the pivotal role of seed systems in rice-based landscapes

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### Abstract

Given the aggravating nature of climate change impacts, rice farming will more and more rely on improved resilience to climate variability and extremes. To this end, the climate-smart village (CSV) approach was developed to address specific challenges of smallholder farmers. Within Southeast Asia, the CSV approach has so far been applied in Myanmar, Lao PDR, Cambodia, as well as in Vietnam and the Philippines where national programs have taken it up and established multiple CSVs. In spite of distinct climatic conditions, all these CSVs have rice-based landscapes as a common denominator. This article focuses on the improvement of rice-seed systems as the core of introducing climate-smart agriculture (CSA) in these villages. The experience of a CSV in Lao PDR clearly shows community-based seed (CBS) systems as a viable CSV component. Moreover, the efficiency of CBS systems is enhanced when applied in combination with the following supporting climate-smart interventions: (1) training in improved crop and pest management through farmers’ field schools, (2) awareness raising through photo exhibits and seed fairs, (3) participatory variety selection, and (4) climate risk mapping as a means for targeted distribution of improved rice varieties. The study also explored direct market access for CSV products by advertising both the generic aspects of climate-smart adaptation strategies and the location-specific stories of smallholder farmers. To this end, the emerging online retail economy could offer viable avenues for highlighting specific aspects of food production in CSVs to different groups of consumers (e.g., the “buy local” preference in the domestic market and climate change concerns in the international market).

**Keywords:** Adaptation, climate risk mapping, climate-smart agriculture, climate-smart villages, community-based seed system, crop management, Lao PDR, online retail, pest management, photovoice