Climate-smart villages: key to a sustainable future in rural communities

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Abstract

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) has been pilot-testing climate-smart villages (CSVs) in South East Asia (SEA), in Vietnam, Cambodia, Lao PDR and the Philippines, since 2014. The CSVs serve as loci for community mobilisation and participatory processes, where knowledge and capabilities of men and women are enhanced and their motivation is promoted to take action towards food security, agricultural productivity, and climate change adaptation and mitigation. In the CSVs, evidence is generated at local scales of what Climate Smart Agriculture options work best – where, why and how – and this evidence is used to draw out lessons for agricultural development practitioners, policy makers and investors from local to global levels. The CSV approach, being context-responsive, process-focused and outcome-oriented, strengthens existing village programs and structures towards climate action. The CSV approach is now being considered in programs in the Philippines, Vietnam and Myanmar. Here we report how the CSVs have been contextualised, how participatory processes have been implemented, and how emerging outcomes have been attained.

This paper presents the case of climate-smart villages, part of the CGIAR research program on climate change, agriculture and food security (CCAFS) to scale up climate-smart agriculture. I work with a team (named in the footnote), who are to be credited for the successful run of climate-smart villages in South East Asia for the last five years.

Climate-smart villages are like field laboratories, testing innovative approaches for climate-smart agriculture to improve food, nutrition and income security in the face of climate change. This talk outlines the basic features of the CSVs in South East Asia, the implementation, evidence creation and the scaling mechanisms – and the challenges.

As we know (and Figure 1 reminds us), climate variability is having severe negative impacts on agriculture productions systems. It threatens food and security across the world. There is an urgent need to identify and promote agricultural technologies and practices that provide options for farmers to adapt to current and future climatic variability.

Climate-smart agriculture, CSA, in climate-smart villages

Climate-smart agriculture as defined by FAO (2013) is

> 'an approach for developing actions needed to transform and reorient agricultural systems to effectively support development and ensure food security under climate change'.

This paper has been prepared from a transcript and the illustrative slides of the presentation.
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Figure 1. Climate variability is having severe negative impacts on agriculture productions systems

CSA supports food security in the face of climate change. Its pillars are agricultural productivity, resilience and mitigation. CSA has been introduced in many parts of the world, but there is challengingly weak uptake of many innovative CSA practices and technology.

Cultural production systems are identified as a factor contributing to the low uptake. Therefore, CGIAR via CCAFS has developed the climate-smart village (CSV) approach, with which we generate evidence demonstrating the efficiency of proven and innovative climate-smart solutions; that is, CSA solutions.

The CSV approach is an agricultural research-for-development approach: to test, through participatory methods, technological and institutional options for dealing with climate change in agriculture. It seeks to fill knowledge gaps and stimulates scaling of CSA. It aims (Aggarwal et al. 2018):

> 'to generate evidence at local scales of what CSA options work best, where, why and how, and to use this evidence to draw out lessons for policy makers, agricultural development practitioners and investors, from local to global levels.'

CSVs since 2012

CGIAR, CCAFS started looking at climate-smart villages in 2012 in Africa and south Asia, and in 2014 extended that work to South East Asia and Latin America.

We have seven CSVs in South East Asia (Figure 2): Ma and My Loi and Tra Hat in Vietnam, Guinayangan in the Philippines, Ekxang and Pailom in Laos, and Rohal Suong in Cambodia. They represent diverse climate risks, landforms, cropping systems and land use strategies, and were selected to focus on climate change hotspots and mitigating greenhouse gas from rice production systems.

The CSV approach aims to generate a climate-smart landscape (Figure 3). We involve the local communities and surrounding natural resources in participatory practices. The social mobilisation of CSV starts with building trust through

Figure 2. Climate-smart villages in South East Asia.

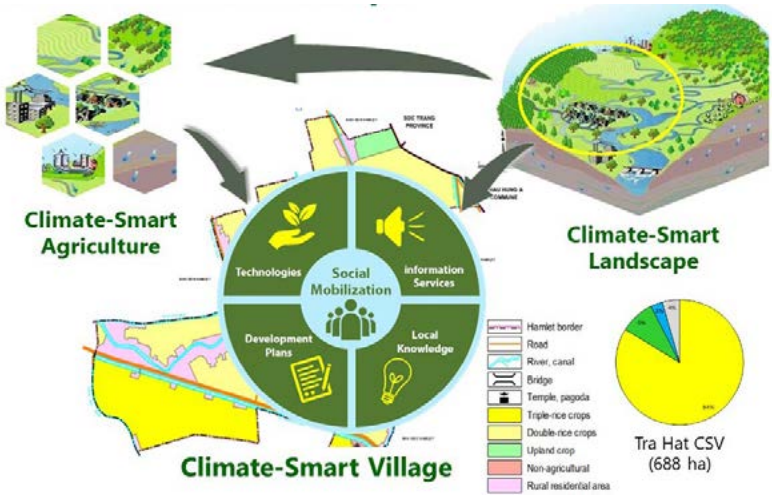

Figure 3. From climate-smart agriculture to a climate-smart landscape.

community engagement and partnership among diverse stakeholders, resulting in the agreement to organise the CSV.

In South East Asia, to set up the CSVs, CCAFS began by working with local organisations, and making baseline surveys to assess the climatic risks and vulnerabilities to agriculture at the household, village and landscape levels, among other things. Participatory land-use planning has become a platform for multi-stakeholder participation and collaborative work in these CSVs.

Context matters!

There is no fixed package of CSA interventions. Figure 4 shows the types of CSA interventions that have been implemented in three CSV sites, in Vietnam, Laos and Cambodia. Options differ based on the sites' agro-ecological situation, level of development, and the capacity and interest of farmers and of the local

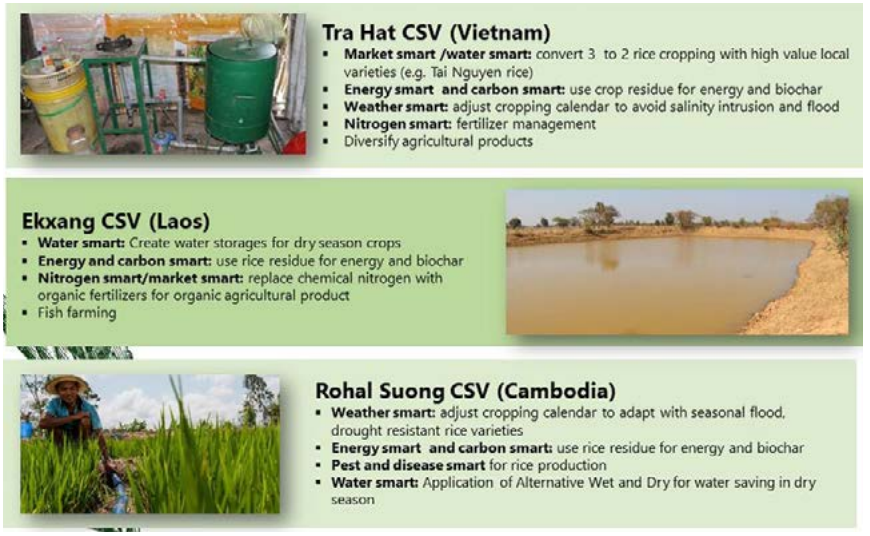

Figure 4. Context matters. Different regions need different approaches. Examples of climate-smart options in CSVs in South East Asia.

Figure 5.

community. Only locally suited and context-specific practices and technologies are implemented and disseminated.

Figure 5 shows the various CSA technologies and practices tested and evaluated in CSVs in South East Asia, using the local context and building evidence that then strengthens the people's capacity to adapt to the changing climate.

We are also scaling CSA up and out, to bring adjusted climate-smart options to larger areas: 'scaling out' via roving workshops (see Figure 6) in the CSVs.

Involving policy and institutions in using the CSV approach

We also are engaged in vertical scaling – 'scaling up' – through policies and institutions (Figure 7). For example, the CCAFS CSV approach is now being

Figure 6.

considered for strengthening climate-smartness of rural communes under Vietnam's National Target Program on New Rural Area (NTM) of the Ministry of Agriculture and Rural Development. In the Philippines, the CSV approach is used by the Department of Agriculture in its 'Adaptation and Mitigation in Agriculture' (AMIA) Project as a template for the AMIA village in 10 regions in the country. In Myanmar, a climate-smart village approach has also been introduced and adapted as part of the Climate-Smart Agriculture Strategy of the Ministry of Agriculture Livestock and Irrigation.

Figure 7. Countries in South East Asia where CCAFS is working.

Figure 8. Eight guide-steps for setting up a climate-smart village.

A CSV scaling workshop in July 2019, sponsored by SEARCA, GIZ and CCAFS, was attended by 12 representatives from seven South East Asian countries.

Summary

In summary, CCAFS climate-smart villages are like field laboratories. Using the eight basic steps in Figure 8, we set up CSVs to test innovative context-appropriate approaches for climate-smart agriculture to improve food, nutrition and income security in the face of climate change.

I would like to emphasise that through CSVs, what we are doing is making villages climate-smart.

References

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