

# ***Supporting agricultural extension towards Climate-Smart Agriculture***

## **An overview of existing tools**



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### **Compendium**

The Compendium provides examples of more than 20 different approaches of how agricultural extension can support climate-smart agriculture, with contributions from seventeen institutions and over 30 contributors worldwide.



GLOBAL ALLIANCE FOR  
CLIMATE-SMART AGRICULTURE

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(editors)

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#### Setting

Vietnam has made a remarkable journey to ensure food security for 90 million people while increasing forest cover. Since the 1980s, it has become an exporter of rice, coffee, rubber, cashew, black pepper, wood and aquaculture products.

Over two-thirds of the population live in rural areas and depend at least partly on agriculture for their livelihoods. Challenges are low profit margins, high labour inputs due to outdated equipment, small and dispersed fields, poor infrastructure and investment options, and weather-related stresses.

#### Extension services

Vietnam has two major systems: 1) public extension through the Ministry of Agriculture and Rural Development (MARD). Remote areas often have only one extension officer for an entire commune. 2) The Farmers' Union (FU), a civil society organization under the Party and People's Committee. Its capacity varies across the country.

An increasingly popular activity among farmers and extensionists is private extension linked to selling inputs, such as seed and fertilizers.

#### Climate-smart initiatives

MARD has been involved in CSA since 2010, hosting the Second Global Conference on Agriculture, Food Security and Climate Change in Hanoi in

2012. A key outcome was establishment of the Global Alliance for Climate-Smart Agriculture (GACSA) in 2014. MARD sees participation in GACSA as adding value and sustainability to agriculture. For example, FAO's Economics and Policy Innovations for CSA programme worked with MARD on CSA value chains of indigenous products. Agriculture and forestry feature strongly in the Intended Nationally Determined Contributions to UNFCCC. CSA initiatives include rice in the delta regions — sustainable intensification and alternate wetting and drying (Siopongco et al., 2013) — and forestry through Payments for Forest Environmental Services (PFES) (MARD, 2012).

#### Climate-smart villages

Climate-smart villages (CSV) were introduced through the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) in 2014. Six villages were selected, representing different climatically-exposed agroecosystems: three in Vietnam; two in Lao; one in Cambodia. The CSVs are test sites for scalable CSA technologies and build on partnerships between CGIAR and local agencies (CCAFS, 2015).

My Loi CSV in Ky Anh District, Ha Tinh Province represents upland farming in central Vietnam that is exposed to temperature and water stresses, strong föhn winds and tropical storms. My Loi CSV is coordinated by the World Agroforestry Centre (ICRAF Vietnam) in collaboration with Ha Tinh provincial FU and the Department of Agriculture and Rural Development. This case study draws on this collaboration (Simelton et al., 2015a).

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<sup>45</sup> Contribution by E. Simelton (ICRAF)

## Collaboration in CSV

ICRAF has worked with FU in Ha Tinh Province since 2008. FU staff enrolled as group facilitators, interviewers and translators of local and scientific ecological knowledge. There have been concrete benefits from the collaboration.

1. During interviews and meetings, FU staff address farmers' questions, while learning about climatic impacts and local adaptation (Simelton et al., 2013).

2. FU staff joined meetings to make inventories and prioritize CSA interventions. Although not called CSA, farmers were implementing practices to sustain yields during extreme weather, such as intercropping, rotation and mulching.

3. FU generally has more female staff than the public extension service. Female farmers were generally less aware than men of climate change; one reason being that male extensionists tended to talk to men. Through a gender-sensitive selection process, some of the needs of women are now raised. Women in My Loi CSV preferred interventions in livestock and home gardens; men favoured forestry; and both wanted intercropping. Women having a longer daily schedule and want to use time more efficiently (Simelton et al., 2013a)

4. Among the low-cost, gender-equal, CSA interventions at the CSV are school vegetable gardens, vermiculture and a village weather station that monitors deviations from centralised forecasts.

5. A cooking competition helped everyone realize the diversity of vegetables and fruit that could be included in the CSA portfolio.

## Challenges for CSA

Among the various challenges for CSA in Vietnam, the three main ones have been described.

1. CSA has different interpretations. First, some equate food security with quantity of rice, meaning that they do not identify a problem. This disregards the fact that over 10 percent of children under five years-old are malnourished and that many households struggle to survive from agriculture. More flexible interpretations of CSA are reduced yield variability or losses as a result of adaptation (and mitigation) interventions. Second, non-climate-related environmental services lack a clear objective in CSA. This causes contradictions when introducing PFES and for reducing pesticide use. Third, there are no indicators for evaluating "smartness", such as co-benefits, landscape-level, non-economic or longitudinal benefits.

2. Supporting policies. ICRAF and MARD have run policy dialogues since 2013 on overcoming barriers to agroforestry. Among the barriers are separated policies and land use for agriculture and forestry. Similarly, extensionists receive training in either agriculture or forestry. Furthermore, awareness of climate change is limited among farmers and leaders; this increases the risk of maladaptation, particularly if the CSA priority is yield increase (Simelton et al., 2013).

3. Gender. Without reducing women's work it will be difficult to release time for women to join training courses, field trips and community activities.

## Opportunities

Four main opportunities can be identified for follow up actions.

1. Export crops are grown mainly as monoculture or short-term rotations but all can be grown in integrated systems (ICRAF, 2015).
2. “Smartness” indicators can be developed with extensionists and farmers to monitor adaptation to reduce or stabilize yields and improve incomes. The indicators can also monitor extension demonstrations. Research with FU shows that agroforestry reduces the period of economic recovery after natural disasters (Simelton et al., 2015a).
3. With 3 to 4-year projects with rotating staff it is vital to work with those who stay — FU and extension staff — and who learn to generate resources. Moreover, FU members can request training and support for demonstrations.
4. The FU is vital for expansion and MARD for policies enabling expansion.

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