CHANGE PROJECT STAKEHOLDER LEARNING FORUM

Project Wrap-Up Summary

Canadian Feed The Children (CFTC) with Canadian coalition partner Farm Radio International (FRI), local implementing partners Regional Advisory & Information Network Systems (RAINS), Trade Aid Integrated (TAI), Tumu Deanery Regional Integrated Development Programme (TUDRIDEP), and NGO, government and academic technical partners carried out the *"Climate Change Adaptation in Northern Ghana Enhanced"* (CHANGE) project in northern Ghana between January 2013 and December 2015.

CHANGE's key objective was to support smallholder farmers to improve their adaptive capacity and build their resilience to the impacts of climate change on agriculture, food security and livelihoods. CHANGE had three goals:

1) To increase access to information about climate change and its effects, and to strengthen the capacity of women and men smallholder farmers to implement adaptive actions
2) To use a participatory stepped-down training approach to train agricultural extension agents, farmers, and farmer-based organization leaders to implement climate-adaptive agriculture practices that build community resilience to the impacts of climate change
3) To increase women's participation in sustainable agricultural and alternate livelihoods

This *Wrap-Up Summary* consolidates the main results from the end-of-project evaluation, lessons learned, and best practices of CHANGE discussed at the CHANGE Stakeholder Learning Forum held in Tamale, Northern Region, Ghana on May 17, 2016.

Canada

CHANGE ran from January 2013 to September 2014 with generous funding from the Government of Canada. The project was extended in October 2014 for a third year funded by Canadian Feed The Children, and concluded in December 2015.

CHANGE was implemented in 17 communities in three regions of northern Ghana.

Region	District/Municipality	Community	Partner
Northern	Savelugu - Nanton	Tindani, Zosali, Langa, Yilikpani, Kpachelo	RAINS
Upper East	Bolgatanga	Sumbrungu, Yikene, Zaare, Yorogo, Gowrie, Vea, Nyariga	TAI
Upper West	Sissala East	Dangi, Kong, Sakai, Wellembelle and Pieng	TUDRIDEP

The project united work being done by Canadian Feed The Children's implementing partners, RAINS, TAI and TUDRIDEP, with the expertise of FRI for the radio training and broadcasting component, and resources and technical expertise of:

Ghana Meteorological Agency (GMet)
Ministry of Food & Agriculture (MoFA)
Savannah Agricultural Research Institute (SARI)
University for Development Studies (UDS)

and CARE International, who shared their Climate Vulnerability and Capacity Analysis (CVCA) tools, an important component of CHANGE's unique and powerful model of stepped-down training.

RESULTS

Goal 1 INCREASED ACCESS TO INFORMATION ABOUT CLIMATE CHANGE & STRENGTHENED CAPACITY TO IMPLEMENT ADAPTIVE ACTIONS

Four modules of training were delivered by technical partners SARI, GMet and CARE to implementing partners, Community Extension Agents (CEAs), MoFA Agricultural Extension Agents (AEAs), radio station staff, and farmer-based organization (FBO) leaders on:

- Productive and environmentally-sustainable agronomic practices
- Weather forecasting and prediction
- Use of agricultural calendars
- Seasonal weather forecast information
- Other climate-smart agriculture (CSA) techniques

Over the course of the project, participants received a series of follow-up trainings on: CSA agricultural practices and conservation agriculture; sustainable soil and water conservation practices; effective use of agriculture data; and harvesting, storage and prevention of post-harvest losses, plus other topics.

These trainings were highly successful at disseminating knowledge to the 17 project communities. An end-of-project evaluation found that:

100% of FBO leaders reported understanding climate change, its effects and adaptation measures

95% of farmers attended at least one learners' forum and considered it an important source of information on climate change and adaptation

Other results include:

- 395,438 farmers were reached through radio programs across the 17 communities, increasing their awareness and utilization of climate-smart agricultural (CSA) practices and weather information
- 95% of smallholder farmers (65% F) have been trained to carry out participatory vulnerability assessments, use climate data, and identify adaptation measures
- 100% of FBO leaders tested CSAs learned from stepped-down trainings and radio, and shared their experiences during radio programs and at community learning forums
- Two of three implementing partners developed Environmental Management Plans
- Farmer-based organizations (FBOs) promoted the preparation of CAAPs and CLUPs, and were supported to influence District Assemblies to incorporate them into their Medium Term Development Plans
- Sub-projects such as the Climate-Seeds-Knowledge (CSK) initiative, tree nursery, bullock ploughing, energy-saving stoves, improved seed storage, and basket-weaving have boosted smallholder farmers' incomes and resilience

Goal 2 INCREASES IN SMALLHOLDER FARMERS' AGRICULTURAL PRODUCTIVITY AND INCOME

93% (66% F) of farmers tested one or more CSA method, far exceeding the target of 75%

95% (66% F) who implemented CSA strategies (e.g., low tillage, planting drought-resilient seeds, planting across/along slopes, mulching, organic fertilizer/manure, and use of indigenous seeds requiring low inputs) reported increased farm productivity

Other results include:

- Farmers planted 200 acres of land with indigenous seed varieties (red cowpea (sanzi), neri, red and white millet, yellow maize, bambara beans, cowpea, tomatoes and pepper): 160 acres (80%) were planted by women, far exceeding the target of 40% women planting 100 acres
- 383 farmers (55% F) received credit from rural banks at reduced interest rates to purchase fertilizer, seeds, weedicides and ploughing services in the 2014/2015 farming season; however, 25% of these farmers were unable to pay these loans back, and therefore the credit component of CHANGE was deemed only a partial success
- 285 farmers who received loans in 2015/2016 were able to implement their newly-acquired knowledge to generate surplus yields for market
- Farmers were trained on improved post-harvest storage facilities (cleaning, drying, pesticide use, stocking procedures) which reduced post-harvest losses by an estimated 70%
- 2,305 smallholder farmers (67% F) are using energy-saving stoves to reduce climate hazards, women's labour, and health risks; the stoves are economical in terms of construction and fuel wood, provide income benefits for those who construct and users have come to prefer them to traditional fire stoves

Goal 3 SUSTAINING WOMEN'S LIVELIHOODS IN A CHANGING CLIMATE

CHANGE helped women significantly improve their agricultural productivity, income, and participation (as described above). Other agricultural-related and alternative income generating schemes targeted to women achieved the following results:

- Women basket weavers noted that they achieved improved quality, and that there is high demand for baskets on the international market
- 90% of basket weavers reported increased incomes
- Although the local cultivation of vetiver grass (the raw material used in basket weaving) was not as successful as hoped, basket production increased by 36% between the start of CHANGE and its conclusion
- 100 women were successfully trained to graft mango plants and produced 8,230 mango seedlings, however only 7.6% of these were sold. Despite this, 98% of beneficiaries reported an increase in their incomes of at least 10% under the mango seedlings project.

"…it wasn't possible for people like us to make up to two to three million (GH¢200-300). With the support of TradeAid, I am now able to make that much money … and I am able to pay for my children's health insurance. That is how helpful the increase in income has been to us."

Female basket weaver & CHANGE beneficiary Upper East Region, Ghana

LESSONS LEARNED

Gendered approach: The CHANGE gender strategy – targeting women for specific inclusion in agricultural training and leadership opportunities, and for specific types of agricultural and non-agricultural income generation – produced significant benefits, and should be continued and furthered in future projects.

Environmental Management Plans: While two implementing partners were able to develop EMPs, neither was implemented fully or updated in subsequent years. Going forward there should be strong emphasis on development of EMPs at project inception, and implementation should be monitored throughout the project period.

Land access: The constraints on land tenure should be addressed in an even more participatory manner, and more work needs to be done to address the systemic inequities that prevent women from gaining access to fertile land.

Credit scheme: Future projects that involve credit should have a continuous capacity-building component that targets potential beneficiaries and financial institutions. Beneficiaries should be trained on credit, accounting, and financing; and should be supported to invest effectively. There also needs to be a well-understood system of loan repayment.

Demand for mango seedlings: To increase sales of grafted mango seedlings, intensive campaigns should be carried out by both the project implementing agency and the beneficiaries. Market research should determine markets for selling the seedlings within and outside the project district; once identified, formal contracts should be put in place.

Trials before implementation: Projects such as the vetiver grass sub-project should be piloted before being scaled up. Site selection and timing of planting is crucial.

Irrigation as a climate strategy: CHANGE included water conservation strategies, but not irrigation. Subsequent climate change adaptation projects should complement water conservation with small-scale irrigation systems as irrigation is an important strategy to reduce the burden of climate change on smallholder farmers.

BEST PRACTICES

Stepped-down training model – Bridging the gap in agricultural extension and supporting sustainability: The stepped-down CSA training model combined with radio programming connected farmers with experts from government ministries and research institutions so they could experiment and learn from each other. Training sessions, learning forums and participatory radio programs enabled farmers to learn and implement CSA techniques, share their learnings with their communities, and advocate for the needed resources to address emerging challenges.

Partnership approach: Implementation was based on a collaborative multi-stakeholder approach. This enabled coordination, efficiency, and effectiveness of efforts across regions toward a common goal.

Profiling FBOs on District Agricultural Development Unit (DADU)/MoFA database: Profiling FBOs in the DADU/MoFA FBO database allows MoFA and other development partners to leverage these FBOs when rolling out interventions in the same communities. Each of the 54 FBOs in the Sissala East District has been included in the DADU database. This is an effective way to harness private and public sector efforts towards community, sector and national development.

Radio: Radio broadened the number of people CHANGE could reach, and was a highly effective medium to disseminate information about CSA methods to smallholder farmers. Radio listener groups brought farmers together to share their experiences via phone-in and in-person communications. Re-broadcasts of radio programs were essential for those who had been unable to listen to the programs live.

Energy-saving stoves: Highly effective as a climate adaptive mechanism, energy efficient stoves were adopted by CHANGE in its second year. Uptake has been tremendous, spreading to non-project communities constructing and using the stoves. The stoves have multiple benefits including using less fuel wood, reducing women's labour, reducing health risks for women and children as a result of lowered exposure to smoke, and increasing income for those who are contracted for stove construction.

Silos: Indigenous mud silos have received excellent uptake. Community members, including non-beneficiaries, have been willing to pay construction costs given the benefits (e.g., mud silos maintain seed quality for longer, so farmers are able to minimize crop loss and get a greater price at market for better quality seeds). Unlike metal fabricated silos, mud silos use indigenous knowledge and materials, are less costly, and store a larger variety of seeds.

Climate-Seeds-Knowledge (CSK): The CSK initiative to revive indigenous, drought-resilient seed varieties has a promising future. CSK supported the revival of 10 seed varieties, which have the potential to address the food security needs of northern Ghana sustainably. Cultivation of these indigenous seeds is primarily done by women. Ongoing collaboration between CFTC, SARI and other research institutions could help expand the scope of support for indigenous crop cultivars beyond those currently in use.