2024 CLA CASE COMPETITION

COLLABORATE • LEARN • ADAPT

Case Title:

Collaborative early warning mechanism reduces impact of climatic disturbances and disasters in DRC

Name:

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Organization:

Catholic Relief Services (CRS)

A participant and CRS staff collaborate during team visit to a cowpea plot where participant Patrick applied the 3-stage sowing technique. Credit: Alain Yamba,CRS DRC.

Summary:

This case describes how CRS used a collaborative, learning and adapting (CLA) approach to address the challenge of climate shocks and natural disasters affecting food security and stabilization in Kasai Central and Tanganyika provinces of the DRC. From March 2022-2024 the Displaced, Returnee, and Host Households Invite Recovery in the D.R. Congo (DRIVE) project aimed to improve agricultural livelihoods and resilience of conflict-affected households through multisectoral interventions. However, recurrent droughts, floods, pests, and diseases threatened to undermine the project's impact and sustainability. To cope with these risks, CRS established a collaborative framework with local authorities, communities, and other stakeholders to implement an early warning system (EWS) that monitored and responded to environmental and social risks. The collaborative EWS enabled the project team and the beneficiaries to identify warning signs, analyze them, and adapt their practices accordingly. The EWS also facilitated continuous learning and improvement by informing the development of community action plans and communication strategies. Through the integration of multiple CLA framework components (internal and external collaboration, use of a technical evidence base, pause and reflect, adaptive management, CLA in implementing mechanisms, and continuous learning and improving), the project was able to mitigate the effects of climate disruptions and natural disasters, encourage the uptake of best agricultural practices, and improve overall production and resilience.

1. **WHAT: What is the general context in which the case takes place? What organizational or development challenge(s) or opportunities prompted you to collaborate, learn, and/or adapt?**

Climate shocks in Kasai Central and Tanganyika provinces threaten the progress of food security and stabilization programming in the region. Prolonged droughts punctuated by intense rainfall and flooding displace households and severely reduce crop yields, worsening conflict and security, and disproportionately impacting vulnerable communities. These impacts are magnified by households and communities engaging in negative coping strategies. CRS designed the 2-year DRIVE project to help communities sustainably build resilient livelihoods and mitigate negative coping strategies that erode resilience to future shocks.

Despite DRIVE's strong approach to support the restoration of agricultural production, recurrent natural disasters negatively impacted agricultural production yields and agriculture-based incomes throughout implementation. These existing and emergent environmental risk factors are exacerbated by poor household practices such as slash-and-burn agriculture, carbonization and artisanal timber harvesting- leading to an imbalance in biodiversity and consequently causing problems of unhealthy drinking water, land degradation, erosion, climatic and cultural disturbances.

To address these challenges, CRS engaged with the local authorities and community to establish a framework for collaboration, learning and adapting that supports the project's disaster risk reduction policy and practice. The collaborative early warning mechanism created enables the identification of all risks impacting agricultural production and the enhancement of mitigation and adaptation measures to support local leaders and communities in sustainably and peacefully managing natural resources and related conflicts in a resilient environment. The project utilized risk mapping and the development of community action plans as a means of reducing these ongoing risks. The following sections describe how the project team collaborated with communities, local authorities and other stakeholders to learn and adapt mitigation measures that promoted the application of best agricultural practices and improved agricultural production overall.

2. **What two CLA Sub-Components are most clearly reflected in your case?**

External Collaboration

CLA in Implementing Mechanisms

3. **HOW: What steps did you take to apply CLA approaches to address the challenge or opportunity described above?**

Project staff recognized that near real-time communication with community members would be pivotal to achieving an agile, contextualized early warning system and adaptive implementation approach. To strengthen community resilience against risks and disasters affecting agricultural production, the project established a collaborative framework that hinged on actively engaging the project's internal and external stakeholders, the local government, and, most importantly, targeted communities in collecting risks, reflecting on and adapting practices. Adoption of this framework grounded project implementation in CLA.

To develop the collaborative early warning framework, project staff first convened the provincial Ministry of the Environment, local leaders (including traditional chiefs, religious leaders, supervisors of farmer leaders, Territorial Inspectors and state services) and the project's technical staff in charge of risk and disaster reduction. This group then formed a piloting committee (COPIL), which implemented the Early Warning System (EWS), using alerts as a technical evidence base to adapt and refine planned activities and continuously learn and improve incorporating three CLA subcomponents in the process (Technical Evidence Base, Adaptive Management and Continuous Learning and Improvement).

Next, technical staff trained the committee in natural resource management, risks and related conflicts to ensure accurate identification of risks and application of effective response measures. During community visits, COPIL members collected and monitored warning signs for identified risks and collaborated with community members to establish community risk-reduction action plans, alert the community actors in charge, and refer activities to the appropriate government services for a response. The COPIL holds weekly meetings to pause and reflect on the alerts received, analyze them, identify measures and draw up community action and communication plans to inform community members of potential risks and recommended response measures. The implementation of this Early Warning mechanism and use of its data has strengthened the ability of community members to identify warning signs and adapt practices before the effects destroy production or the environment.

The following example demonstrates the flow of information through the framework. During weekly analyses, COPIL members document the following signs: (1) a slight drought indicating pest attack on maize, (2) deformation of cassava leaves indicating mosaic attack, (3) quarrels between two families that could escalate to violent community conflict, (4) the presence of holes on a crop leaf indicating disease or pests, (5) changes in the number of rains per week. These signs, once perceived by a producer household, are reported to its lead farmer, who in return reports to the piloting committee via his supervisor. The COPIL meets, analyzes the alerts and proposes possible solutions using local resources, or refers the case to available state actors.

To highlight an actual alert and response: the practice of "semi-echeloning" was recommended to communities in response to alerts of heavy rains followed by drought. The practice consisted in spreading the seeds over 2 or 3 different semi-sowing periods to avoid seed loss. Prior to application of this technique, households lost up to 80% of their seeds, leading to significant harvest losses. However, thanks to this alert and the recommended action, communities were able to recover over 60% of the harvest after incorporating the practice of semi-echeloning.

Joint visits and weekly meetings are organized by the COPIL to monitor the application of adaptation measures. The COPIL also share results with communities during community visits to support their commitment to adapting agricultural practices and techniques likely to mitigate risks. In parallel, the CRS team organize monthly reviews to assess community action plans and their effectiveness in reducing risk.

4. RESULTS: Choose one of the following questions to answer.

We know you may have answers in mind for both questions; However please choose one to highlight as part of this case story

A. DEVELOPM ENT RESULTS

The implementation of this early warning system and the learning gained have contributed to adaptations that have strengthened the application of best agricultural practices likely to influence better environmental protection and agricultural production. At the end of crop season A, it was reported that 6669 out of 8000 targeted participants had applied improved management practices or technologies with support from BHA. Furthermore, the final evaluation result showed that the number of hectares under improved management practices or technologies with BHA assistance reached 6365.80 hectares versus 1878.3 at baseline.

Additionally, the application of improved agricultural practices has contributed to an overall increase in agricultural production in both targeted territories. In Dibaya territory, the average amount of production achieved by a household having applied improved management practices or technologies to maize, cowpea, and groundnut production was 125kg, compared to 36 kg observed in households that did not apply best practices. In Luiza territory, the yield of the same crops totaled 150kg, compared to 52kg in households that did incorporate best practices.

Other changes at the community level included two major community initiatives launched by COPIL members without any resources from the project: (1) Planting and multiplication of around 2,000 acacia seedlings and 2 hectares of reforestation to cope with increased deforestation due to agricultural activities In the Kambale health area; (2) And the establishment of home gardens to make vegetables more readily available, thanks to the involvement of local leaders in the fight against roaming animals. These two actions demonstrated participants' commitment to community resilience. Project staff and participants agree that the scale of behavior change that occurred during the project would not have been possible without this such strong external collaboration and commitment to continuous improvement. The involvement of state structures not as beneficiaries but as agents of change was seen as an important systemic and structural outcome.

5. **ENABLING CONDITIONS: How have enabling conditions - resources (time/money/staff), organizational culture, or business/work processes - influenced your results? How would you advise others to navigate any challenges you may have faced?**

This early warning system approach to improving disaster risk reduction results was made possible by the flexibility of the program's approach, the openness of the technical teams to apply new perspectives, collaboration with the community and the good cooperation with the Provincial Ministry of Environment. Moreover, since communities had very little power over resources and no decision-making authority over community natural resource management issues, the involvement of the provincial environment ministry and state services helped to facilitate specific actions related to mitigation plans at the community level. However, the project team learned that a true commitment to continuous improvement requires more tedious and critical teamwork to refine detailed plans and budgets to execute significant adaptations. The team favored the use of local means to respond to alerts and execute adaptations. Although, in some cases, adaptations require additional resources that were unplanned and difficult to acquire. Moving forward, the integration of an insurance service at the community level is fundamental to providing guaranteed access to resources to mitigate the effects of climatic disturbances and disaster-related risks.

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