Evidences

Study #3576

Contributing Projects:

- P1604 - Digitally integrated approaches for managing climate risk and increasing food security
- P266 - [Flagship Leader] FP4: Engagement, synthesis and support

Part I: Public communications

Type: OICR: Outcome Impact Case Report

Status: Completed

Year: 2021

Title: Six Guatemala municipalities benefit from a community-based climate risk and food security surveillance system, directly reaching 7,500 households

Short outcome/impact statement:
CCAFS scientists supported the Guatemalan government in the co-design and implementation of a hybrid community-based climate risk and food security surveillance system. The system supports the generation of information in 6 municipalities in the Dry Corridor and is scaled to other regions. The information is shared in the municipal food security councils that integrate main public sector decision-makers regarding food security. The information benefits decision-making as it helps to make more effective, timely and targeted decisions on food-security interventions. Acute food insecurity in the Guatemalan Dry Corridor is highly related to climate change and increased periods of drought. Within the Chiquimula department, the system was implemented in 6 municipalities, in each municipality monitoring 6 communities. The sampling is representative for 58 000 families in the Chiquimula department, whereas 7500 families benefit directly from the system in the department as they form part of the monitored and attended communities.

Outcome story for communications use:
Climate change is a main driver of acute food insecurity in the Guatemalan Dry Corridor. For targeted and effective responses, decision-makers were claiming a lack of the necessary tailored agro-climatic and food security information (ref.8). Responding to this need, CCAFS scientists have supported the Guatemalan government in its effort to generate locally relevant information to guide decision-making and early action. After adoption of the co-designed system (called "Sala Situacional Municipal") by the Guatemalan government in 2018 (coms material 1), CCAFS and partners supported the implementation and scaling of the system as well as the use of the information in local decision-making spaces.

Extension agents collect data in representative communities, the information is uploaded to the system through a mobile application. Automated analysis gives a food security alert level for each municipality based on standardized indicators (ref.7). The agents participate in the monthly meetings of the municipal food security council and present the data. The councils form part of the municipal governance structure and integrate public actors and NGOs that play a relevant role to assure food and nutrition security. The data from the system supports decisions in the council i.e. on the interventions for acute food insecure children or to prevent increase in crop and livestock damage (ref.5).

Although adopted by the Government in 2018, the national scaling process was challenging. Our research revealed some important lessons learnt for the design, implementation and scaling of digital tools relevant for other contexts as well (ref.9). Action Against Hunger (ACF) will keep supporting the implementation of the system beyond the CCAFS project support . During 2021, Caritas, Catholic Relief Service and Plan Internacional started to support the implementation of the information system within their projects in three different Departments (ref. 3). This assures sustainability of the process.

For improved decision-making, tailored data is not enough (ref. 8). Necessary data literacy skills among the users are equally relevant. Recognizing this importance, CCAFS scientists organized a series of workshops for food security extension agents around data literacy and data visualization (comms material 2). One product of the Workshop is the design of a Municipal Food and Nutrition Security bulletin (ref. 5). This bulletin integrates information from the monitoring system, about local climatic predictions and any other information relevant for local food security. The bulletin will inform local decision-makers outside of the municipal councils.

Links to any communications materials relating to this outcome:

- https://tinyurl.com/yygrqzgz
- https://tinyurl.com/y3xrxl4z

Part II: CGIAR system level reporting

Link to Common Results Reporting Indicator of Policies : Yes

Policies contribution:

- 648 - The Food Security Decision Support System is integrated into a national food security strategy

Stage of maturity of change reported: Stage 2

Links to the Strategic Results Framework:
Sub-IDOs:
- Appropriate regulatory environment for food safety
- Enhanced adaptive capacity to climate risks (More sustainably managed agro-ecosystems)

Is this OICR linked to some SRF 2022/2030 target?: No

Description of activity / study: A Food Security Decision Support System (FSDSS) guides SESAN to identify alerts in the changes of the livelihoods of rural communities, for the analysis of the current situation of affectation of food and nutritional insecurity, supporting decision making through the generation and use of information provided by community and institutional informants.

Geographic scope:
- National
- Sub-national

Country(ies):
- Guatemala

Comments: N/A

Key Contributors:
Contributing CRPs/Platforms:
- CCAFS - Climate Change, Agriculture and Food Security

Contributing Flagships:
- FP4: Climate services and safety nets

Contributing Regional programs:
- LAM: Latin America

Contributing external partners:
- Action Against Hunger
- SESAN - Secretaría de Seguridad Alimentaria y Nutricional (Guatemala)

CGIAR innovation(s) or findings that have resulted in this outcome or impact:
N/A

Innovations:
- 2511 - Sala Situacional Municipal - Hybrid monitoring and surveillance system for climate-related acute food insecurity in the Dry Corridor of Guatemala

Elaboration of Outcome/Impact Statement:
In 2018, the Guatemalan Secretary for Food and Nutrition Security (SESAN) adopted a community-based food security monitoring system (called "Sala Situacional Municipal" or SSM) with the intention for national scaling (ref.1). The system was co-designed with strong support through CCAFS scientist. Nation-wide scaling was challenged by a variety of institutional and political factors. But in the Dry Corridor, the implementation was a success. Together with our long-term partner, Action against Hunger (ACH) and SESAN, we supported from 2019-2021 the implementation and sustainability of the system in 6 municipalities of the Chiquimula department. This included i)continuous training of SESAN staff in the municipalities and at central level in system use and maintenance; ii)strengthening of the data collection efforts; iii)help to establish SSM as relevant information source for local decision-making, e.g. in several Municipal Food and Nutrition Security Council (COMUSAN); iv)support SESAN in the institutionalization of the SSM; and, v)support relevant partners in their effort to implement SSM.

In Chiquimula, the information generated through SSM is presented in six COMUSAN since early 2020, since a few months with an newly designed bulletin (ref.2). The information supported already several decisions in the council, e.g where to prioritize food security interventions (ref.3). The bulletin of the Local Acroclimatic Comittee of Chiqumula integrates information generated in the SSM (ref.4), thus increasing the reach of the information generated through the system. A combination of capacity building and strengthening effort, e.g. in data literacy (ref.5), as well as a high ownership of the system by our local partners (both ACH and SESAN) resulted in the positive results in Chiquimula. Other partners started to get interest in supporting SESAN with the implementation of the system in other Guatemalan regions (ref.6).

Direct users of the information system SSM are municipal food security extension agents. They use the system to collect and analyze their data and report the results in their municipality. In each municipality, six communities are monitored that are representative for the food security trends in the municipality (ref.7). Thus, the information represents 58 000 families in the region, 7500 families directly benefit from the system (ref. 3). The rural families benefit from the improved availability of localized information. Decision-maker have a better idea on where support and interventions are needed. This makes decisions on where to intervene more effective and timely, helping the vulnerable communities to be more resilient to climate-related food insecurity.

Within the Chiquimula department, the system was implemented in 6 municipalities, in each municipality monitoring 6 communities. The sampling is representative for 58 000 families in the Chiquimula department, whereas 7500 families benefit directly from the system in the department as they form part of the monitored and attended communities (assuming average families of 5 we talk about 37 500 people).

References cited:

•[1] Müller, A. (2018, Nov 14). Guatemala implements a Food Security Monitoring and Early Warning System supported by Bioversity and CCAFS. CCAFS Blog. (https://tinyurl.com/y3xrxl4z)
•[2] Muller, et al. (2020). Good data are not enough. Understanding limited information use for climate risk and food security management in Guatemala. (https://doi.org/10.1016/j.crm.2020.100248)
•[3] [D17849] Müller, A. and Navarro-Racines, C. (2021, Oct 28). Improving data usage for climate and food security decision-makers in Guatemala's dry-corridor. CCAFS News. (https://tinyurl.com/yygrqzgz)
•[4] SIMSAN. (2021, Nov 11). Municipal Information System on territorial food and nutritional security of the trinational border area. (http://www.trinacional.simsan.org/sitvan/sala-situacional-mtfrl)
•[5] Navarro-Racines C. 2020. Compilation of Agroclimatic Technical Bulletins in Guatemala, 2020. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). (https://hdl.handle.net/10568/111387)
•[6] ACH Technical Report 2021 (https://hdl.handle.net/10568/116488)
•[7] Müller A, Bouroncle C, Coto A, Gaytan A, Giron E, Granados A, Monzon M, Portillo F, van Etten J. 2019. Co-diseñar un sistema de monitoreo y alerta temprana de hambre estacional relacionado a variabilidad climática en Guatemala. Working Paper No. 261. Wageningen, the Netherlands: Programa de Investigación del CGIAR en Cambio Climático, Agricultura y Seguridad Alimentaria (CCAFS). (https://hdl.handle.net/10568/103505)
•[8] [D32980] Müller, A. (2021). Compilation of reports from the Municipal Situation Room in Chiquimula and Zacapa, Guatemala, for 2021. Wageningen: The Netherlands: Alliance Bioversity and the International Center for Tropical Agriculture (CIAT); CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). (https://hdl.handle.net/10568/116230)
•[9] [D32570] Steinke, J., Ortiz-Crespo, B., van Etten, J., & Müller, A. (2022). Participatory design of digital innovation in agricultural research-for-development: Insights from practice. Agricultural Systems, 195, 103313. (https://doi.org/10.1016/j.agsy.2021.103313)

Quantification:

Type of quantification: a) Actual counts or estimates from a particular study (please provide reference)
Number: 7500.00
Unit: households
Comments: Within the Chiquimula department, the system was implemented in 6 municipalities, in each municipality monitoring 6 communities. The sampling is representative for 58 000 families in the Chiquimula department, whereas 7500 families benefit directly from the system in the department as they form part of the monitored and attended communities (assuming average families of 5 we talk about 37 500 people).

Gender, Youth, Capacity Development and Climate Change:
Gender relevance: 0 - Not Targeted
Youth relevance: 0 - Not Targeted
CapDev relevance: 1 - Significant
Main achievements with specific **CapDev** relevance: ACH was responsible for continuously supporting capacity development with SESAN during the implementation process. One ACH technical staff was working closely with the teams in the six municipalities in Chiquimula, giving day-to-day support and accompanying field work.
ACH also supported SESAN and other partners in building capacities in other municipalities by organizing workshops and trainings.
The project also organized a series of trainings in data literacy and data visualization for the users in the municipalities.
Climate Change relevance: 2 - Principal
Describe main achievements with specific **Climate Change** relevance: Acute food insecurity in the Guatemalan Dry Corridor is highly related to climate change and increased periods of drought. Information provided through the system is more granular and locally relevant compared to the information available through national information systems. This helps decision-makers to make more timely and effective decisions that help to prevent climate-related food insecurity.

Other cross-cutting dimensions: No

Other cross-cutting dimensions description: N/A

Outcome Impact Case Report link: Study #3576

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