UGANDA

INNOVATIVE METHODS AND PARTNERSHIPS TO TACKLE CLIMATE RELATED SHOCKS

Presenter

YOUNG FARMER'S FEDERATION OF UGANDA

Description

Uganda is experiencing significant impacts of climate change in agriculture, water and the health sector. The impacts range from unprecedented rainfall patterns to extreme flooding in settlements over 1400m above sea level. Reduced groundwater supply and rainfall intensity, increased pest and disease infestations, rising surface temperatures of up to 2 degrees per decade (IPCC Fifth Assessment Report (IPCC AR5) directly affect the subsistence agriculture sector, which hosts/employs the largest proportion of Uganda's population (70%) and contributes about 25% of the country's GDP. Fragile ecosystems, including hilly and mountainous areas, forests, riverbanks, lakes and grasslands, are facing encroachment and degradation.

Moreover, the restrictions and the standard operating procedures deployed because of COVID-19 affect our operations for-example, public gatherings have been discouraged has they accelerate the spread of the virus.

In line with inspiring young farmers, creating role models and exposure, the young farmers' federation created an online food security competition that gives young farmers a chance to showcase their innovation using videos.

The winners are granted in-kind tokens to motivate them and make their farms better. Furthermore, a farmer video library platform where farmers can watch framing videos from all around the world to understand the different techniques and modern farming technologies that can be adopted on their farms has been created.

The fight to combat climate change has also involved the private sector through a PPP (private, public partnership) model in which the government works hand in hand with private institutions to promote tailored solutions to the negative effects of climate change, for example the Climate-smart Agriculture Support Project that was implemented in 2016-2020 between the government of Uganda and the world bank. The project aimed to improve agricultural productivity and provide an effective response in case of emergency crises. Other projects such as "Water for Production" through the Ministry of Water and Environment or the Uganda Clean Cooking Supply Chain Expansion Project and many others were implemented to control the rate of climate change.

At a more grassroots level, the public is made aware of the negative effects of climate change through various programmes of non-governmental organisations, private institutions, farmers' organisations, cooperatives or rotational clubs. In particular, farmers are encouraged to use modern cultivation methods, including improved technologies, to promote crop production resistant to rising surface temperatures, with low water demand, low susceptibility to pests and diseases, and short gestation periods. In unfavourable cases, the use of mobile irrigation kits is supported by the fact that most farmers in Uganda are smallholder farmers. Precision farming, where only the necessary fertilisers and chemicals are used, can generate higher returns on investment and reduce pollution levels in the agricultural sector.

Results

The use of improved cultivation methods has seen farmers increase yields from around 40 kg/acre to 200 kg/acre in bean production. The use of soil testing methods has reduced the immense amount of fertiliser, applied only when necessary for the crop. Furthermore, the planting of fodder trees has improved the air quality of the community and also provided feeds to the animal. The zero tillage aspects also enhanced the biophysical properties of the soil with an increase of carbon sequestered in the soil.

Diversification of farming methods has enabled young farmers to continue farming even in difficult times. The switch to irrigation rather than rainfed agriculture has ensured food security for the community and increased household income. The higher availability of water for production and home consumption, coupled with use of clean and renewable energy, has consequently improved the health and livelihoods of the rural women and the community at large.

Climate smartness

This story browses to different initiatives and climate-smart practices that have been promoted in collaboration with multiple stakeholders at different scales, particularly the farmers, implementing practices that take care of three key important elements to reinforce sustainability of agricultural production systems, named, soil health, sustainable water management, and biodiversity conservation. This through practices such as soil testing methods, zero tillage, irrigation systems, planting trees for animal feed, etc., contributing in an integrated manner to CSA outcomes: food security indicators e.g., yield, income, food availability; biophysical and social adaptation capacity e.g. agricultural and biological diversity conservation, efficient natural resources and agricultural inputs management. This may lead to co-benefits in GHG emissions reduction attributable to a gradual balancing in soil physical-chemical and biological characteristics such as soil organic carbon content that comprises one of the major carbon sinks in terrestrial ecosystems, also considering the carbon sequestration potential of biomass accumulated in trees. The Young Farmer's Federation of Uganda also has explored interactive spaces (exposure visits for sharing experiences) and the use ICT tools to create online events for increasing awareness and education about sustainable practices —for example farmer video libraries as a e-extension platform— through their 36000 members. The continuous work and interaction of actors from the perspective of youth and gender, stimulates the development of the social fabric and strengthens the resilience and adaptation capacity under changing climate conditions.