Adaptation Projects Contribute to Flood Preparedness and Response

The pilot climate change projects funded by CCCA are designed to increase the resilience of vulnerable communities to the long term impacts of climate change, but these projects also bring more immediate benefits for local populations trying to adapt to current climate variability and extreme events.

This was recently demonstrated during the floods which hit Cambodia between August and October 2013, affecting 21 provinces and over 400,000 households, and leading to the loss of at least 168 lives. Many of the CCCA's pilot projects have contributed to better preparedness and resilience of vulnerable communities. For instance:

Climate Resilience of Irrigation Systems: Kop Trabek Reservoir

In Takeo Province, the Kop Trabek reservoir – with its storage capacity of over 33 million cubic meters – and related irrigation systems play an essential role in supporting rice and rice-fish farming in six communes.

During periods of intense floods and heavy rains, the reservoir dyke is facing unusually high water pressure, and may collapse if not properly managed, with risks to the lives and livelihoods of nearby communities.

Through the project "Building Climate Change Resilience Food Systems: Integrating Reservoir and Rice-Fish Systems", implemented by the Prek Leap National College of Agriculture, CCCA has provided support to:

i) Execute necessary repairs and maintenance on the dyke in partnership with the Provincial Department of Water Resources; ii) Build local capacities of Water Management Committee to effectively manage release of water from the reservoir in cooperation with the upstream reservoir committee when risks become too high.

The combination of an effective maintenance and capacity development for local management of the reservoir has allowed the six concerned communes to effectively manage the impacts of the 2013's flood on the reservoir and protect over 1,000 hectares of rice paddy.

Kop Trabek Reservoir maintenance committee discussed its response to climate change

Integrating Rice-Fish Systems for climate resilience

Flood-resilient fish farming: Puok Commune

In Puok Commune, Siem Reap Province, a CCCA-funded pilot project has allowed a local fish farmer to significantly reduce losses of brood and fingerlings due to floods.

With support from the Fisheries Administration, ***Mr. Say Sorn*** had put in place a system of floating cages in the ponds he uses for aquaculture. When the 2013 floods hit Puok Commune, he was able to retain approximately 50% of his fingerlings and brood by placing them in the floating cages, thereby avoiding a significant loss. Mr. Say Sorn reckons that all of his stock could have been protected using this simple technology, but the fast rising flood waters and lack of sufficient manpower did not allow him to place all fingerlings in the cages in time. This points to the need to improve early warning systems.

Flood-Proofing Rural Roads: Borei Chulsar Commune

With financial support from CCCA, the National Committee for Sub-national Democratic Development (NCDD) has provided technical assistance for pilot communes in Takeo Province to improve the planning and design of their investments in the context of climate change. A pilot funding scheme provided climate finance through national systems to complement the existing Commune Sangkat Fund and climate-proof priority investments. In Borei Chulsar Commune, a road was built according to these standards. Unlike the nearby "business as usual" road, it has withstood the October 2013 floods and allowed 892 households to maintain access to services and markets during the flood period. This is an example of the higher return on investment and cost-effectiveness of climate-resilient infrastructures.

Climate-resilient road in Borei Chulsar Commune, Takeo

Integrated Climate and Disaster Preparedness in Aek Phnom District, Battambang

Located west of the Tonle Sap Lake and near Sangkae River, Aek Phnom District is particularly vulnerable to floods and was severely affected in 2013.

The project has an innovative engagement approach, building on a strong partnership with Older People Associations (OPAs) in concerned communes, providing services and managing inputs for climate adaptation activities such as distribution of water filters and construction of large earth tanks accessed to clean water during floods.

Accessing clean water through earth tank, Bak Amrek Village, Aek Phnom District, Battambang Province

Mr. Huom Kosal, a Commune Council member of Prek Lourng, noted that health issues of villagers during the 2013's flood had been reduced compared to previous years. Short term rice varieties (Chulsa, Sen Pidaor and IR66) were also introduced which could be harvested in time before the floods, therefore, averting major losses for rice farmers.

Other adaptation measures also included:

1. Home gardens on higher land, and growing vegetables in hanging pots during the floods.
2. Skills acquired during the disaster risk reduction training were put into practice, including better monitoring of weather forecast information through the media and government channels, prevention measures against snake and other insect bites during floods, and distribution of disaster relief kits for most affected and vulnerable households.
3. Additional adaptation measures are being proposed for inclusion in the Commune Investment Plan for 2014, based on experience gained in 2013. These include rehabilitation and climate-proofing roads and watergates, resilient rice and vegetable seeds, and tree planting.