

Enhancing Food Security in the Upper Catchments of Northern Laos



HIGHLIGHTS

- ✓ 15 tons of 28 different upland rice varieties distributed to 800 farmers
- ✓ 321 National Agricultural Research Extension System (NARES) staff members trained to strengthen their research capacities
- ✓ Farmers' perceptions, attitudes and behaviors changed through training, field trips and exposure visits

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Outcome Stories

Laughter punctuated the noisy chatter of women who were gathered around a table, packing rice seeds in the Houng Hom watershed in Ban Fai Village in Lao PDR. The light mood belied the importance of the women's task. The rice seeds, produced by their community, were being delivered to extension agencies and NGOs, to be distributed to farmers in other parts of the upper catchment of northern Laos. Just a few years earlier, farmers in Ban Fai had difficulty obtaining rice seeds, but today they produce rice seeds for farmers of other villages as well.

A CGIAR Challenge Program on Water and Food (CPWF) project, led by the International Rice Research Institute

(IRRI), has worked in these upper catchments of northern Laos, finding ways to enhance the food and livelihood security of some of the poorest farmers in the region. For local farmers like Sysomphane, upland rice farming had become unproductive. They could only produce a six months supply of rice each year, and needed to buy the rest from the trader who made regular trips to the village. Her fellow villagers, who had smaller rice fields in the valley, took to terracing the slopes, but some of these were also unproductive because of soil erosion.

"The complexity of the challenges in the marginal upper catchments required and taught scientists from different disciplines to work as a team."

The CPWF research team discussed with villagers the reasons for low farm productivity, such as the short fallow period, intensified cultivation, soil erosion, water losses, and the decline of forest cover in the watershed. The researchers initially planned to limit themselves to testing and validating a few technologies. However, because of strong community and institutional participation in the project, the scope of their engagement was expanded. For Sysomphane it was important that the project help farmers like them to produce more to meet their additional needs, reducing the number of hungry months in Ban Fai.

Knowing the land and identifying appropriate technologies

The project team inventoried, characterized and mapped land and water resources in the upper catchments. Water-poverty links were studied using household survey data. The project produced and validated a number of technologies for different upland ecosystems, including 28 rice varieties. The yield advantage of improved rice varieties over local

variety check plots ranged from 200 to 1500 kg/ha for paddy rice. One of the key features of the project was the participatory rice seed production initiative. The project produced 17 tons of seed from around 53 upland varieties. It distributed 15 tons of 28 upland rice variety seeds to about 800 farmers.

From project results to outcomes

These technologies were aimed not only at increasing rice production through varietal improvements, but also at promoting sustainable land-use systems by reducing intensive cultivation of sloping uplands. The project also had a substantial impact on building national capacities. The project team implemented training programs and organised field days and exposure visits. The research team trained 321 National Agricultural Research Extension System (NARES) staff members to help strengthen their research capacities. Staff also participated in study tours to enhance knowledge and research capabilities. The complexity of the challenges in the marginal upper catchments required and taught scientists from different disciplines to work as a team.



Sysomphane now proudly recalls the various groups and people, including foreign technocrats and scientists, who had visited Hom to witness for themselves the successful use of improved rice varieties and adoption of rice-based crop management and cropping systems. These visitors represented national research and development institutes, including eight institutions from collaborating countries. Success could also be gleaned from the resulting policy and investment/funding support for sustainable land use, community-based natural resource management, irrigation, and large-scale production and distribution of seeds. Such support from policymakers is well-placed, because in Laos, rice security is tantamount to food security – rice is life.

References

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Project Partners

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About CPWF Outcome Stories

The CPWF Outcome Stories document changes in knowledge, attitudes and practices that have emerged through CPWF-funded research. Outcomes occur when research outputs foster engagement processes that result in changes in practice or changes in behavior. These stories capture outcomes at a specific point in time; outcomes may have evolved since the completion of these projects.



Photos: CPWF

Andes • Ganges • Limpopo • **Mekong** • Nile • Volta

About CPWF

The CGIAR Challenge Program on Water and Food was launched in 2002, with the aim to increase the resilience of social and ecological systems through better water management for food production (crops, fisheries and livestock). We do this through an innovative research and development approach that brings together a broad range of scientists, development specialists, policy makers and communities, in six river basins, to address the challenges of food security, poverty and water scarcity.

The CPWF is part of the CGIAR Research Program on Water, Land and Ecosystems. WLE combines the resources of 11 CGIAR centers and numerous international, regional and national partners to provide an integrated approach to natural resource management research. The program goal is to reduce poverty and improve food security through the development of agriculture within nature. This program is led by the International Water Management Institute (IWMI).

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