



Cross-level planning for appropriate agricultural adaptation: Case studies from Savannakhet Province, Lao PDR

Key Findings:

- **Using community-based participatory methods to assess adaptation priorities incorporates site-specific locally relevant criteria—in addition to stakeholder ownership—into adaptation planning processes**
- **Selection of adaptation interventions as well as associated inputs and outcomes identified locally and those identified nationally may differ. These differences in perceptions should be addressed prior to implementation through engaging stakeholders about prioritization, design, and barriers to adoption.**
- **Interventions that appear similar at national levels can translate into different actions with highly different associated costs and benefits at community levels appropriately reflect to local contexts.**
- **Verifying costs and benefits of key components of adaptation interventions and outcomes with local stakeholders can increase the accuracy of nationally conducted impact assessments. The level of locally derived data needed may vary depending on such variables as community knowledge of selected interventions, prevalence of local data at higher levels, and landscape level interactions.**

Integration of climate change adaptation into policy and planning processes is critical for the agricultural sector. The Participatory Social Return on Investment (PSROI) framework is a participatory method used to identify locally appropriate adaptation strategies for effective community-based adaptation and to assess the costs and benefits of adaptation plans. PSROI pilot studies in Lao PDR demonstrated the critical importance of site specific information in creating adaptation plans appropriate at the community level. The studies further outlined the need for communication and cooperation across sectors and levels of governance to integrate priorities, address landscape level consequences of building resilience in certain areas, and prevent unforeseen outcomes when planning for adaptation.

Introduction

Agriculture is a significant component of the Lao PDR economy with roughly 80% of the population involved in some form of agricultural activity. The agriculture sector is also one of the most vulnerable to the negative effects of climate change, which will further threaten the food security of the population, with already over 30% of the population experiencing seasonal shortages of rice. Plans and policies must be implemented to effectively and adequately adapt the sector given the goals of food security and sustained agricultural productivity.

There are many possible pathways that could build resilience in agricultural system, thus the choice of a climate change adaptation action that is effective, efficient, and appropriate to local contexts can be a challenge. Efforts have been made internationally and within the Lao PDR to conduct inclusive planning processes which draw upon the knowledge and priorities of a diversity of stakeholders. However, climate change adaptation policies and cost estimates generally continue to lack sufficient resolution to match the realities faced by households and farming communities. The danger of this mismatch is the potential support of interventions that do not maximize opportunities to build resilience and at worst, may lead to maladaptation and the increased vulnerability of communities.

The Participatory Social Return on Investment (PSROI) framework assists in the identification of priorities and the analysis of the value of adaptation actions that build community resilience from stakeholders' perspectives. It uses participatory techniques and builds on existing local capacity to pinpoint appropriate adaptation options given the unique context of the community, and then analyzes the costs and benefits of actions from economic, social, and environmental perspectives. PSROI can be an effective method for incorporating community-based information into adaptation planning at regional and national levels.

In 2012, the Lao PDR National Agriculture and Forestry Research Institute, in particular the Agriculture and Forestry Policy Research Centre (AFPRC) and the International Center for Tropical Agriculture (CIAT) piloted the PSROI framework in two communities in Savannakhet province, Lao PDR, in the districts of Outhomphone and Champhone. Communities were engaged in prioritizing local agricultural adaptations options and the costs and benefits of these options were estimated both with local level information as well as national level data to evaluate the need for local consultation to accurately capture economic impacts.

Same goal, different results

Using the PSROI method, two villages in different districts (Champhone and Outhomphone, Savannakhet) both prioritized the same community level adaptation strategy: irrigation for improved dry season water management. In theory, the implementation of an irrigation and water management project should involve similar broad challenges and objectives—especially when viewed from a high level perspective such as from a national planning platform.

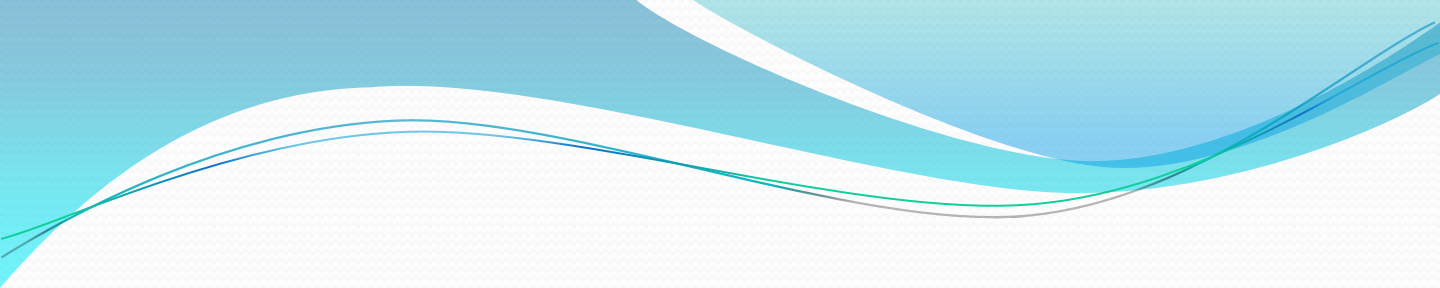
However, in practice, the prioritization of the same category of interventions can lead to highly differentiated actions with divergent inputs and outcomes. In Champhone, for example, all members of the PSROI workshop unanimously prioritized the construction of a water weir (dam) to develop their reservoir. While a dam was also considered in Outhomphone, local topography and social challenges complicated this strategy and the development of private fish ponds was favored as an alternative livelihood and water saving strategy. This intervention was highly integrated into various aspects of the local systems, leading to outcomes for business, human health, livestock, crop cultivation, and others, demonstrating the cross-sector approach needed to assess certain adaptation actions.

Key lessons

- Subtle differences in social, ecological and economic contexts can lead to the prioritization of adaptation interventions with divergent inputs and outcomes, although similar at face value. The same intervention might have different costs and implications for different communities.
- Using participatory methods such as PSROI in adaptation planning helps to uncover and integrate local contexts that can affect intervention prioritization.
- Cross-sector approaches are needed to accurately assess the outcomes of adaptation interventions that integrate multiple components of local systems.

Community-based interventions can have cross-level impacts

Decisions made at the national or regional level can impact one locale positively and another negatively. In Champhone a reservoir was recently constructed which supplied irrigation to five agricultural villages. Lam Thane village, which was not a beneficiary of the reservoir, noted in the PSROI workshop that the construction of associated irrigation



canals increased flooding and crop loss in their fields during the wet season. Watershed-level decisions, such as this one, would benefit from the input of a broad diversity of local communities in order to minimize the potential for unforeseen effects that increase vulnerability. These decisions can affect the success of local adaptation plans, such as Lam Thane's prioritization of the construction of a water-gate to increase local resilience to climate change, which is highly susceptible to regional water management decisions.

Key lesson

- Interventions, such as irrigation planning, can have broader landscape-wide implications. Successful adaptation for a broad range of communities throughout such a landscape requires the inclusion of community level information into higher-level decision-making.

Linking action with outcomes

Involvement of community members in costing adaptation options can be useful as local residents are often able to identify key differences in outcomes resulting from changes in project design or components. In Lam Thane, for example, villagers noted that changes to a dam project, such as adding pumps, canals, or reconstructing reservoirs, did not always lead to outcome changes of the same magnitude, in this case in terms of the area of land that could be irrigated. Community members can provide valuable information on outcomes that take into account local realities, thus optimizing project design and fund allocation to capture the desired outcomes.

Key lesson

- Local perceptions of the outcomes of adaptation interventions can add context specific information to adaptation planning, potentially changing the magnitude of the desired outcomes and overcoming barriers to adoption.

Policy implications

1. Robust assessments of the social, economic, and environmental costs and benefits of adaptation interventions, and how these affect stakeholders, are needed to identify appropriate adaptation responses for building resilience.

2. Adaptation planning policy should engage communities in assessing the potential effects of landscape level interventions, where building resilience in one location could lead to maladaptation in another.
3. The PSROI framework can be a useful tool for assessing adaptation priorities and costs, which can guide decision making about adaptation planning, identify impacts for adaptation funders, and in addition act as a monitoring and evaluation tool to assess these impacts over the long term.

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Supported by:

