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Policy Brief

Civil Society collaboration in measuring impact of adaptation investments: the case of agriculture in Nepal

Context

Collaborations across disciplines is key to achieving the Sustainable Development Goals because attainment of one goal could be contingent on achievements in other goals. For example, SDGs relating to water, food and energy are climate dependent and, therefore, cannot be effectively achieved without addressing climate change. Specifically, achieving SDG 1 and 2 in Nepal requires sustained agricultural growth and increased productivity. In view of growing climate risks, this can be possible only when investments are made in agriculture programmes that deliver climate-resilient services and outcomes.

Box 1: Civil Society Organizations (CSOs)

Civil Society Organisations (CSOs) that include various non-state and non-market organizations, play an important role in bringing together diverse groups of people to solve collective problems. CSOs can be made up of community groups, non-governmental organizations (NGOs), labor unions, charitable organisations, and foundations, research organisations and think-tanks.

Effective monitoring and evaluation is important to provide feedback on the impacts of investment and assist decision makers to tailor responses to emerging climate risks that may vary significantly locally and across regions.

Collaborative research understood broadly as researchers working together to achieve the common goal(s) of producing new understanding or knowledge for addressing specific gaps. It is an approach where government and the civil society organizations (CSOs) (Box 1) can work together to generate insights on the impacts of climate investments to improve their effectiveness. Collaboration with CSOs can assist government agencies to undertake informed analyses and improve effectiveness of climate investments by building on the comparative advantages of knowledge, resources, outreach and independence that CSOs bring to their work.

CSOs are often not fully aware of the constraints faced by government agencies, nor do they fully appreciate the capacity that government has in terms of resources, administrative channels, as well as tools. A commonly acknowledged mandate of CSOs is their oversight function. Together, government systems and processes, combined with the potential of CSOs in community outreach, can offer significant benefits. CSOs can help examine the actions taken by government, whether or not there is transparency in decision-making, and whether or not public resources are being used efficiently and effectively. They can also provide critical analysis that is important for improving plans with required modifications.

The Ministry of Agriculture and Livestock Development (MoALD) has initiated evaluating key climate-relevant programmes in collaboration with National Disaster Risk Reduction Center (NDRC), a local CSO. It

was MoALD's first ever collaborative research carried out with a local CSO to examine the impacts of selected programmes in helping the vulnerable farmers with particular focus on poverty and gender (MoALMC, 2018¹). The research was conducted in two districts: Myagdi in the mid-hills and Bardiya, in the Tarai plains. The initiative provided a snapshot of the current gaps in the delivery of climate invest-

ments, and generally concluded that climate-related public investments in the agriculture sector were paying off.

This is a brief synopsis of the collaborative research initiative of the MoALD and presents some policy recommendations to support more similar work for effective climate spending for meeting the SDGs. It also shows how collaboration between government and CSOs can contribute to gauging the impact of climate investments and suggesting ways to improve their effectiveness.

Climate vulnerability of Nepal's agriculture

Nepal's agriculture sector contributes to about 27.6 percent of the Gross Domestic Product (GDP) and employs almost 2/3 of the population. However, it also faces multiple problems such as loss of crops due to floods, droughts, diseases, insect infestations; loss of land due to landslides, sand casting, bank erosion; and reduced soil fertility due to erosion. All of these

are linked to climatic conditions. Low performance of the sector in general and lack of other employment opportunities have forced a large number of youth to seek work as migrant labourers abroad to support their families. The result has been shortages of agricultural workers leading to further weakening of the prospects of the sector to support national food security and economic growth. Projections of economic losses in agriculture due to climate change are alarming (Box 2) and if unaddressed, the threats of climate change will only exacerbate the problems.



¹ MoALMC, 2018: Impact of Climate Finance in Agriculture on the Poor, MoALMC and UNDP Kathmandu, Published by Ministry of Agricultural, Land Management and Cooperatives. [http://moad.gov.np/public/uploads/1405688690-Collaborative%20Research%20\(1\).pdf](http://moad.gov.np/public/uploads/1405688690-Collaborative%20Research%20(1).pdf)

Integrating climate change through ADS

Nepal has formulated the long-term (2015-2035) Agriculture Development Strategy (ADS) for transforming agriculture into a self-reliant, sustainable, competitive, and inclusive sector. The transformation is expected to come through improved governance, higher productivity, profitable commercialisation, and competitiveness. The ADS also recognises that climate change will be one of the main constraints in achieving higher productivity, which in turn is closely linked with profitable commercialisation and competitiveness.

A nationwide survey by the Central Bureau of Statistics (CBS) in 2016 to analyse the perceived impacts of climate change found that a large number of people had already observed changes taking place in the rainfall pattern of the last 25 years, availability of water sources, plant diseases and rise in infestation by insects (Table1). These changes have direct bearing on the growth of agriculture and income of farmers (CBS, 2017²).

Box 2: Estimated economic losses caused by climate change

1. Increased variability and more extreme climatic events contribute to a loss of 2-3 percent of GDP per year in water management and agriculture sectors, with much higher losses in extreme years (IDS Nepal, PAC, and GCAP, 2014).
2. Total loss in agriculture due to floods, landslides, and drought was estimated to be about 2,360 million rupees for 2015 (AED, 2015), which was more than 10% of the total budget of the Ministry for that year.

ADS has emphasised the prioritisation of agricultural programmes that enhance resilience of farmers to climate stresses. It has identified introducing stress tolerant varieties of major crops, developing early warning systems, and agriculture insurance as measures to enhance resilience; and integrated water resource management, recharge basins, catchment management, and non-conventional irrigation as means that could help to boost production.

National Adaptation Plan for agriculture (NAP-Ag), a joint initiative of Government of Nepal (GoN) and UNDP/FAO to help improve adaptation, has been underway to assist the mainstreaming of climate change in plans and budget by incorporating economically viable adaptation options over the medium and long-term.

Table 1: Perception of key CC impacts observed in last 25 years (Source: CBS, 2017)

Impact area	Impact indicators	Respondent in (%)
Rainfall	Monsoon delayed by 1 to 4 weeks	84.58
Water sources	Complete drying up of surface water in mountain region	74.56
	Complete drying up of the underground water in hill area	48.81
Drought	Increase in drought	99.33
Diseases and insects	New diseases in crops	60.25
	Appearance of new diseases in livestock	45.98
Landslides	Increase in incidence of landslides	78.12
Hot and cold waves	Increase in cold wave in central mountain region	100
	Increase in hot wave in eastern Tarai	56.25
Invasive plants	Observed invasive creepers in agricultural land	92.03

² Nepal Climate Change Impact Survey, Central Bureau of Statistics, Government of Nepal, Kathmandu, 2016.

In particular, NAP-Ag is supporting a review of the Monitoring and Evaluation (M&E) functions and Key Performance Indicators (KPIs) (with climate change accounted for) and looking at how ADS programmes specifically link with the climate-relevant objectives and broader performance goals of achieving increased productivity, farmer resilience, etc. The impact monitoring framework of NAP-Ag will help generate evidence-based results of adaptation options, which will continue to inform policy dialogues on national adaptation planning.

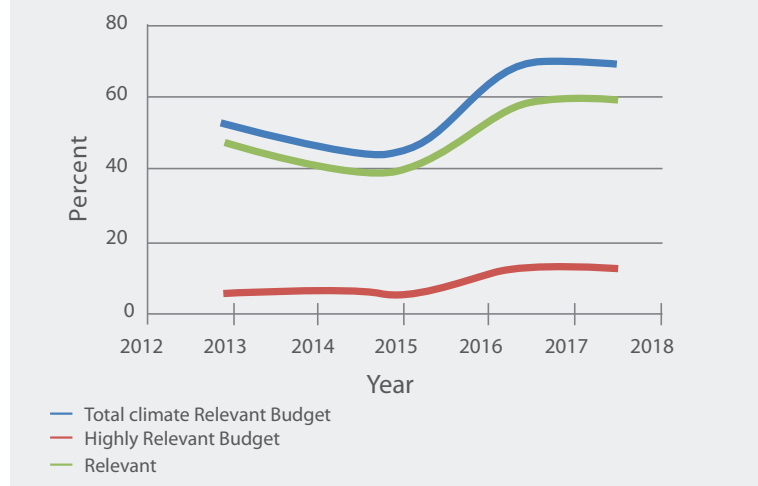
In the newly adopted federal structure, the responsibility of implementing most of the agriculture programmes has shifted from the federal government to provincial and local governments. The large number of people experiencing climate-related stresses (CBS, 2017) necessitate integration of climate change systematically in local plans, which will require understanding local climate vulnerability and planning of the responses. The findings of CBS (2017) and the evidence-based results of adaptation options generated through NAP-Ag process will provide a basis to begin integrating climate change in the local plans.

Climate-relevant activities of MoALD

The agriculture programmes, by default, were already addressing the impacts of climate change (NPC, 2013). According to the GoN's consolidated expenditure reports, between 41% and 59.4% of the annual budget of the MoALD from 2013 to 2017 was identified as being related to climate change (Figure 1).

At the national level, this amount made up 20% of the climate related budget, making MoALD one public agency that was allocating

Figure 1: Share of Climate Budget in total MOALD Budget



a substantial share of its budget to climate-relevant programmes. A majority of these programmes were projects providing irrigation water to farms where local sources had declined or disappeared in the past decade. At the local level, the erstwhile district agriculture offices had spent between 15% to 53% of their annual budgets on activities that were climate relevant (d-CPEIR, 2017³).

Even though a large share of MoALD's programmes were climate related, it has remained difficult to measure how they have been able to increase the resilience of farmers. The information generated through regular M&E is generally quantitative and does not provide qualitative information. In the absence of specific indicators that relate to climate change, the regular M&E lacks a definite climate perspective. Monitoring the climate benefits of the regular programmes requires a different mindset for understanding the issue, which is often limited among monitoring staff. Further, regular programmes are generally designed with specific objectives such as providing irrigation or increasing production, and, hence, measuring ancillary climate objectives and benefits often gets obscured in the conventional M&E system. In addition, the capacity of local governments responsible to plan and implement agriculture programmes locally is inadequate for carrying out effective M&E because of lack of experience, training, and understanding of the issue. Collaborative research has been quite effective and helpful in carrying out the evaluation and providing feedback to fill the gap in regular M&E.

³ Synopsis of the district climate public expenditure and institutional review (d-CPEIR) conducted in the districts of Achham, Bardiya, Dhading, Myagdi, Udayapur, Ministry of Federal Affairs and Local Development, 2017.

Case Study: Agriculture

This collaborative research was designed as part of monitoring of climate related investments in the agricultural sector, which is linked to the national commitments of the SDGs

Selection of CSO

MoALD carried out a collaborative research in 2016 with NDRC, to examine the impact of climate investment in regular programmes implemented by the ministry since 2013. It was the first collaborative research being conducted and therefore the selection of CSO was done through a meticulous process. First, the CSOs involved in climate research and available for interaction were visited to assess their capacity in terms of logistics, expertise and workforce as

well as their interest in collaborative research. It was followed by developing a concept note and Terms of Reference (ToR) for collaboration. Next expression of interest was sought. And from among the applications received, shortlisted CSOs were invited for presentation and discussion before final selection.

The specific objectives of the effort were to:

- Assess whether the climate-relevant budget in agriculture was spent as initially allocated;
- Assess the socioeconomic impact of climate-relevant programmes on the climate-vulnerable poor with a special focus on gender; and
- Analyse the factors that determined decisions about where resources were allocated including the mechanisms that facilitated those decisions.

Findings of the collaborative research

- **Impacts on the poor and vulnerable** - The productivity of cereal crops increased as farmers supported by climate-relevant programmes practiced multiple cropping, managed local water more effectively, planted drought- and flood-resilient varieties, used organic fertilisers, and practiced tunnel farming. Some investments, such as those in improving irrigation facilities, had helped women farmers to save time and earn more.



However, the very poor, the landless and poor households (with less than 0.5 hectares of land), who lived far away from service institutions had not benefited by climate-relevant programmes. The approach adopted to assist farmers (through farmers' group) had failed to include the poor and ultra-poor farmers. The climate-relevant programmes had also been ineffective in introducing gender sensitive climate-friendly agricultural technologies to reduce the workload of women.

- **Out-migration and under-spending of climate budget**– The expenditure in some climate-relevant activities had declined over time due to increased out-migration of the youth, and this indicated the urgency to address climate stresses effectively for sustainable agricultural growth.
- **Assessing vulnerability to improve climate-relevant proposals** - Locally available information on vulnerability was

scattered and seldom used for project identification, planning or implementation. Agriculture extension service was not equipped to communicate climate-related information to farmers, nor did it inform them of local research findings. There was very little vertical communication among agricultural institutions on climate-related issues. Planners need to use vulnerability assessment tools and reports for improving budget proposals.

Even though the findings cannot be fully attributed to climate-related public investments only, as other investments may have also contributed to the change, the findings generated by research carried out in collaboration with CSO should be used as a step towards building foundations for future impact analysis through collaborative research and for enhancing understanding the benefits of climate investments.

Regional Examples

Nepal can draw upon other regional examples for good practice in collaborative research. In Indonesia, for example, the Centre for International Forestry Research (CIFOR) is collaborating with the Ministry of Finance to examine how four different existing climate financing mechanisms integrate aspects of gender equality and pro-poor dimensions in programme



implementation. It is also examining how these channels can be more transformative and cost-efficient to achieve their impacts in an integrated manner. UNDP is also supporting the Ministry of Women's Empowerment and Child Protection in collaboration with the national CSO Pattiro to assist six different line ministries in designing, implementing, and evaluating the experiences of climate finance pilot projects in selected subnational sites, including those focused on climate-smart agriculture and forestry.

Conclusions

Nepal's experience in collaborative research has led to a better understanding of how government systems and processes combined with the potential of CSOs for evaluating the effectiveness of climate investments can help planners in taking necessary steps to improve the focus of climate-relevant programmes.

The experience has shown that the government and CSOs can work together on collaborative research to determine the type of analysis that would be most useful for such improvements by making the best use of the combined expertise of both institutions. Collaborative research has potential to generate information to meet specific needs and offer feedback on projects developed and implemented particularly at the local level, where they often fail to yield desired results, despite clear objectives and identified potential beneficiaries due to a lack of information about climate stresses.

The approach can be an effective way to regularly improve inter-ministerial climate policy and planning processes consistent with fulfilling the targets under the SDGs, Nationally Determined Contributions (NDCs) and the NAP processes. Sectors beyond agriculture willing to take actions or those seeking to improve their development plans for meeting the SDGs could find collaborative research useful as it can bring outcomes in focus. The MoALD experience is an example of how it can be done and how it can assist in enhancing the level of understanding.

Collaborative research offers opportunities to explore areas of synergy using local projects as entry points especially in updating information in the Medium Term Expenditure Framework (MTEF), at national, sub-national, and sectoral levels. The MTEF provides a rolling budget that can be continuously reviewed and adjusted for effective impacts of climate investments.





Summary of Recommendations

The following recommendations can be considered to capitalise on the potential of CSOs to support government in improving the performance of projects seeking to enable farmers to adapt to climate impacts.

For Government Agencies

- Create opportunity to use of the independence of the CSOs in conducting critical analysis and accessing funds for evaluation of climate investments.
- Engage with CSOs for ensuring impartial evaluation of projects and obtain feedback

not generally available through regular monitoring and evaluation processes for use in planning.

- Engage with local CSOs to generate information about climate stresses at the sub-national level, where projects are expected to help the communities and farmers by producing results within short durations, but lack adequate information about exposure stresses.

For CSOs

- Explore engaging with government agencies to support planning and designing of gender responsive climate actions and play a proactive role in such initiatives. Build mutual trust for continuous engagement.
- Explore the possibility of capacity building to develop joint proposals for gauging effectiveness of climate investments.

For Development Partners

- Seize the potential to assist the GoN in supporting collaborative research in climate-affected sectors to help Nepal in achieving the SDGs and NDCs.

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