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Practical ACTION

EU-UNEP CLIMATE CHANGE AND SECURITY PROJECT
BUILDING RESILIENCE TO CLIMATE-RELATED SECURITY RISKS IN WEST KARNALI, NEPAL

CLIMATE CHANGE AND SECURITY CONTEXT

The impacts of climate change are highly visible in Nepal's Karnali River Basin. Extreme weather events and climate-related hazards such as floods, droughts, hot and cold waves, and forest fires significantly impact natural resources and threaten livelihoods of communities living in the Basin. As temperatures rise and rainfall patterns become more erratic and unpredictable, disputes often occur over access to community forests, availability of water and land ownership, especially in areas where governance mechanisms are still weak.

In recent years, for example, devastating floods have destroyed essential water infrastructure and eroded private land, leading to tension over water resource use and spurring disputes over the taxation of land no longer viable for farming purposes. Marginalized groups – who are often the most exposed to climate change hazards and have the fewest resources available to adapt – are particularly vulnerable to climate-related risks.

To cope with livelihood insecurity, migration to the urban centres of Nepal and across the border to India is common, particularly among men. Seasonal migration is not new to the region and has long been used to supplement household income during the dry season. However, some communities report that seasonal migration is increasing, and household members are staying away for longer periods of time. This has important implications for other individuals who remain, and are often tasked with new roles and responsibilities to compensate for lost income.
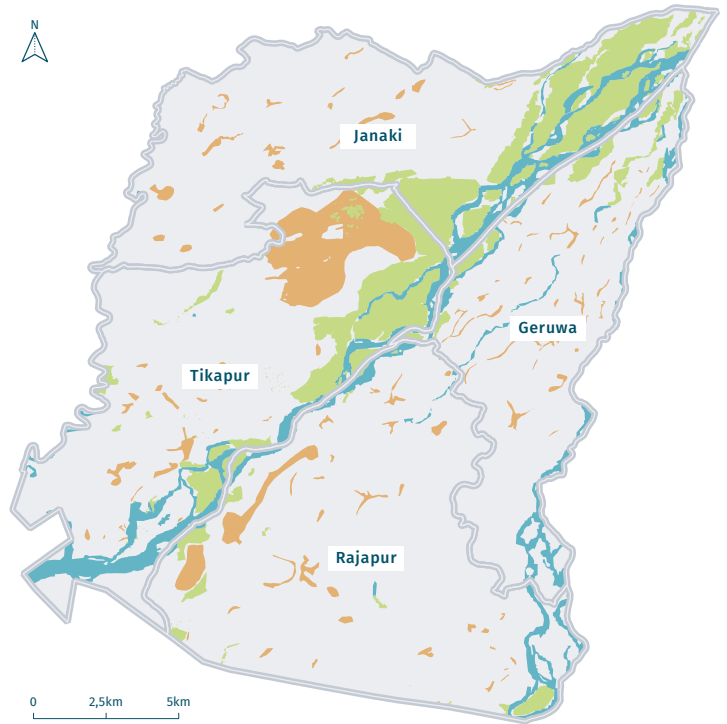
RAINFALL PATTERNS FLOODING DROUGHTS FOREST FIRES MARGINALISATION MIGRATION URBANISATION

Map: *Land use map of the Karnali River Basin (2019) showing settlements (orange), agricultural land (grey), rivers (blue), and forests (green). A combination of climate change hazards and other socio-economic and environmental factors in the region are impacting the lives of communities that rely on natural resources to sustain their livelihoods.*

For a more comprehensive analysis of the links between climate change, peace and security in Nepal, see the Climate Fragility Risk Brief for the country.

A CLIMATE-SECURITY PILOT

In 2018, the EU-UNEP partnership on Climate Change and Security established a pilot project in Bardiya and Kailali districts of West Karnali, Nepal to improve understanding of climate change risks in the country and test integrated approaches to programming that address the underlying drivers of insecurity and enhance resilience to climate change.

Using a combination of climate change adaptation and peacebuilding activities, the project aimed to achieve three core objectives:

➡ PROMOTE SUSTAINABLE AND CLIMATE-RESILIENT LIVELIHOOD OPTIONS FOR VULNERABLE GROUPS;

➡ STRENGTHEN LOCAL GOVERNANCE CAPACITIES FOR NATURAL RESOURCE MANAGEMENT AND DISPUTE RESOLUTION; AND

➡ ENHANCE RELATIONSHIPS, SOCIAL COHESION, AND TRUST BETWEEN COMMUNITIES.

SOCIAL COHESION + INCLUSIVE GOVERNANCE

RESILIENCE
TO CLIMATE-RELATED
SECURITY RISKS

Peacebuilding

Sustainable livelihoods

Climate change adaptation
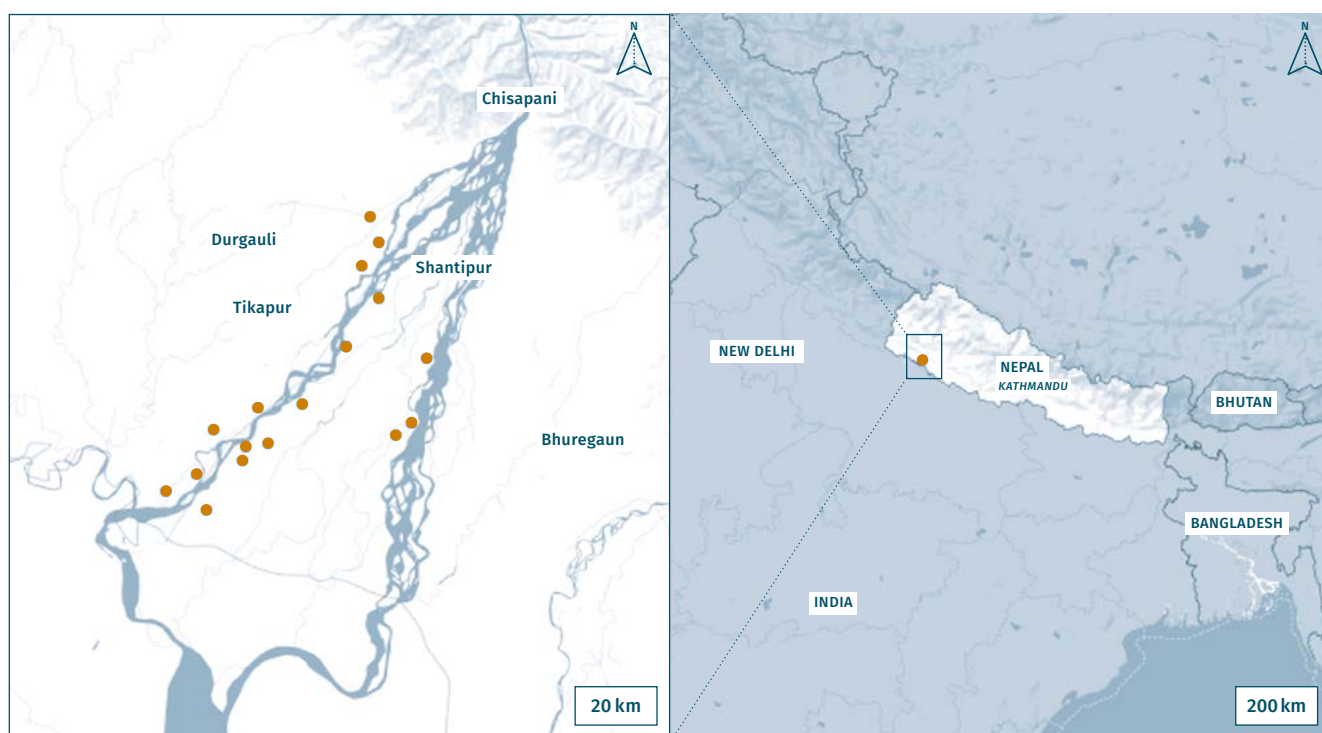
Map: Pilot communities are in the Karnali River Basin, along the Kauriala and Girwa rivers.

The project developed a suite of guidance materials to support the integrated design of pilot initiatives in Nepal and in Sudan where a second pilot project was implemented simultaneously. These tools and resources were updated after finalization of the pilot projects, to document learning and support the design and implementation of future climate-security programmes.

MAIN ACTIVITIES AND RESULTS

1. Strengthened capacity of communities to mediate disputes through inclusive natural resource-related governance mechanisms

To address growing intercommunal tensions over natural resources, the project supported community-based natural resource management committees in each of the 17 project locations to identify environmental challenges, devise possible community-based solutions, and mediate natural resource-related disputes. In some cases, committees were directly involved in mediating disputes between two communities or with local government. On the edge of Bardiya National Park, for example, local committees facilitated a dialogue with park authorities to discuss challenges related to recent flooding of a river marking the park boundary (Box 1). In other cases, committees managed disputes over access to water or infrastructure maintenance.

Photo: CRDRC member Mahadev Tharu points to contested land in between Bardiya National Park and Dakshinpurba community in Geruwa Rural Municipality, Nepal. ©Ram K. Gurung

OVER 100 HECTARES OF FARMLAND SWALLOWED BY THE GERUWA RIVER

BARDIYA NATIONAL PARK

Box 1: Dispute resolution between Bardiya National Park authorities and the Dakshinpurba community in Nepal
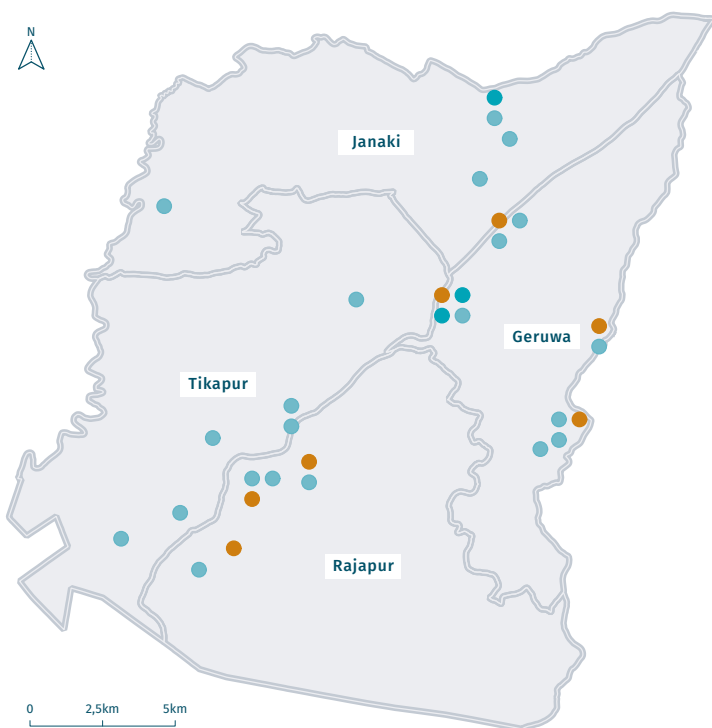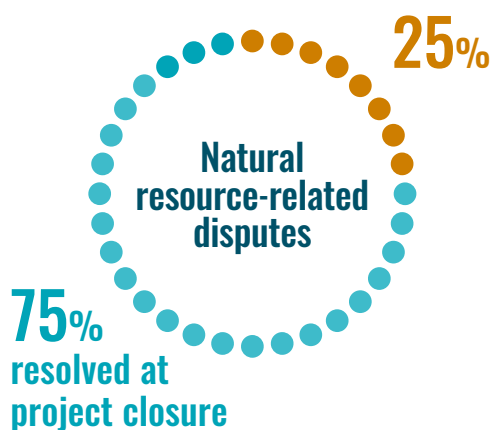
The Geruwa river has historically been understood to be the official boundary between Bardiya National Park and Dakshinpurba community. However, climate change is contributing to an increasing number and intensity of floods, which in turn have led to the river frequently changing its course. This has resulted in the boundary of the park moving over time and cutting into farmland. Flooding has given rise to disputes between local authorities and farmers over taxation of more than 100 hectares of land which has been swallowed by the river.

With support from the project, the Community Disaster and Climate Resilience Committees (CDCRC) in Dakshinpurba, together with a committee formed by the Geruwa River flood victims, launched a public campaign to advocate for more just treatment and facilitated a constructive dialogue between park authorities and the community. The process resulted in a decision by the local government to reduce the land tax for flood victims by 75 percent, and in January 2021, a plan was approved to construct a dam along the border of the National Park to protect farmland from flooding.

Mahadev Tharu, a member of the CDCRC involved in the dialogue process between Dakshinpurba and the park authorities, noted that "once the dam is constructed, we are hopeful that the people will get back land that was grabbed by the National Park" and that "the age-old dispute will be settled, leading to an improved relationship with the park management. Without CDCRC," he noted, "we would not have been able to voice our concerns."

The strengthened committees – and their enhanced capacities for mediation – had a marked impact on resolution or reduction of disputes in the area. A conflict tracking tool used to identify and monitor disputes related to natural resources over the course of the project implementation found that out of 32 identified disputes, 75 percent were either reduced (22 conflicts) or fully resolved (3 conflicts).

25%

Natural resource-related disputes

75%
resolved at project closure

Case 1

The establishment community forest in Baklawa resulted in disputes between three forest user groups over claim to and use of forest land. Awareness raising activities conducted by the project helped communities understand the benefits of community forests, particularly in the context of a changing climate. By building the capacity of local governance mechanisms, such as Community Forests User Groups, communities are better prepared to equitably manage forest use, enhance conservation efforts, and peacefully resolve intercommunal disputes. As a result, the communities resolved their dispute over the forest and now co-manage its access and use.

Janaki

Geruwa

Tikapur

Rajapur

0   2,5km   5km

Map: Status of the natural resource-related disputes addressed by the project through community-based organizations in the Karnali River Valley.
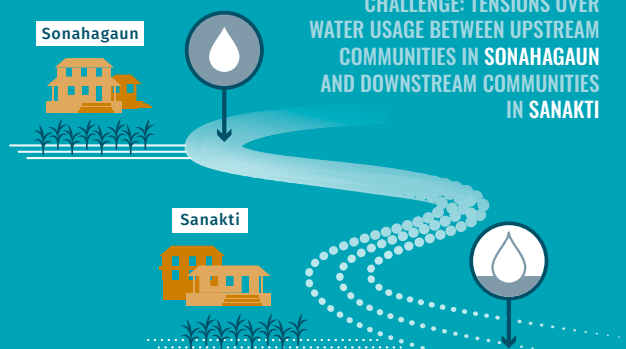
Case 2

CHALLENGE: TENSIONS OVER WATER USAGE BETWEEN UPSTREAM COMMUNITIES IN **SONAHAGAUN** AND DOWNSTREAM COMMUNITIES IN **SANAKTI**

Sonahagaun

Sanakti

Sonahagaun and Sankati communities share the same irrigation canal for farming, which funnels water from upstream (Sonahagaun) to downstream (Sankati). However, the supply of water is limited and residents in Sanakti were often left without enough water for their farming and household needs, leading to disputes between the two communities. To improve equitable use of water, the project supported the establishment of an inclusive water committee to agree on a fair distribution plan and manage water use. This significantly improved communication between the two communities and resolved the longstanding dispute.

Photo: *CDCRC meeting in progress in Sangharshanagar village. © Ram K. Gurung*

The committees also created a platform for dialogue with local government, as local committees were invited to actively engage in key government planning processes for disaster preparedness and response. This helped to ensure that community needs and capacities are considered in local plans and policies, and to build trust between communities and local government.

> *UNLIKE IN THE PAST, THESE DAYS THE CDCRC IS INVITED TO PARTICIPATE IN THE FLOOD DAMAGE ASSESSMENT, AND OUR RECOMMENDATION HAS BEEN MADE MANDATORY BEFORE THE LOCAL GOVERNMENT PROVIDES ANY RECOVERY AND RELIEF SUPPORT IN THE CASE OF FLOOD-INDUCED DAMAGE OR WILDLIFE-RELATED REPARATION TO THE AFFECTED HOUSEHOLDS.*
>
> *MINA THARU, A MEMBER OF THE CDCRC*
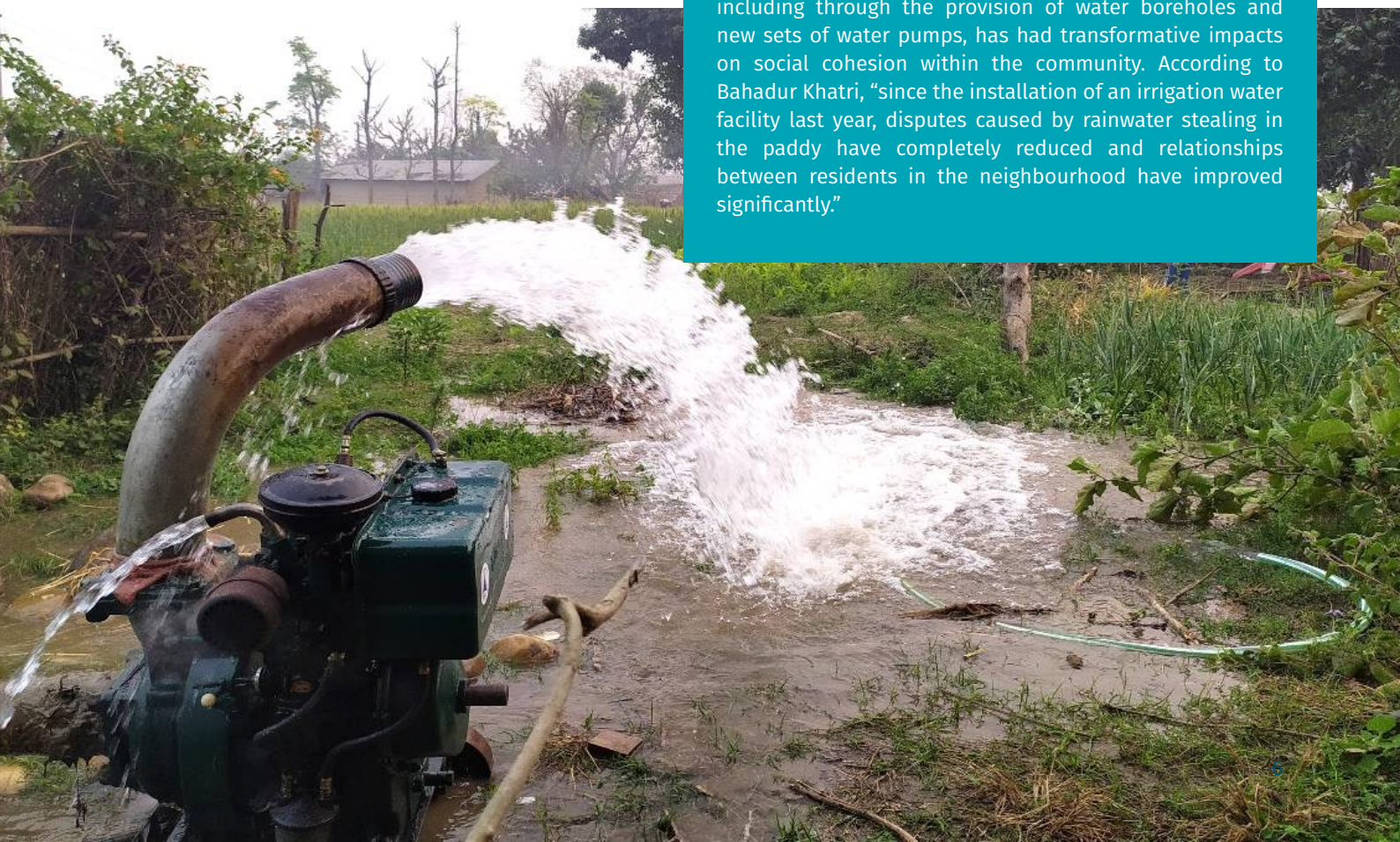
FLOOD VICTIMS   CDCRC   GOVERNMENT
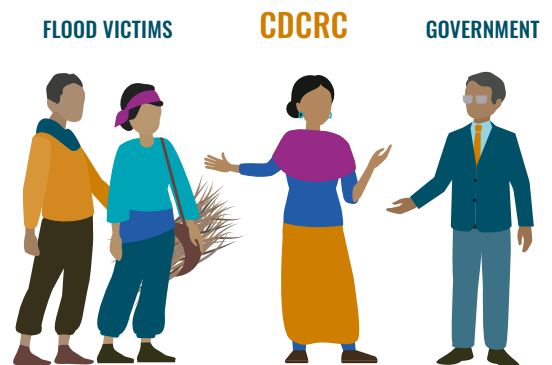
2. Enhanced social cohesion through peace-positive climate change adaptation and resilience-building measures

Intercommunal conflicts in the Karnali River Basin often arise around defunct water infrastructure, especially when competition over scarce water resources increases during the dry season or when monsoon rains are weak. A community-led process to improve water infrastructure and management supported by the project reduced incentives for conflict over water and improved capacities to cope with increasing weather extremes.

Implemented under the leadership of newly formed construction and maintenance committees, these activities included the installation of 32 water points, expanding irrigation access in 13 communities as well as the rehabilitation of 3 land protection schemes along existing irrigation canals, which had the dual purpose of providing protection against flooding and erosion as well as increasing access to irrigation. A strong focus was put on developing governance structures to manage, finance and maintain the infrastructure beyond the duration of the project.

FOR THE PAST SEVERAL YEARS, RAINFALL HAS BEEN MORE UNPREDICTABLE AND RAINWATER STEALING IN THE FIELDS HAS GIVEN RISE TO SOCIAL DISHARMONY

Box 2: Improved water infrastructure and management strengthen social cohesion in Sonahaphanta

Sonahaphanta, a small village located at the bank of the Geruwa Karnali River, is one of the poorest villages in Bardiya district, home mainly to small landholding farmers whose livelihoods rely on rainfed agriculture. Amar Bahadur Khatri, the village Badghar or traditional leader responsible for mediating disputes at the community level, described that "for the past several years, both winter rain, pre-monsoon rain and even the monsoon rains have been more unpredictable, and rainwater stealing in the field has given rise to social disharmony."

Support for critical water infrastructure and capacity building for the sustainable management of this infrastructure provided by the Climate Change and Security project, including through the provision of water boreholes and new sets of water pumps, has had transformative impacts on social cohesion within the community. According to Bahadur Khatri, "since the installation of an irrigation water facility last year, disputes caused by rainwater stealing in the paddy have completely reduced and relationships between residents in the neighbourhood have improved significantly."

Photo: Farmers utilize the water facility installed under the project to irrigate their farms. ©Ram K. Gurung

3. Improved inclusion of marginalised groups with climate-smart alternative livelihoods

Livelihood insecurity in the Karnali River Basin is one of the key drivers of seasonal and permanent out-migration, particularly among young men. Those who remain behind – often women – are tasked with increased burdens to compensate for lost income of family members who migrate.

This was the case for Geeta Tharu in Nangapur village when extreme flooding in 2017 and again in 2019 destroyed her family's crops. Following the disaster, Ms. Tharu's husband migrated to the capital Kathmandu for most of the year to work in the informal construction business, leaving Ms. Tharu behind to support their family.

To create more favourable economic conditions in the region, the EU-UNEP Climate Change and Security Project supported alternative and climate-resilient livelihoods for vulnerable households. Together with local government, community members identified marketable and climate-smart economic opportunities, both on and off-farm.

Ms. Tharu enrolled in a small business training course and received seed funding to start her own small restaurant in her village. During her first year of business, Ms. Tharu earned a daily income of USD 10 to 15, opened a bank account, and saved more than USD 500. The business enabled Ms. Tharu to send her daughter to a private school and bring her husband home to reside permanently in Nangapur and support the family enterprise.

Photo: Geeta Chaudhary preparing food for her customers. © Ram K. Gurung

Ms. Tharu's story is not unique. At the start of the project, the majority of households in the project area (78 percent) relied on one or two livelihood practices, most of which were agricultural and highly vulnerable to changing weather patterns. By the end of the project, however, 67 percent of households had at least three different livelihood practices, allowing them to adapt the source of income to the season and prevailing climatic conditions, and nearly all surveyed (95 percent) reported improved income as a result of project activities.

Livelihood diversification before the project *(n=335)*
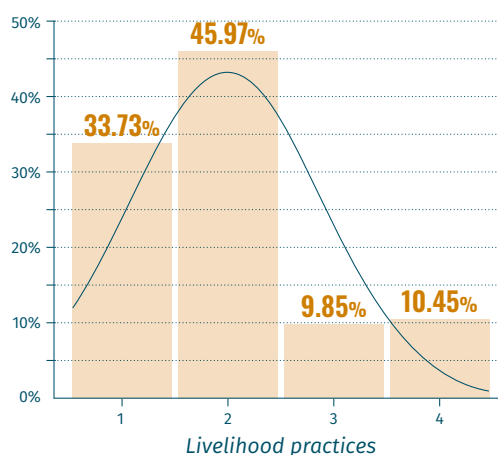
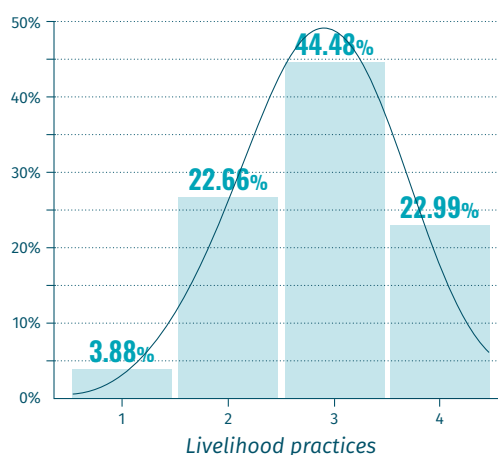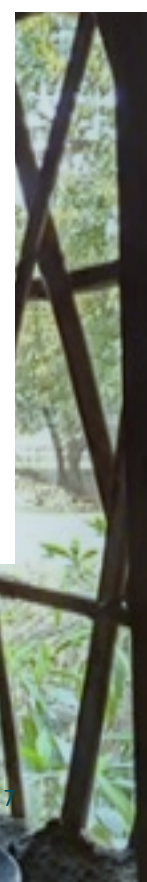**Livelihood diversification after the project** *(n=335)*

Figure: Diversification of livelihood after the implementation of the project indicates an increase in the number of livelihood sources per household from 1 or 2 (78%) to 3 or 4 (67%). Source: Household survey (February 2021).

LESSONS LEARNED

In contexts experiencing multiple and linked environmental, climate and security challenges, this pilot project demonstrated the added value of combining climate change adaptation and peacebuilding activities. The project's integrated approach yielded positive results for livelihoods, natural resource management and climate change adaptation as well as for social cohesion, governance, dialogue, and mediation.

THREE TIPS FOR CLIMATE SECURITY PROGRAMMING IN ALL CONTEXTS	
1 **CONFLICT-SENSITIVITY**	To avoid unintended consequences that could inadvertently escalate conflict risk, project design and implementation should be grounded in a nuanced and detailed understanding of underlying conflict dynamics and inclusive, participatory processes.
2 **LOCAL CLIMATE-SECURITY AWARENESS AND CAPACITIES**	Building the awareness and capacities of implementing partners and beneficiaries are necessary to: ➲ Assess the complex interactions between climate change and conflict, ➲ Effectively combine governance and peacebuilding activities with more technical interventions, and ➲ Monitor and evaluate progress towards both climate change adaptation and peacebuilding impacts.
3 **DIVERSE EXPERTISE**	Including peacebuilding and climate change adaptation expertise in the implementation team from the onset is important to avoid siloed approaches.

Photo: *Nirmala Chaudhary, Murgauwa, Rajapur Municipality, vegetable farmer. © Practical Action*

SEVERAL IMPORTANT LESSONS EMERGED FOR DESIGNING AND DELIVERING CLIMATE CHANGE AND SECURITY PROGRAMMING IN NEPAL OR IN OTHER SIMILAR CONTEXTS.

☑ **Working with local institutions, and linking community-based efforts to local government, can strengthen resilience to climate-related risks while improving relationships between communities and government.** In many contexts, community-based organizations are already responding to climate and environmental risks, but such efforts are poorly linked to local government. Building the capacity of local institutions – such as the Community Disaster and Climate Resilience Committees (CDCRC) – helped establish community ownership of the project from the onset and provided an inclusive mechanism for dispute resolution at the community level. Furthermore, working with local institutions, including local government and other stakeholders in projects planning, implementation, and monitoring helped improve relationships among different actors and build trust. These relationships and new capacities are essential to sustain project activities after the project's conclusion.

☑ **Combining interventions focused on governance and dialogue with more technical climate change adaptation activities created added value for both enhancing social cohesion and climate action.** Project interventions focusing on sustainable livelihoods, climate change adaptation, and resource governance are essential for enhancing the resilience and well-being of communities in Nepal. The project demonstrated that if designed in an inclusive way, climate change adaptation and sustainable livelihoods initiatives can improve resilience to climate and environmental risks while building trust, improving social cohesion, and preventing disputes. For example, by building the capacity of local institutions in mediation and dialogue, the project was able to contribute to resolving natural resource-related disputes on the one hand, while addressing the core drivers of resource competition on the other, such as by providing improvements in water infrastructure and climate-smart livelihood options.

☑ **Integrated programming can offer opportunities for strengthening women's leadership when gender is mainstreamed across all elements of programme design and delivery.** This is especially true in areas experiencing demographic shifts due to the out-migration of men. In the project area, local committees such as the CDCRCs presented an avenue for women empowerment and community leadership. At the same time, livelihood activities specifically targeting women helped to improve financial independence and leadership skills and can lead to gains beyond women's economic empowerment. However, fully leveraging opportunities for strengthening the inclusion of marginalized groups requires an intersectional lens to be applied at all levels of project design and delivery. This requires specific gender expertise to inform the integrated analysis that underpins the project as well as in project design and implementation. Specific attention should be paid to fully engaging women in conflict mediation and peacebuilding structures.

☑ **The federalism reform process is an opportunity to mainstream climate change and peacebuilding considerations into new policies and strategies.** Federal and provincial governments are currently formulating different sectoral policies and strategies for climate change and disaster risk reduction as well as land and forest management to fill the gap between the national and the local level. This is a window of opportunity to inspire local governments to mainstream peacebuilding considerations into these policies and strategies.

ABOUT
THE PROJECT

This pilot project was implemented under the EU-UNEP partnership on Climate Change and Security, establi- shed in 2017, with the aim of collaborating to develop integrated approaches to climate-conflict analysis and deliver actions on the ground to address emerging cli- mate-related security risks. Building on the findings of the report commissioned by the Group of Seven (G7), "A New Climate for Peace," the five-year EU-UNEP Climate Change and Security project (2017-2022) aimed to strengthen the capacity of countries and international partners to **identify environment and climate-related security risks at global, national and community levels, and to programme suitable risk reduction and response measures.**

Implemented by UNEP, this project was supported by the EU Instrument contributing to Stability and Peace (IcSP). To deliver the project, UNEP worked hand in hand with the German think-tank adelphi on analysis, advocacy and capacity development. At national and community levels in Nepal, the project was implemented through Practical Action, in close collaboration with local, state and national authorities.

For more information see: unep.org/climatesecurity