



Building Resilience through Climate-Resilient Livestock Farming in Western Nepal (GRAPE)

Context Analysis and Project Brief

Nepal is highly vulnerable to climate change, with studies from the Asian Development Bank predicting a 2.2% loss in annual GDP by 2050 due to its impacts. The agricultural sector accounts for over half of the country's total emissions, with 60% coming from livestock-related enteric fermentation and manure management. Despite contributing 11.5% of GDP, livestock productivity remains low, particularly for poor households. Key challenges include reliance on traditional breeds, inadequate housing and feeding, limited access to quality feeds, and lack of insurance and risk transfer mechanisms. Climate projections indicate rising mean annual temperatures, especially in the western regions, reduced monsoon precipitation, and increased heavy rainfall events. The Karnali and Sudurpaschim provinces are already facing extreme weather conditions like floods, landslides, storms, and droughts, which directly impact agriculture and livestock. These climate changes lead to increased disease incidence, and decreased availability of feed, fodder, and water, ultimately reducing productivity.

Goal

The goal of this project is to build resilience among smallholder livestock farmers in Karnali and Sudurpaschim by engaging them in climate-resilient livestock farming enterprises that are profitable and sustainable.

Objectives

- To strengthen the capacity of goat and dairy farmers and associated value chain actors on climate-resilient livestock farming measures.
- To improve production and productivity of livestock and thus the income.
- To increase adoption of climate-resilient livestock farming practices by farmers.

Duration

April 2023- October 2024

Working Areas

Karnali and Sudurpaschim Province

Cluster 1: Surkhet (Birendranagar M, Bheriganga M, and Barhatal RM)

Cluster 2: Dailekh (Bhagawatimai RM, Naumule RM, Bhairabi RM, and Dullu M)

Cluster 4: Kailali (Dhangadi SMC, Godawari M, and Chure RM)

Cluster 5: Doti (Badikedhar RM and Joroyal RM) and Dadeldhura (Aalital M and Amargadhi M)

- Improved goat and cattle/ buffalo shed with management of dung and urine (to include organic fertilizer, urine treatment, use of local materials, etc.)
- Fodder/forage plantation for year-round availability of green grass and carbon sequestration
- Balanced and nutritious animal feed promotion for reduced enteric emission using locally available feed ingredients and crop by-products
- Prevention and control of livestock diseases through accessibility and availability of veterinary services and input supplies including ethno-veterinary medicines
- Efficient use of water resources (e.g. rainwater harvesting, etc.)
- Promotion of goats with high production capacity

Climate-Resilient Livestock (CRL) Farming Measures

Alignment with SDGs

The GRAPE project aligns with 5 Sustainable Development Goals: Climate Action (13), No Poverty (1), Zero Hunger (2), Quality Education (4), Gender Equality (5), Sustainable Cities and Communities (11).

Alignment with Heifer's Existing Initiatives

This project aligns with Heifer's existing initiatives like Strengthening Smallholders Livestock Value Chain Enterprises (SLVC) initiative (2012-2023), ensuring sustainability through ongoing follow-up and monitoring. HPN promotes Climate-Resilient Agriculture (CRA) and Climate-Resilient Livestock (CRL) approaches like improved manure management, animal shed improvements, composting, fodder plantations. The GRAPE project will strengthen these efforts and foster synergies among them.

Expected Outcome

Climate-resilient livestock farming measures and practices are sustainably adopted by 1,750 farmers in Karnali and Sudurpaschim through capacity strengthening and regular backstopping.

Outputs

- **Output 1:** Strengthened capacity of goat and dairy farmers and associated value chain actors on climate-resilient livestock farming measures
- **Output 2:** Established demonstration sites of climate-resilient livestock farming
- **Output 3:** Increased access of farmers to inputs, services and market to adopt climate-resilient farming measures at farm level
- **Output 4:** Supported in creating enabling environment for adoption and upscaling of climate-resilient farming measures
- **Output 5:** Disseminated project successes and best practices widely

