

# Linking livelihoods and landscapes for adaptation

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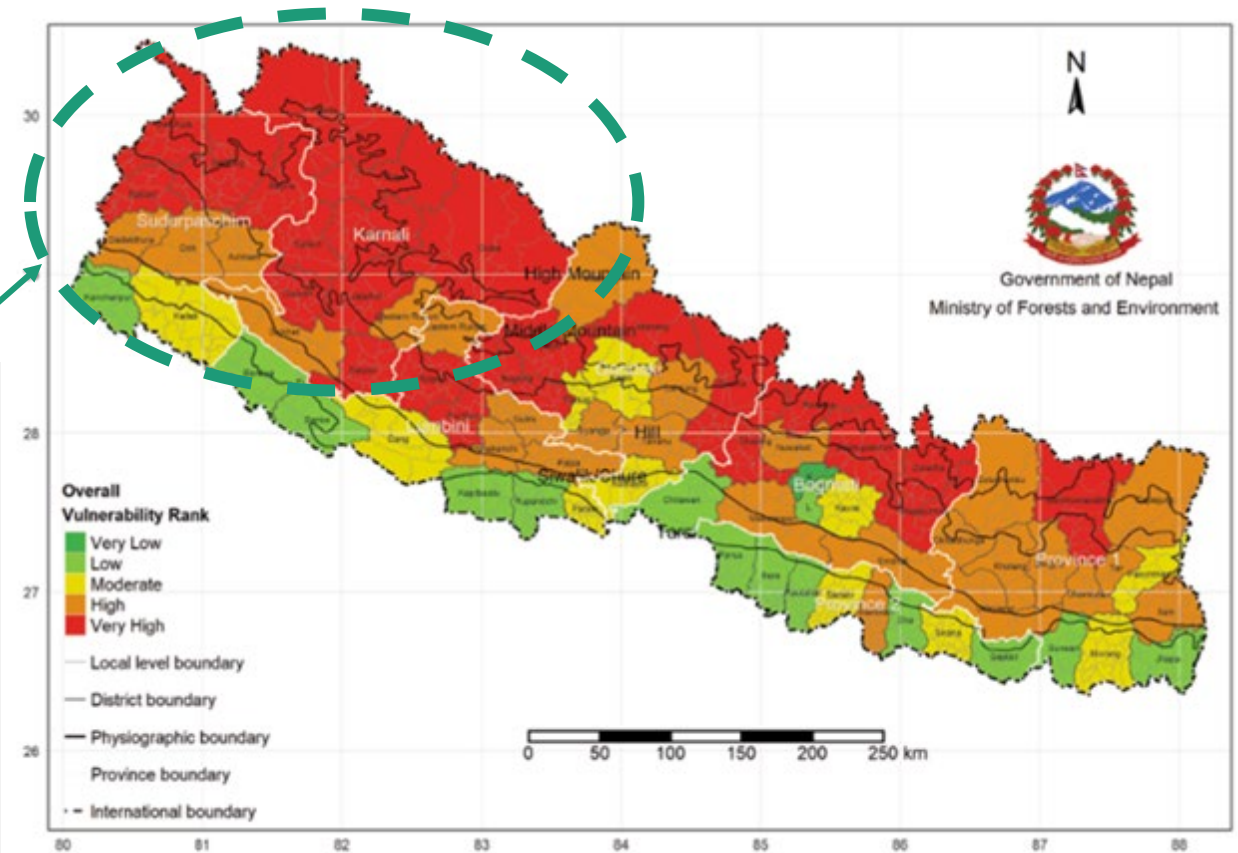
# Context

## Climate vulnerability

- Nepal ranked 10th on Global Climate Risk Index 2021
- Country's economy is forecasted to contract by 7% by 2050 due to climate change
- Karnali and Sudurpashchim, the most vulnerable based on the national vulnerability and risk assessment report

## Karnali and Sudurpaschim Provinces

- **Remote and least connected:** Lowest road density, Karnali 0.12 km/km<sup>2</sup>, Sudhrpaschim 0.27 km/km<sup>2</sup>, national average 0.43 km/km<sup>2</sup>
- **Least developed and high rate of poverty:** Multidimensional poverty Karnali 51.2%, Sudhurpaschim 33.6%, national average of 28.6%
- **Food insecure:** Post Covid Karnali 24.1% and Sudhurpaschim 21.2% of households consuming inadequate diets





# Problem Analysis

## Variable climate and water resources

- Increase in temperature and change in monsoon pattern resulting in:
  - **Water insecurity:** "wet-get-wetter and dry-get-drier", water stress (drying of springs), drought, forest fires, floods, landslides
  - **Threat to traditional farming:** Upward shifts in agro-ecological zones

## Degrading catchment

- Increasing run-off and soil erosion, lack of water retention, natural storage, and embankment stability
- Unsustainable land use, forest degradation (including forest fires)

## Poor socioeconomic condition

- Subsistence livelihoods dependent on natural resources and agriculture
- Outmigration resulting in women-headed household, social in-equality

## Lack of infrastructure and technology

- Poor water management infrastructure and techniques
- Insufficient investment in value addition of natural resources

## Governance

- Poor research, data and analytical capacity
- Weak institutional and staff capacity to meet federalization requirements



# NEP: Climate Resilient Landscapes and Livelihoods Project

**Impact:** Socioeconomic prosperity and resilience of society developed (National Climate Change Policy 2019)

**Outcome:** Climate resilience and water security of communities in Karnali and Sudurpashchim provinces strengthened

## ***Actions to manage hazards:***

- Nature-based and infrastructure solutions for integrated land and water management (surface run-off, infiltration, erosion control)
  - Catchment protection
  - Catchment treatment
  - Water harvesting small infrastructures

**Catchment protection:** forest management, agro-forestry, regenerative farming

**Catchment area treatment:** construction of integrated structural and bioengineering solutions

**Water harvesting:** construction of small-scale reservoirs and storage ponds, springs headwork, water offtakes, distribution and micro irrigation



## ***Actions to manage vulnerability:***

- Nature-based livelihoods (diversification)
  - Production, processing, and marketing of forest products
  - Eco-cultural tourism plans and construction of small-scale infrastructure
- Adaptation and Risk financing
- Community mobilization, capacity building, and skills enhancement

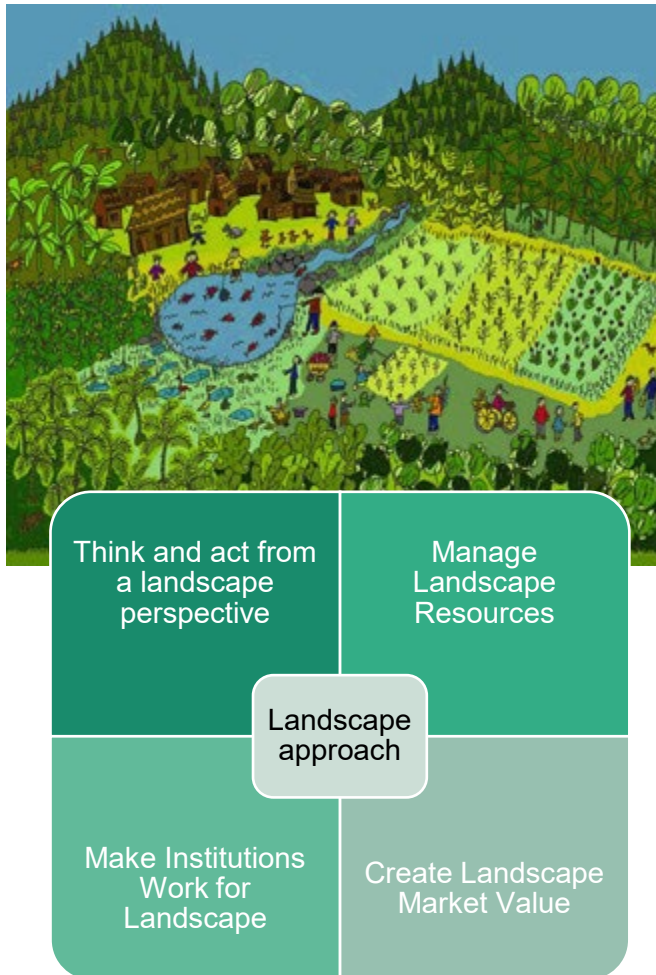
## ***Actions to manage exposure:***

- Hazard integrated land-use planning
- Early warning system

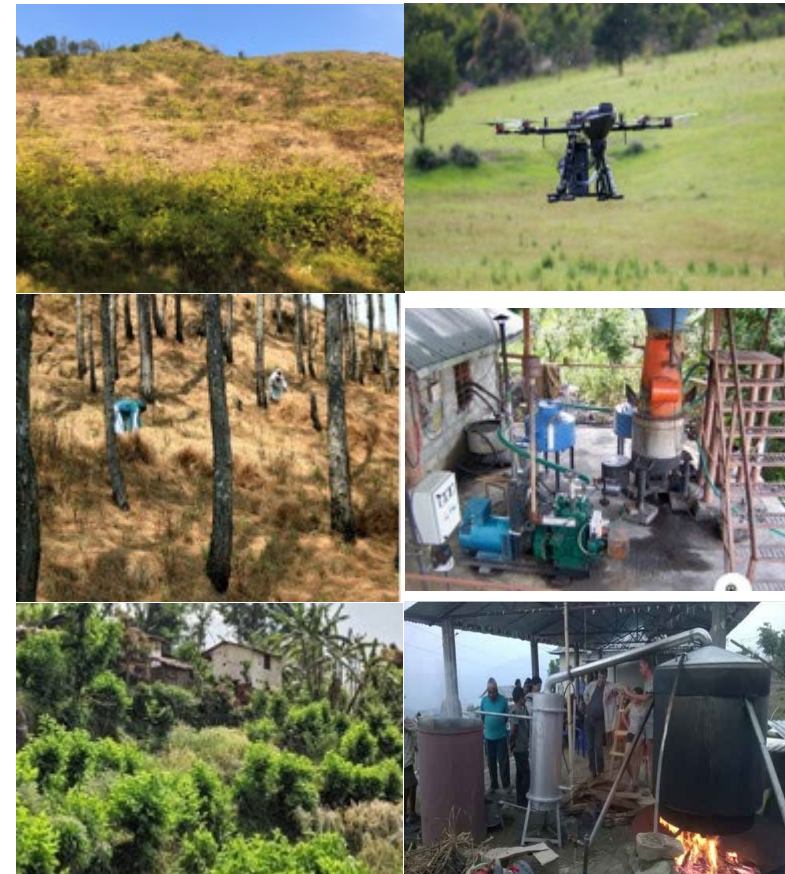


# Innovation

## Approach



## Technology and solution



# Thank you

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