



# Brief on Climate Resilient Land Use Planning



*NRM FS facilitator in maize field*



*Bamboo Nursery*

## 1. Introduction to BRCRN

Building a Resilient Churia Region in Nepal (BRCRN) project, funded by Green Climate Fund (GCF), is a collaborative initiative between Food and Agriculture Organization (FAO) of the United Nations and Government of Nepal (GoN). Launched on May 12, 2020, for a duration of seven years, the project aims to enhance the climate resilience of ecosystems and vulnerable communities in Nepal's Churia region through integrated sustainable natural resource management (SNRM) approaches. The project covers 26 critical river systems in the southeast region of Nepal, spanning Provinces Koshi, Madhesh, and Bagmati, with a total budget of USD 47.3 million, out of which 17% is government co-financing.

## 2. Climate Resilient Land Use Planning

Nepal is highly vulnerable to climate change impacts, including floods, landslides, and extreme weather events. Climate science projections show that the Churia region in Nepal will be profoundly impacted by a multitude of climate impacts in the coming decades though increased temperature, extreme heat, erratic rainfall, increased flood, landslide, drought etc. These climate impacts put people, ecosystems, infrastructure, and the environment at risk. It

aims to reach the most vulnerable section of the population in Churia who face differential and multifaceted climate impacts. Hence, BRCRN ensures Gender Equality and Social Inclusion (GESI) mainstreaming as a cross cutting issue, targeting at least 50% women, 31% Indigenous Peoples, 13% Dalits, 28% Madhesi and 5% Muslim who face differential climate impacts. BRCRN project aims to confront these challenges by enhancing the resilience of ecosystems and vulnerable communities in Nepal's Churia region. Climate Resilient Land Use Planning (CRLUP) can help prepare a community, and institutions including the local government to build resilience in the long-term against the impacts of climate change. It will promote widespread adoption of climate-resilient land use practices, confront the challenges of deforestation and forest degradation, better maintain the forest ecosystem in the Churia hills, and build resilience to climate-induced hazards. CRLUP is crucial for mitigating these risks and ensuring sustainable development. The CRLUP approach integrates SNRM with climate change adaptation and disaster risk reduction (DRR) strategies to ensure sustainable development.

CRLUP is an effective, affordable, and socially just approach that has significant positive impacts on both people and the environment. For example, land use planning can positively contribute to many of the Sustainable Development Goals (SDGs) (United Nations 2015). Land use planning efforts

have the potential to increase agricultural productivity, food security, and incomes of smallholder farmers and highly vulnerable communities. Land use planning contributes to gender equality and social inclusion (GESI) globally through ensuring men and women in planning process and securing equal access to land and resources. Land use planning efforts can protect critical ecosystem services, such as clean water, and promote awareness of sustainable development that matches the potential of the land. Further, land use planning that matches appropriate land-uses with suitable land can strengthen the resilience of people and the environment to climate-related hazards, as well as contribute to land-degradation neutral. BRCRN considers CRLUP process as a key planning step that addresses sectoral planning through Critical Ecosystem Restoration Plan (CERP) based participatory land use planning approach at landscape levels. In this sense, BRCRN considers CERP as a landscape planning approach integrated under CRLUP framework.

## Key Objectives of CRLUP:

- 1. Enhance Capacities:** Strengthen the capacities of government agencies, civil society organizations (CSOs), Indigenous Peoples Organizations (IPOs) and community-based organizations (CBOs) on CRLUP and climate-induced disaster management.
- 2. Promote Sustainable Practices:** Encourage sustainable land use practices, including privately owned forestry, public land forestry, community-based forestry, and climate-resilient agriculture.
- 3. Leverage Resources:** Mobilize technical, institutional and financial resources for the implementation of CRLUP initiatives.
- 4. Address Local Issues:** Identify and address site-specific as well as vulnerable targeted groups specific issues related to forestry, agriculture, and disaster risk reduction and related social issues through community engagement and inclusive action planning.



*LRPs during CLRUP practice*

## Rationale

The National Climate Change Policy (NCCP), 2019 emphasizes integrating climate resilience into land use planning to address the increasing impacts of climate change. It highlights the risk of adverse impacts likely to result from climate change, which will be analyzed while preparing land use plans for agricultural areas. The policy further highlights that forest, agricultural, residential, and industrial areas must be determined based on the risk of climate change impacts while formulating land use plan at local level. Similarly, The Disaster Risk Reduction Management (DRRM) policy, 2018 prioritizes risk-sensitive land use planning as a tool for disaster mitigation. It advocates zoning and land use regulations to prevent settlements in high-risk areas such as floodplains and landslide-prone zones. It also emphasizes building codes and standards tailored to local geographies to reduce vulnerabilities. Nepal's 16th Development Plan integrates climate resilience into national land use policies by focusing on green infrastructure and sustainable urbanization. It outlines that all local level land will be classified, and land use plans formulated for effective implementation. The Government of Nepal has introduced the Land Use Policy (2015) and Land Use Regulation (2022) based on three core principles: promoting complementary land use, maintaining competitive land use, and avoiding conflicting land use. These frameworks aim to ensure sustainable, climate-resilient land management by integrating environmental, economic, and social considerations. The LUP 2015 emphasizes zoning based on topography, soil, and climate sensitivity to mitigate risks like landslides and floods, while the LUR 2022 provides the legal structure for implementing these zones and encouraging community participation.

Together, these policies support adaptive agricultural practices, ecosystem protection, and climate risk integration in development planning. The recent Community Forestry



*Checkdam using bamboo as part of the CERP interventions*



Water recharge pond under construction in Mainajor, Katari-5



NRM FS participants during transect walk observing various land uses practices, Katari-3

Guideline 2081, further reinforces this approach by incorporating land use types into resource mapping and planning. Local governments and community-based organizations are instrumental in applying these frameworks, promoting sustainable land use that enhances climate resilience and secures community livelihoods.

## Approaches taken in BBRCRN

BRCRN project adopts a multi-level approach to catalyze change in land, forest, and natural resource management:

1. Integrated River System-Level Planning: Support provincial/ local level governments, CBOs, IPOs and partners in planning and monitoring natural resources and climate change impacts.
2. Capacity Building: Provide training, expert technical guidance, and resources to CBOs, IPOs and constituency-based organizations for adopting climate-resilient SNRM approaches.
3. Extension Services and Awareness: Strengthen extension services and awareness to support the widespread adoption of climate-resilient practices.

## Impact:

BRCRN project conducted four 5-days Master Training of Trainer (TOT) on CRLUP, two each at federal and provincial levels during 2021 and 2022. Nine events of local level training were conducted, and the facilitators and Local Resource Persons (LRPs) are also trained in CRLUP. Similarly, the CRLUP orientation is also provided to NRM FS participants.

- 80 Natural Resource Management Field School (NRM FS) facilitators (39 male and 41 female)



Province level CRLUP TOT in Koshi

were trained to promote climate resilient land use practices in NRM FS.

- 84 NRM FS have promoted CLRUP and a few NRM FSs have initiated resource leveraging from the local government for the implementation of the CLRUP activities.
- 2180 members of NRM FS trained to adopt and apply climate resilient land use practices.
- More than 2000 high school students enhanced their knowledge on the importance of Chure conservation and climate resilient land use concepts and field practices.
- LRPs are being mobilized for CRLUP preparation at Community Based Organizations (CBOs). LRPs have facilitated seven events of CRLUP comprising 47 community forest users' groups (CFUGs) in Madesh province.

(Note: As of June 15, 2025)

## Future activities

Continue Training on CRLUP for municipal level stakeholders and mobilize LRPs to facilitate the CRLUP in 250 CBOs.



Forest fire awareness and Fireline Construction in Paluwatar CFUG as part of NRM FS CRLUP implementation



Spring paddy practice in NRM FS as part of CRLUP implementation

## Testimonial

Ms. Bimala Budhathoki, chairperson of Jyamire NRM FS, representative of 25 participants, is excited to see the transformative change among the school participants and community after their participation in the school.



*Bimala Budhathoki*

The school has not only taught climate-resilient methods of farming and natural resource management to participants but also helped them make and implement their Climate Resilient Land Use Plan (CRLUP).

The school has empowered farmers to adopt sustainable methods, including composting and bio-pesticides, significantly reducing their reliance on harmful pesticides. "Through continuous engagement with facilitators, we have learned various climate-resilient agricultural practices such as seed soaking, raised bed, and biochar production," says Budhathoki, which have significantly improved the quality and quantity of their yields. Participants have also taken proactive steps to share their learnings with the community, educating their neighbors on bio-pesticides (Jholmol-1, 2 & 3) and biochar.

Moreover, the NRM FS has facilitated the preparation of CRLUP and the implementation of activities under different land uses like forest, agriculture, water resources, climate induced disaster, etc. Previously, the school participants used to go to forests only for illegal activities and collect firewood. For the first time, they engaged in protection

*CRLUP workshop at Bhadrapur Municipality*



of forest by constructing a fire line, clearing unwanted bushes, controlling grazing, and implementing Assisted Natural Regeneration (ANR) in their community forest. "We have also collaborated with the project managers and local authorities to gain support for the construction of a water recharge pond and river embankment in Kali Khola River, which protect our agricultural lands from flash floods," says Budhathoki.

In a notable achievement, they were successful in their attempts to leverage local stakeholders when they requested the ward office for monetary support – they received NPR 65,000 from ward chairperson for off-farm vegetable saplings. "Receiving such support from the ward office has been a big success for the whole community and has further bolstered our efforts," says Budhathoki. This ultimately leads to a more empowered and resilient community



*Katari ward 3 executive member distributing the vegetable saplings*

School participants have also expressed the need for the promotion of cultural and ecological tourism, and mitigation of human-wildlife conflicts. They will continue to look for the support of the project team and stakeholders for these efforts. Overall, Jyamire NRM FFS has fostered a sense of unity and purpose among participants, driving positive change and resilient development in their community.

*River Embankment using bamboo in Jutepani CF, Ratu River System, Bardibas*



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