PROCEEDINGS

NATIONAL WORKSHOP ON ADDRESSING LAND DEGRADATION IN NEPAL THROUGH NATURE-BASED SOLUTIONS (NBS)

9–10 JUNE 2025
GODAWARI, LALITPUR

PARTNERS

DCRL

Government Of Nepal
Ministry of Forests And Environment
Department of Forests and Soil Conservation

Tel.: 977-1-4227574
977-1-4220303
977-1-4221231
977-1-4221744
977-1-4216379
977-1-4256227
Fax:977-1-4227374

Babar Mahal
Kathmandu, Nepal

Ref. No.

Foreword

Land degradation poses a growing threat to Nepal's environmental sustainability and socio-economic development. With over 40% of the country's land area affected by varying degrees of degradation, ranging from soil erosion and deforestation to declining agricultural productivity, the impacts are profound and far-reaching. These include biodiversity loss, reduced water availability, elevated disaster risk, and increased vulnerability of communities. In the context of climate change, these challenges are further exacerbated, requiring urgent, coordinated, and inclusive interventions that not only address the root causes but also promote long-term ecological integrity and social resilience.

Recognizing the critical role of Nature-based Solutions (NbS) in reversing land degradation and enhancing climate resilience, the Department of Forests and Soil Conservation, under the Ministry of Forests and Environment, organized the **National Workshop** on **Addressing Land Degradation in Nepal through Nature-based Solutions** from **9–10 June 2025** at **Godawari, Lalitpur**. The workshop provided a much-needed platform to bring together diverse stakeholders, including representatives from all three tiers of government, academia, civil society, national and international development partners, and local communities. The workshop aimed to enhance knowledge of NbS, share local and global experience, foster collaboration, and explore ways to better integrate NbS into Nepal's land management and restoration strategies.

I would like to express my sincere appreciation to the **Honourable Minister for Forests and Environment, Mr. Ain Bahadur Shahi Thakuri,** for his valuable presence and directives in his inaugural speech. I also extend my sincere gratitude to **Dr. Rajendra Prasad Mishra, Secretary of the Ministry,** for his insightful remarks and overall guidance in conducting this event.

We are particularly grateful to our key partners: **Developing Climate Resilient Livelihoods (DCRL) Project, UNDP Nepal, WWF Nepal, IUCN Nepal, NTNC, and Clim-Adapt** for their collaboration and support in making this workshop a success. I would like to extend my special thanks **Deputy Director Generals Mr. Dhananjaya Lamichhane** and **Mr. Ajit Kumar Karna** for their tireless efforts in bringing this workshop to a meaningful conclusion. Similarly, thanks go to **Mr. Raju Sapkota** and **Mr. Ram Krishna Rajthala,** Under Secretaries, and all other officials of the Department involved in coordinating and managing the overall logistical aspects of the workshop. I highly appreciate **Mr. Regan Sapkota** for his support both during the workshop and in the preparation of this proceedings document, which captures the technical presentations, panel discussions, key inputs, and the **Godawari Declaration**. Special thanks to **Dr. Bimal Raj Regmi** and **Dr. Prem Paudel** for their valuable input in finalizing the proceedings. I would also like to acknowledge Mr. Prakash Lama for his continued support in communications.

It is our sincere hope that the ideas, knowledge, and commitments reflected in this document will serve as a foundation to accelerate the implementation of Nature-based Solutions in Nepal.

Badri Raj Dhungana
Director General

Introduction

Land degradation is a critical environmental and developmental challenge in Nepal, with over 40% of the country's land affected by soil erosion, deforestation, unsustainable agricultural practices, and the impacts of climate change. The consequences are far-reaching, impacting biodiversity, water resources, food security, and the resilience of vulnerable communities. Events like the Melamchi disaster have underscored the link between degraded land and heightened climate-related risks such as floods and landslides. Nature-based Solutions (NbS) offer a sustainable and integrated approach to tackling land degradation by leveraging ecosystems to deliver both environmental and socio-economic benefits. These solutions include reforestation, sustainable agriculture, watershed restoration, and grassland rehabilitation supporting soil stabilization, water regulation, carbon sequestration, and local livelihoods. This national workshop convenes stakeholders from government, civil society, academia, and local communities to collectively explore how NbS can be integrated into Nepal's land management strategies and restoration programs. It also provides a platform to share practical experiences, innovations, and policy pathways to scale up NbS in the context of climate resilience and sustainable development.

Workshop Objectives:

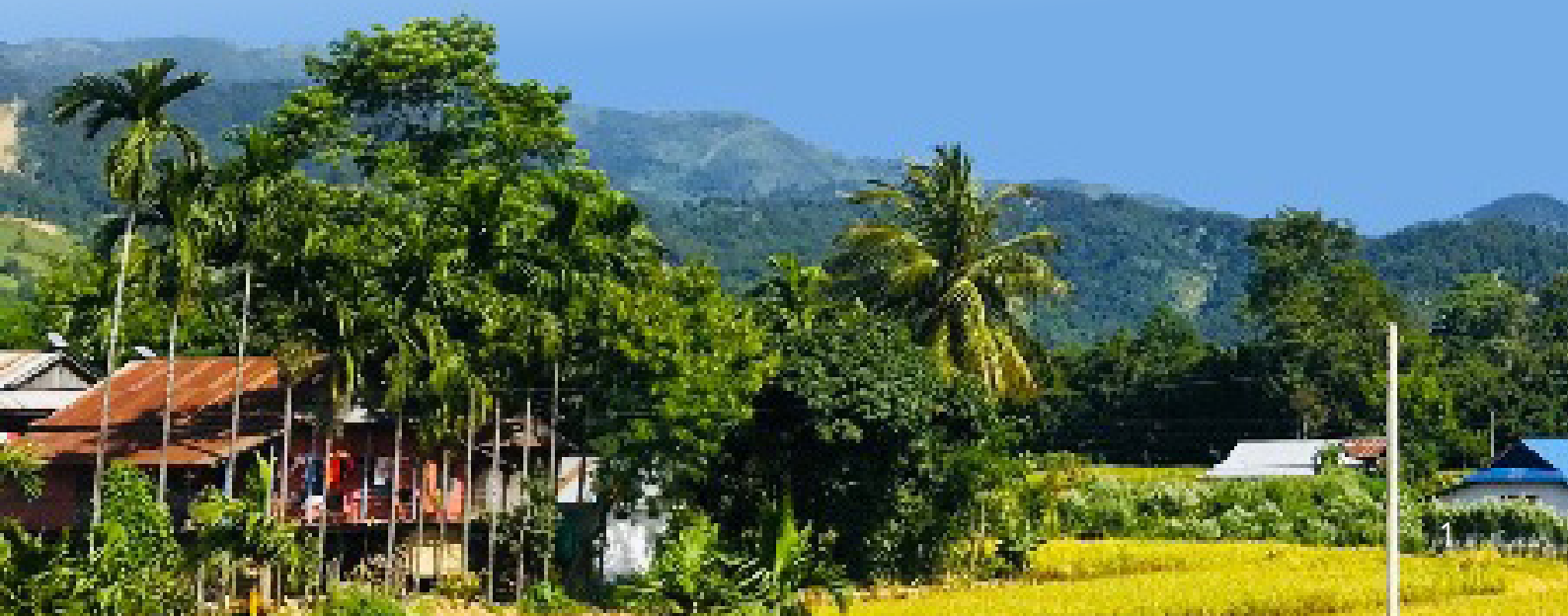
- Enhance understanding of land degradation issues in Nepal and the role of Nature-based Solutions (NbS) in addressing these challenges.
- Provide a platform for sharing experiences, best practices, and successful case studies of NbS from Nepal and other countries.
- Strengthening collaborations between government bodies, civil society organizations, international agencies, and local communities in the implementation of NbS for land restoration.

Workshop Themes and Sessions:

Theme one: Understanding the significance of Nature-Based Solutions in addressing land degradation

Session 1: Global Context of NbS initiatives, it's standards to address environmental and Societal Challenges

Session 2: Restoration of Drought Prone Watershed Through Nature Based Solutions: An Experience from Developing Climate Resilient Project (DCRL).



Theme two: Innovations, learning, and good practices on Nature based Solutions

Session 3: Learning from EbA in Nepal - Approaches to Upscale NbS to combat land degradation and climate vulnerability.

Session 4: Designing and Implementing NbS projects: An experience from WWF Nepal

Session 5: Harnessing the Role of National Climate Finance Accredited Entities in Scaling Up Nature-Based Solutions in Nepal.

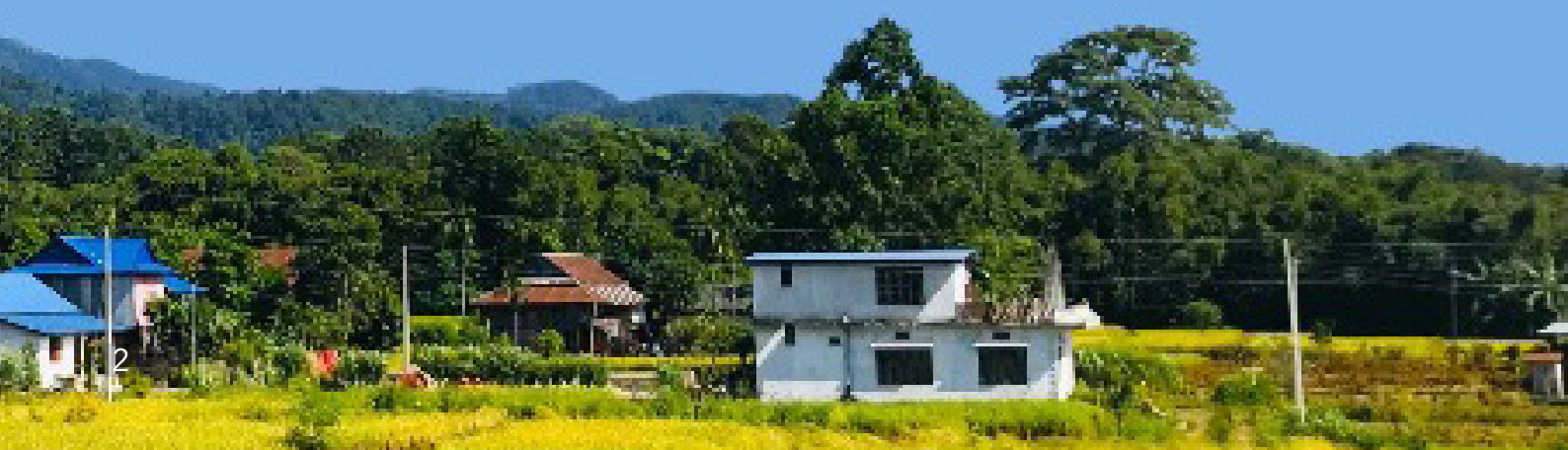
Theme three: Understanding the nexus of Locally Led Adaptation and Nature Based Solutions

Session 7: Role of Local Government to address land degradation and NbS.

Session 8: Decolonizing Nature Based Solutions: Blending Locally Led Adaptation and Community Based Adaptation Approaches and Practices

Session 9: National context of Nature Based Solutions and their linkages with UNCCD and National Land Degradation Neutrality framework.

This workshop represents a timely and critical step towards restoring Nepal's degraded landscapes while enhancing community resilience and aligning with national and global environmental commitments. The workshop was organized by was joined by Department of Forest and Soil Conservation, Ministry of Forests and Environment and supported by DRCL, WWF Nepal, IUCN, NTNC and Clim Adapt. This national workshop was joined by around 150 participants from diverse backgrounds including three tiers of government, academia, practitioners, CSOs, I/NGOs, researchers, youth and media. The workshop also generated a declaration entitled "Godavari Declaration on Addressing Land Degradation in Nepal through Nature-based Solutions" with aim to provide actionable recommendations for policy integration, capacity building, and community-led implementation of NbS.

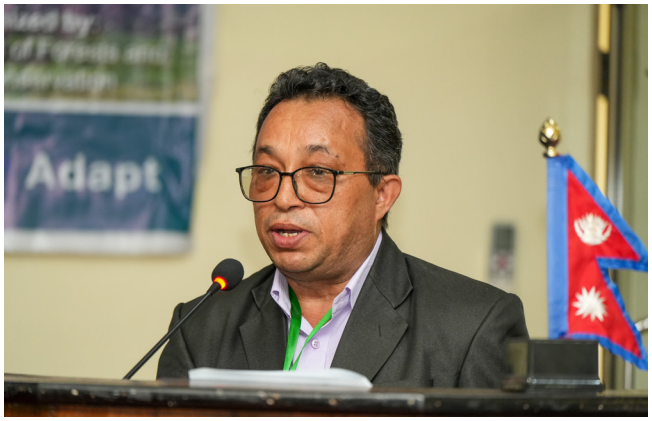


DAY 1

9 June 2025

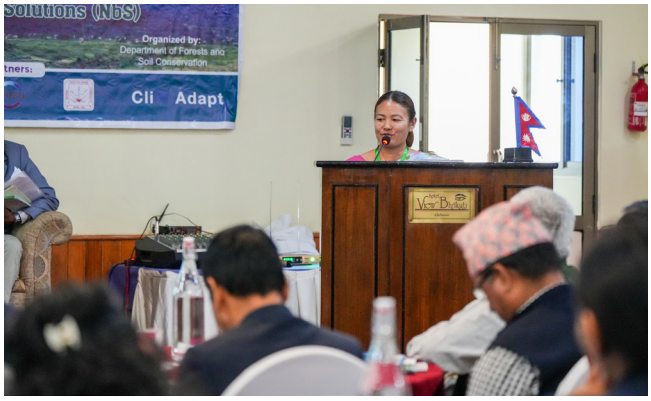
Opening Session

The national workshop commenced with a warm and engaging opening session, setting the tone for two days of dialogue and deliberation on reversing land degradation in Nepal through Nature-based Solutions (NbS). The session was moderated by Mr. Raju Sapkota, Under Secretary at the Department of Forests and Soil Conservation (DoFSC). The Chief Guest of the session, Hon. Minister of Forests and Environment Mr. Ain Bahadur Shahi was joined by Special Guests Dr. Rajendra Prasad Mishra, Secretary of MoFE. Representatives from partner organizations also joined the dais, including Dr. Ghana Shyam Gurung, Country Representative of WWF Nepal, and Mr. Vijay Singh, Assistant Country Director of UNDP. The session was chaired by Mr. Badri Raj Dhungana, Director General of the Department of Forest and Soil Conservation,. The session was formally inaugurated by the Chief Guest, Hon. Minister Mr. Ain Bahadur Shahi by watering the plant.

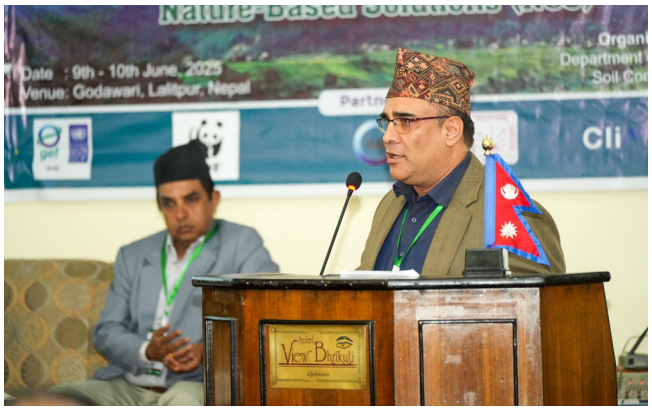


Mr. Dhananjay Lamichhane, Deputy Director General of DoFSC, delivered the welcome remarks. In his opening remarks, he reaffirmed Nepal's commitment to ecosystem restoration and emphasized the urgency of integrating NbS into national climate and development strategies. He highlighted Nepal's growing climate vulnerability and called for ecological restoration to be viewed not only as an environmental necessity but also as a development imperative.

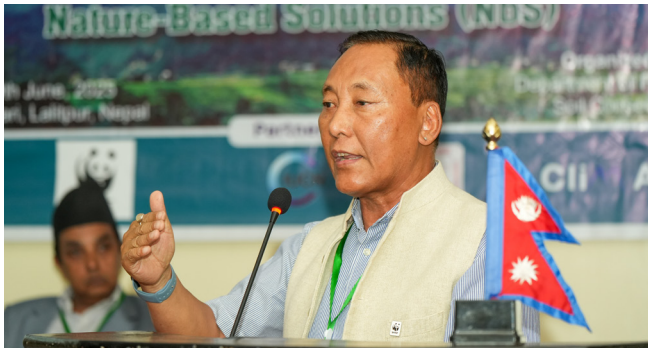
The Chair of the session, Mr. Badri Raj Dhungana gave the keynote presentation to set the tone of the workshop. In his presentation, he underscored the importance of locally driven action, cross-sectoral collaboration, and innovation in financing mechanisms to sustain and scale NbS interventions. He emphasized that long-term success in reversing land degradation will require robust institutional cooperation, enhanced technical capacity, and inclusive participation across all levels of governance.

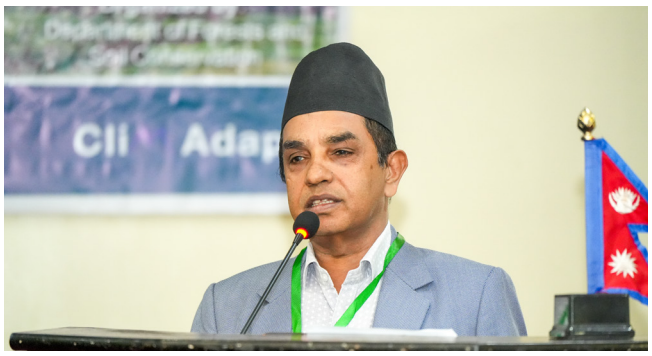


Remarks from representatives of provincial and local governments highlighted the operational realities of implementing NbS on the ground. Dr. Indra Sapkota, Provincial Forest Director of Koshi Province, noted the effectiveness of NbS interventions and urged for nationwide upscaling under strong government leadership. Simiarly, the Mayor Ms. Bimala Rai of Halesi Tuwachung Municipality, echoed this call, sharing that while local governments are committed and proactive, resource constraints remain a significant barrier. She emphasized the need for coordinated support across federal, provincial, and local levels as well as enhanced partnership to ensure the sustainability of NbS efforts.



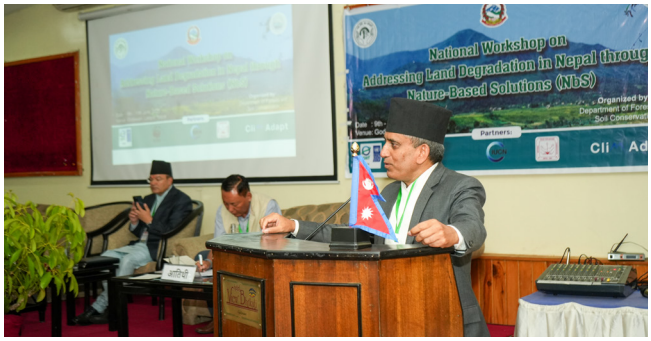
Representatives from partner organizations also provided valuable reflections. Dr. Ghana Shyam Gurung of WWF Nepal and Mr. Vijay Singh of UNDP both commended the government's leadership in promoting NbS and stressed the need for deeper partnerships, increased investment, and mainstreaming of NbS approaches into development planning across all sectors and geographies of Nepal.

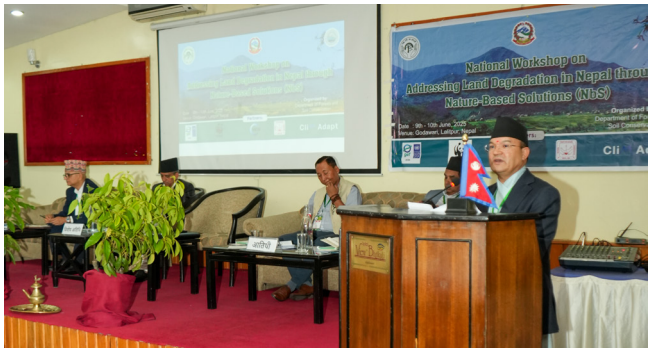




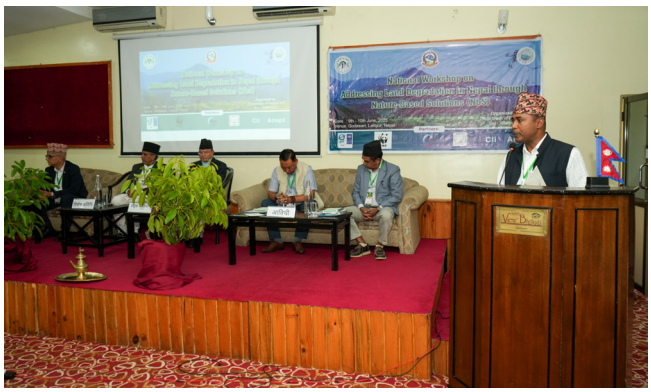
In his remakrs Secretary of the Ministry of Forests and Environment, Dr. Rajendra Prasad Mishra highlighted the importance of NbS to tackle land degradation problems in the context of adverse effect of climate change. Dr. Mishra emphasized the integration of Agriculture, Forestry and Water Resource Management through integrated watershed management to improve our ecosystem services and land productivity.

The Chief Guest, Hon. Minister Mr. Ain Bahadur Shahi Thakuri in his inaugural speech reaffirmed the government's policy commitment and political will to scale up NbS interventions nationwide. He emphasized the alignment of Nepal's restoration efforts with national priorities and international frameworks such as the United Nations Convention to Combat Desertification (UNCCD) and the Land Degradation Neutrality (LDN) targets.





The session concluded with closing and a vote of thanks delivered by Mr. Ajit Kumar Karna, Deputy Director General of DoFSC. He expressed sincere appreciation to all tiers of government, partner organizations, and distinguished participants for their commitment and contributions to advancing the NbS agenda in Nepal.



Theme one: Understanding the significance of Nature-Based Solutions in addressing land degradation

Theme 1 of the national workshop provided the conceptual and practical foundation for subsequent discussions by focusing on the global context and field-level experiences of implementing Nature-based Solutions (NbS). It comprised two sessions and was chaired by Mr. Dhanajay Lamichhane, Deputy Director General of the Department. Under his guidance, the theme facilitated both conceptual grounding and practical reflections drawn from project experience.

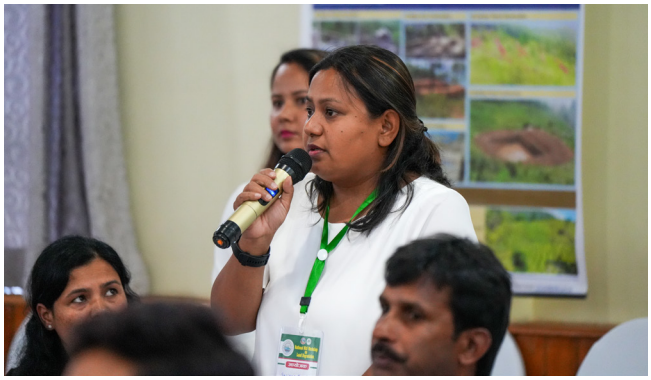
Session 1: Global Context of NbS initiatives, it's standards to address environmental and Societal Challenges

Speaker: Dr Narendra Man Babu Pradhan, IUCN

Title of the presentation: Nature-based Solution: its standards to address environmental and Societal Challenges

In the opening technical session of the workshop, Dr. Narendra Pradhan, Country Representative of IUCN Nepal, delivered a keynote presentation on the global relevance and guiding principles of Nature-based Solutions. He emphasized that NbS are not merely conservation measures, but purposeful actions that protect, sustainably manage, and restore natural ecosystems to address pressing societal challenges such as climate change, water and food insecurity, disaster risks, and biodiversity loss. These approaches, he underscored, must simultaneously promote human well-being and biodiversity conservation while being inclusive, adaptive, and economically sustainable.

Dr. Pradhan provided an in-depth introduction to the IUCN Global Standard for NbS, detailing its eight criteria and 28 indicators, which serve as a benchmark for designing and implementing effective, equitable, and scalable NbS interventions. These standards prioritize understanding and addressing societal challenges, designing interventions at the appropriate scale, managing trade-offs, ensuring inclusive stakeholder engagement, and embedding monitoring, evaluation, and adaptive learning mechanisms. He called on governments, practitioners, and financial institutions to adopt these standards to ensure that NbS initiatives go beyond pilot projects and are embedded into broader policy and financing frameworks. His session set up a strong conceptual foundation for the workshop, anchoring discussions in global best practices and emphasizing the need for standardization in NbS efforts.



Discussion session:

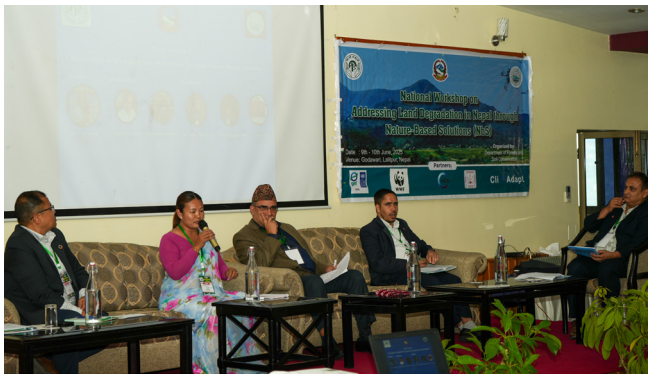
Post presentation, the floor was opened for discussion session, were around ten participants engaged in a lively exchange around the applicability of the IUCN Global Standard in Nepal's decentralized governance structure. Questions centered on balancing global benchmarks with local realities, ensuring inclusive community participation, and strengthening local capacities to operationalize such standards in planning and monitoring. The discussion emphasized the importance of translating global frameworks into actionable, locally rooted approaches.

Session 2: Restoration of Drought Prone Watershed Through Nature Based Solutions: An Experience from Developing Climate Resilient Project

Speaker: Dr. Prem Paudel, National Project Manager, Developing Climate Resilient Livelihoods Project, Nepal

The session began with a comprehensive keynote presentation by Dr. Prem Paudel, National Project Manager of the Developing Climate Resilient Livelihoods (DCRL) Project at UNDP Nepal. His presentation, titled "Restoration of Drought-Prone Watersheds Through Nature-Based Solutions," drew upon hands-on experiences from the Lower Dudhkoshi Watershed, covering Khotang and Okhaldhunga districts. Dr. Paudel elaborated on the intersecting challenges of agricultural, hydrological, and meteorological droughts that are increasingly affecting mid-hill communities. He contextualized how such climatic and ecological stressors are contributing to land degradation, biodiversity loss, chronic poverty, and even forced migration in vulnerable rural areas.

Highlighting the DCRL project's integrated approach, Dr. Paudel presented a range of Nature-based Solutions implemented to address both environmental and socio-economic dimensions of drought. These included contour trenching, cultivation of drought-tolerant non-timber forest products (NTFPs), soil-cement water harvesting ponds, community-led water source protection, and green-grey hybrid infrastructure like improved cattle sheds and efficient cookstoves. He emphasized the role of scientific vulnerability assessments in identifying target sites and the need for layering green (ecological restoration), blue (water systems), and grey (infrastructure) strategies for resilience. Furthermore, he underlined DCRL's contribution in supporting policy formulation and strengthening local governance to ensure sustainability and scalability of these efforts.



Panel Discussion: Cross-Sectoral Reflections on Scaling NbS in Drought-Prone Regions

Following the keynote presentation, a dynamic and insightful panel discussion was held, moderated by Dr. Bimal Raj Regmi from Clim Adapt. The panel brought together representatives from federal, provincial, and local governments, as well as development partners, to reflect on the field-level experience of the DCRL project and its broader implications for Nature-based Solutions in Nepal. The panelists included Mr. Ganesh Paudel, Member Secretary at the Prisident Chure Terai Madhesh Conservation Development Committee; Dr. Indra Sapkota, Province Forest Director of Koshi Province; Ms. Bimala Rai, Mayor of Halesi Tuwachung Municipality; and Mr. Pragyajan Y. Rai, representative from UNDP Nepal.

Mr. Ganesh Paudel, emphasized the ecological and strategic importance of the Chure landscape, which supports over 60% of Nepal's population. He highlighted mounting pressure on land and water systems and made a compelling case for upscaling DCRL-type interventions, especially contour terracing,

conservation ponds, and drone-based aerial seeding and ecological monitoring in the fragile Chure belt. He advocated for an integrated Multi-Hazard Vulnerability and Risk Assessment (MHVRA) to inform local NbS planning.

Dr. Indra Sapkota, representing the provincial government, shared how Koshi Province allocated NPR 4 million to scale up DCRL-inspired watershed management strategies. He emphasized that sub-national governments have the flexibility to prioritize NbS but need stronger technical capacities and dedicated financing to replicate such initiatives more widely across municipalities.
Mayor Bimala Rai of Haleshi Tuwachung Municipality offered an inspiring account of how her municipality took early ownership of NbS initiatives. They allocated 30% of municipal budget upfront to incentivise interventions such as buffalo grants, cattle shed improvements, and soil-cement water ponds, while also establishing community-managed water user groups and revolving funds for water governance. She stressed that while local governments are willing to lead, scaling NbS requires stronger partnerships, manpower, and resource mobilization across all levels of governance.

Mr. Pragyajan Y. Rai from UNDP provided insights on how the DCRL experience is informing broader climate adaptation efforts. He pointed out that basin-level NbS planning, moving beyond discrete watershed-scale projects is critical to build long-term resilience. He also noted the importance of linking NbS with ongoing GLOF risk reduction efforts, integrating land management into broader adaptation and mitigation frameworks to attract financing.

The panelists collectively agreed that community ownership, proactive sub-national governments, and inter-agency coordination are essential to ensuring lasting impact of NbS interventions. They also noted that a strategic combination of on-ground restoration, knowledge documentation, and evidence-based planning will be vital for replication.

Discussion session:

The session concluded with an insightful open floor discussion in which more than 10 participants raised practical and strategic questions. A key concern was the sustainability of NbS interventions beyond the DCRL project lifecycle, specifically, how to institutionalize watershed restoration practices in local government planning and budgets. Questions were raised about replicability: could interventions like contour trenches or soil-cement ponds work in other topographies or socio-economic settings? Participants also debated the true effectiveness of grey infrastructure elements such as concrete water ponds or stoves in enhancing resilience or whether they risked creating dependency on non-ecosystem-based solutions. Several attendees emphasized the need for comprehensive documentation and dissemination of lessons learned, including cost-benefit analyses, to help other municipalities adopt and upscale similar approaches. The discussion ultimately highlighted that while the DCRL project offered a strong model, it must now be embedded in formal planning systems, with a focus on knowledge-sharing, municipal capacity-building, and inter-governmental alignment for scaling impact.

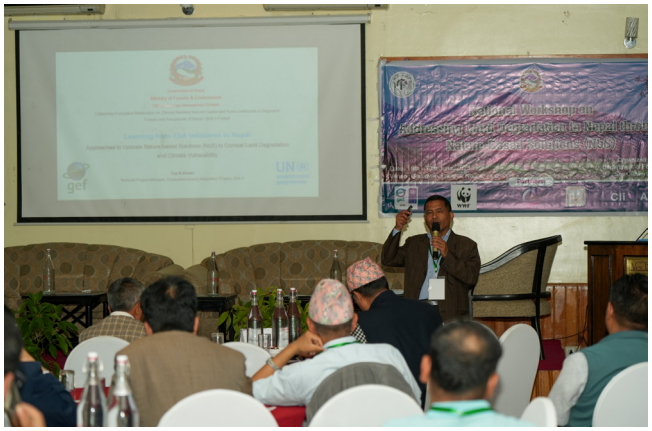
Theme two: Innovations, learning, and good practices on Nature based Solutions

Theme 2 of the workshop focused on operational dimensions of Nature-based Solutions (NbS), particularly exploring how economic incentives, decentralized governance, community-led practices, and national policy frameworks can be leveraged to scale NbS for land restoration in Nepal. The theme was chaired by Mr. Mohan Kaphle, Joint Secretary at the Ministry of Forests and Environment and included a total of four technical sessions held across both the first and second day of the workshop.

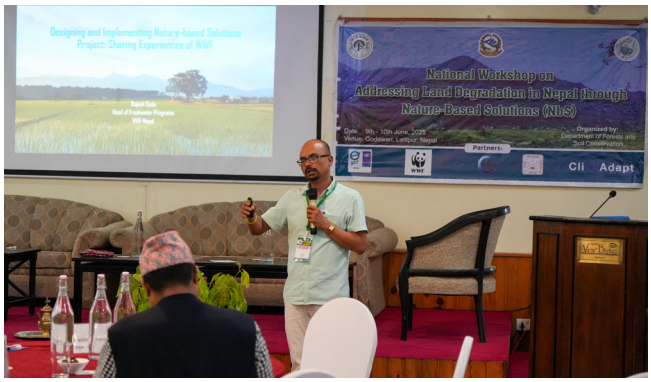
Session 3: Learning from EbA in Nepal - Approaches to Upscale NbS to combat land degradation and climate vulnerability.

Speaker: Mr. Top B. Khatri, EBA II

Mr. Top B. Khatri shared compelling insights from the Ecosystem-based Adaptation (EbA) II Project (2019–2024), implemented in Achham, Salyan, and Dolakha districts. He explained that EbA, as a subset of NbS, uses biodiversity and ecosystem services to help communities adapt to the adverse effects of climate change. Mr. Khatri elaborated on the project's comprehensive landscape restoration work, which included water source protection, degraded forest and rangeland restoration, terrace farming improvements, and climate-smart agriculture all implemented in collaboration with local user groups and municipal authorities.



One of the project's key achievements was the high level of local government ownership, as eight out of ten municipalities allocated significant budgets (ranging from NPR 30 to 80 lakhs) to sustain and expand EbA interventions. He highlighted the project's emphasis on knowledge and capacity building, from integrating EbA content into school curricula (grades 6–12) to generating policy briefs and partnering with media to raise public awareness. The EbA experience culminated in the development of a national upscaling plan, which outlines a strategic pathway for institutionalizing EbA across Nepal's climate and development sectors.



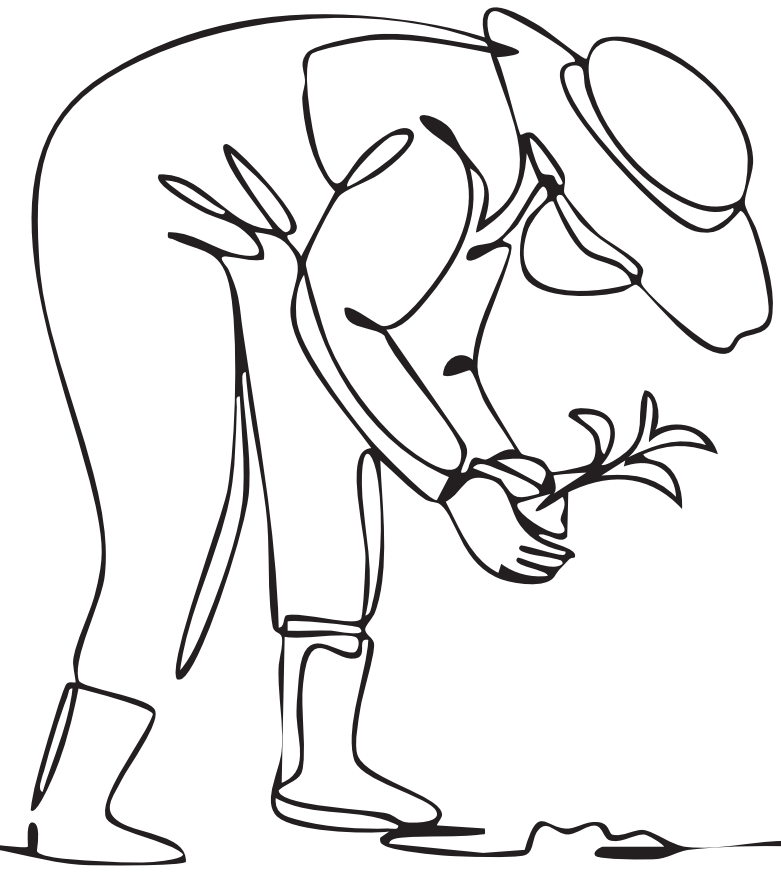
Session 4: Designing and Implementing NbS projects: An experience from WWF Nepal

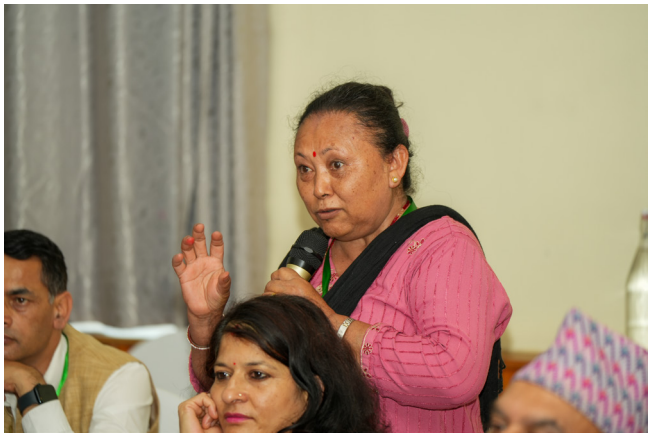
Speaker: Mr. Rajesh Sada, WWF Nepal

This session featured an insightful presentation from Mr. Rajesh Sada, Program Director, WWF Nepal on their experience designing and implementing Nature-based Solutions (NbS) projects in the Lower Narayani River Basin. The presentation focused on how WWF applied the IUCN Global Standard for NbS to develop interventions that were ecologically sound, socially inclusive, and locally relevant. The speaker outlined the participatory process used in the project's design phase, which involved multiple rounds of stakeholder consultations to identify pressing societal challenges and develop nature-based responses that were firmly rooted in the local context. The presentation emphasized that

the project design was informed by detailed ecological assessments, socio-economic analyses, and local knowledge. These inputs were integrated to align the project with the eight criteria of the IUCN Global Standard, ensuring that the interventions were measurable, equitable, and resilient.

He also shared several field-level interventions that were implemented as part of this project, including wetland restoration, riverbank forest restoration, and the strengthening of buffer zones. These interventions collectively helped to enhance local biodiversity, reduce flood risk, and support community resilience. The project demonstrated how NbS could offer cost-effective alternatives to traditional infrastructure while delivering multiple co-benefits to people and ecosystems. The speaker reflected on both opportunities and challenges encountered during implementation. One of the key challenges discussed was the difficulty of balancing long-term ecological goals with short-term community expectations, especially in dynamic riverine environments. Institutional coordination and securing sustainable financing also emerged as persistent barriers.





Discussion session:

The open floor discussions following Sessions 2 and 3 centered on the practical challenges and opportunities in implementing and sustaining Nature-based Solutions and Ecosystem-based Adaptation (EbA) approaches. Over 15 participants participated in the discussion session where they emphasized concerns around the sustainability of interventions beyond project cycles, particularly in resource-constrained municipalities. Questions were raised about financing mechanisms such as revolving funds or payment for ecosystem services (PES), and how participatory design processes could translate into long-term community ownership and municipal integration. The distinctions between EbA and broader NbS frameworks also sparked interest, with participants seeking clarity on how to harmonize both approaches within local development and forestry plans.
Technical issues like managing invasive species in restored areas, measuring success beyond ecological indicators, and handling trade-offs between conservation and development goals were also discussed. There was strong interest in conflict resolution approaches, stakeholder coordination, and adaptive planning. The importance of educational initiatives and local governance capacity was highlighted, along with calls for stronger inter-municipal learning platforms. Overall, the discussion reinforced that successful scaling of NbS and EbA hinges on institutional alignment, inclusive planning, and sustained support across all tiers of government.

DAY 2

10 June 2025

Session 5: Harnessing the Role of National Climate Finance Accredited Entities in Scaling Up Nature-Based Solutions in Nepal

Speaker: Dr. Manish Raj Pandey, Head, Department of Climate Change, NTNC

Dr. Manish Raj Pandey, from the National Trust for Nature Conservation, delivered a presentation focused on the critical role of national climate finance accredited entities in enabling the scaling of Nature-based Solutions in Nepal. He outlined Nepal's vulnerability to land degradation especially in the mid-hills, Chure, and Tarai and the growing policy commitment to NbS as seen in frameworks like the National Adaptation Plan (NAP 2021–2050), NDC 3.0, and the Green, Resilient, Inclusive Development (GRID) strategy.

Dr. Pandey highlighted that despite these commitments, Nepal continues to face serious implementation barriers, particularly fragmented governance, technical capacity gaps, and underfinancing. He stressed that NTNC, as a national entity accredited to the Green Climate Fund, is strategically positioned to address these barriers by developing bankable NbS proposals, managing climate funds, and demonstrating innovative financing models such as blended finance, payment for ecosystem services (PES), green insurance, and targeted government subsidies. Dring his presentation, he stressed for a paradigm shift in how NbS is perceived from being seen as conservation costs to strategic investments in resilience, green jobs, and inclusive development. Importantly, he advocated for simplified and flexible access to climate finance, and the strengthening of all three tiers of government, civil society, and local NGOs particularly relevant in a context where Nepal has over 30,000 NGOs, many of which are capable of implementing NbS with the right support.

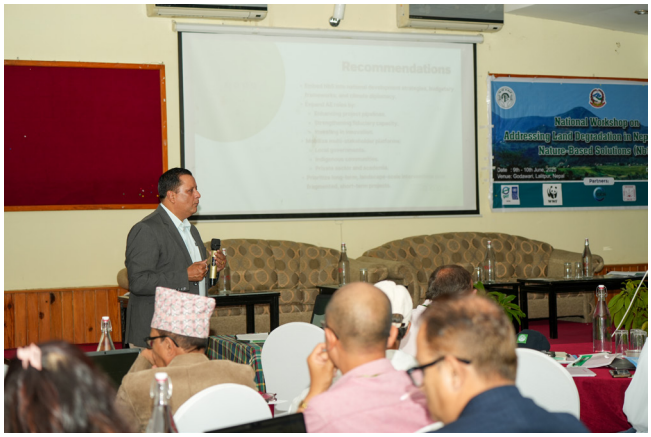
Session 6: Incentivizing Nature-Based Solutions

Speaker: Dr. Rajesh Rai, Professor, Institute of Forestry

Commentator: Dr. Krishna Raj Tiwari

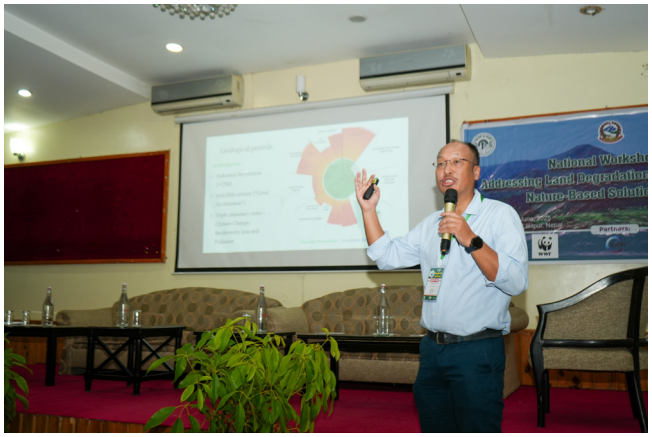
Title of presentation: Leveraging Economic Incentives to Mainstream NbS

Dr. Rajesh Rai delivered a thought-provoking presentation on how well-designed economic and institutional incentives can accelerate the adoption of Nature-based Solutions. He began by reflecting on the evolution of human civilization and its relationship with nature, emphasizing the need to reorient our development path toward ecological modernization. According to Dr. Rai, sustainable resource management is not only an environmental imperative but also an economic opportunity.



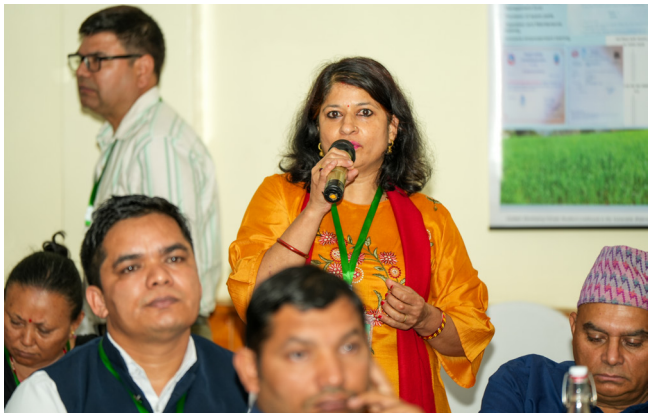
He presented a range of incentive mechanisms including PES, tax exemptions, green subsidies, and support for eco-enterprises. He emphasized the importance of enabling policies that can ease procedural burdens and provide financial and non-financial incentives for individuals, cooperatives, and enterprises engaged in ecological restoration and conservation. His call for building "green enterprises" centered on local innovation and resource use that respects planetary boundaries.

Furthermore, the commentator of the session, Dr. Krishna Raj Tiwari, expanded the need to align fiscal policies, institutional structures, and governance systems with the principles of NbS. He cautioned that without long-term sustainability mechanisms, many NbS interventions risk becoming donor-dependent or short-lived. He stressed embedding NbS incentives within local development planning and budgeting processes to promote ownership and durability.

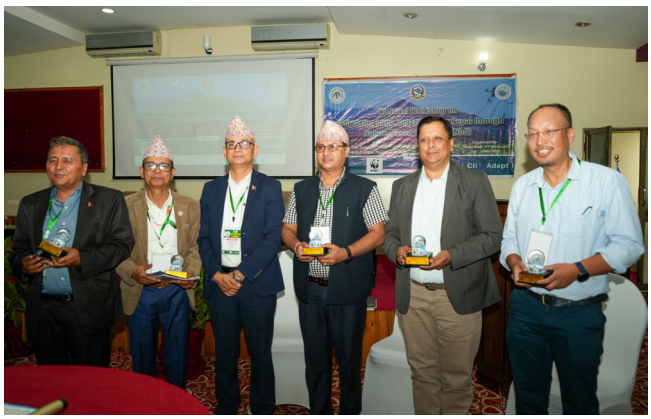


Discussion session:

After the keynote presentations on Sessions 5 and 6, the workshop transitioned into a participatory discussion session, where more than ten expert participants actively shared their views, questions, and concerns. A major focus of the dialogue of session 5 was the implications of Nepal's upcoming graduation from Least Developed Country (LDC) status in 2026 and the anticipated changes in access to concessional climate finance. Participants stressed the urgency of preparing for this transition to avoid disruptions in funding flows. Concerns were also raised about the accessibility of international climate funds like the GCF or Adaptation Fund for smaller, local organizations. Participants also called for simplified processes and proposed mechanisms such as mentorship programs, proposal incubation hubs, and technical assistance from accredited entities like NTNC. There was also strong interest in shifting the narrative around Nature-based Solutions from being conservation-focused expenditures to strategic investments that can drive resilience, equity, and green job creation. This was echoed in suggestions for integrating private sector financing, risk-sharing instruments like insurance, and blended finance models.



In continuation, the discussion on economic incentives, following Dr. Rai's presentation, highlighted the need for more inclusive and context-responsive incentive structures to support the scaling of NbS. Participants explored the practical challenges of operationalizing PES, particularly in areas where land ownership remains ambiguous. There were critical reflections on whether existing fiscal instruments such as subsidies and tax incentives are equitably benefiting marginalized and vulnerable groups, or inadvertently perpetuating inequality. The idea of linking NbS incentives with the implementation of Local Adaptation Plans of Action (LAPAs) and Multi-Hazard Vulnerability and Risk Assessments (MHVRA) was discussed as a way to better target and tailor interventions. Overall, the session reinforced the importance of designing financing and incentive mechanisms that are not only technically sound but also socially just, decentralized, and aligned with Nepal's diverse local realities.



Theme 3: Understanding the nexus of Locally Led Adaptation and Nature Based Solutions

The third theme of the national workshop focused on governance and institutional dimensions of Nature-based Solutions (NbS), with particular attention to the roles of local governments, inclusive adaptation approaches, and the alignment of national policy with international commitments. The theme was chaired by Mr. Badri Raj Dhungana, Director General of the Department. Sessions under this theme explored how decentralized governance structures can be better leveraged to address land degradation, the importance of integrating Locally Led Adaptation (LLA) and Community-Based Adaptation (CBA) into NbS, and the pathways for aligning Nepal's national frameworks with the United Nations Convention to Combat Desertification (UNCCD) and the Land Degradation Neutrality (LDN) targets.

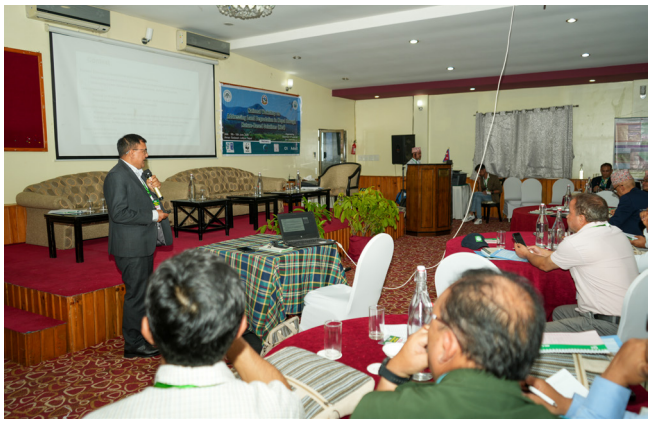
Session 7: Role of Subnational Governments to Address Land Degradation and Nature Based Solutions

Speaker: Dr. Popular Gentle, Clim Adapt

Presentation title: Decentralized Governance and the Political Economy of Land Management

Dr. Popular Gentle delivered a rich and contextually grounded presentation on the historical and structural drivers of land degradation in Nepal. During his presentation he highlighted that land degradation is not solely a result of local resource use or population pressure, but stems from centralized governance, weak land use planning, settlement expansion, and fragmented institutional mandates. His presentation emphasized the political economy lens and how power, interests, and institutional incentives shape natural resource outcomes.

Dr. Gentle during his presentation stressed while Nepal's constitution grants concurrent authority to federal, provincial, and local governments on natural resource management, poor unbundling of these responsibilities and governance overlaps have created friction. Nevertheless, community-based resource management approaches such as community forestry, FMIS, and integrated watershed management remain successful local models that blend traditional knowledge with scientific approaches to deliver NbS. Dr. Gentle called for clarifying roles, enhancing inter-governmental collaboration, and mobilizing local knowledge systems, warning that delayed coordination risks missing opportunities to address land degradation and climate risks effectively.

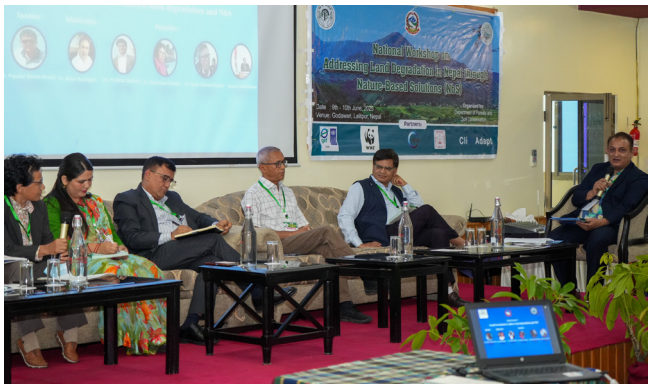


Panel Discussion: Ground-Level Realities and Inter-Governmental Synergy

Following the keynote presentation, the session featured a dynamic panel discussion moderated by Dr. Bimal Raj Regmi from Clim Adapt. The panel brought together a diverse group of experts and practitioners to explore the governance and implementation challenges of Nature-based Solutions in the context of Nepal's federal structure. Panelists included Dr. Manohara Khadka, Country Representative of IWMI Nepal; Dr. Naya Sharma Paudel, a prominent researcher on environmental governance; Mr. Prabhat Sapkota, Province Forest Director, Lumbini Province; and Ms. Apsara Lamsal Lamichhane, Vice Chairperson of Hemalbu Rural Municipality.

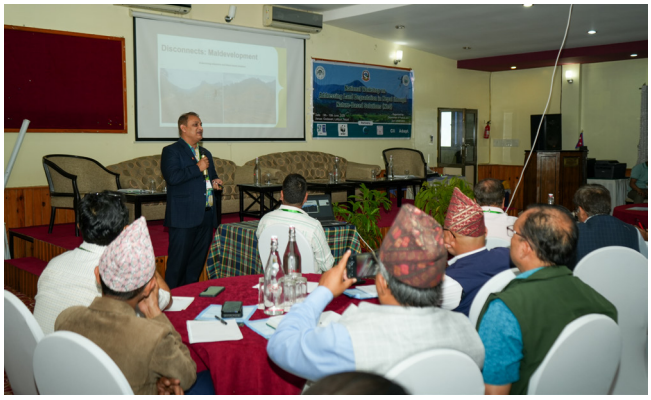
The panel discussion brought diverse perspectives:

- Dr. Naya Sharma Paudel argued that NbS must be politicized and brought to the forefront of local political agendas. However, he warned that simply politicizing NbS does not guarantee transformative outcomes unless tied to political accountability and public pressure.
- Dr. Manohara Khadka discussed the water governance nexus and emphasized cross-sector collaboration in water conservation practices, especially across provincial boundaries.
- Mr. Prabhat Sapkota, Province Forest Director, Lumbini Province echoed the importance of vertical coordination but noted that policy ambiguity and fiscal limitations still constrain implementation.
- Ms. Apsara Lamsal Lamichhane, Vice Chairperson of Hemalbu Rural Municipality shared how a single disaster can overwhelm local systems, stressing that while local governments are closest to the problems, they often lack the resources, manpower, and risk buffers to lead NbS efforts without external support.



Discussion session:

The open discussion in this session was both practical and politically attuned. Over 10 experts participated in the discussion session and one of the pressing questions from the discussion was how to build functional inter-provincial coordination mechanisms, given current institutional fragmentation. Participants debated whether community-based groups such as Community Forest User Groups (CFUGs) could be formally recognized and resourced as key delivery agents for NbS. There was also discussion on the political economy of NbS specifically, how to encourage political parties to integrate NbS into their manifestos and budget commitments. The session closed with a strong call for long-term, flexible financing mechanisms that align with local government development plans and help institutionalize cross-sectoral collaboration.



Session 8: Decolonizing Nature Based Solutions: Blending Locally Led Adaptation and Community Based Adaptation Approaches and Practices

Speaker: Dr. Bimal Raj Regmi, Clim Adapt

Case Presenters: Mr. Nagdev Yadav, Chairperson, CDAFN; Dr. Shikha Thapa Magar, Executive Director, NDRI

Keynote Presentation: Towards Inclusive and Just Adaptation Pathways

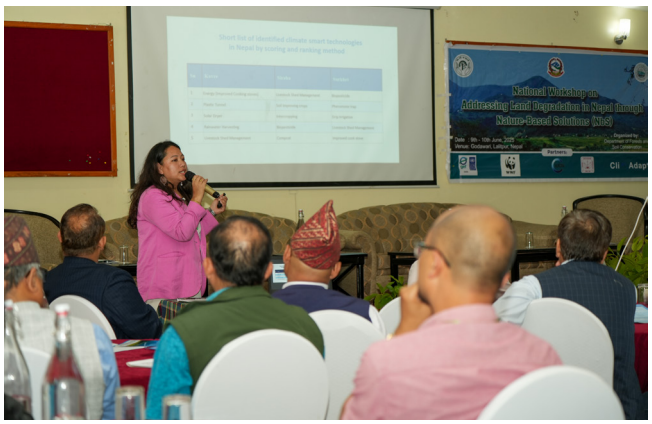
Dr. Bimal Raj Regmi delivered a compelling keynote on decolonizing NbS by bridging Locally Led Adaptation (LLA) and Community-Based Adaptation (CBA). He challenged the dominant top-down, externally driven conservation paradigms and called for placing local actors, knowledge systems, and governance structures at the center of adaptation planning. Dr. Regmi during his presentation stressed that development devoid of local context ("maldevelopment") often increases vulnerability, especially for women, marginalized groups, and indigenous communities. He proposed that NbS should be seen not only as ecological strategies but as platforms for climate justice, inclusive

governance, and agency-building among vulnerable groups. "Integration is inevitable," he stated, highlighting the need to blend modern science with community wisdom for durable, equitable climate responses.

Case Studies: Voices from the Field

- **Mr. Nagdev Yadav** shared experiences from the Chure region where his organization, CDAFN, has worked with communities on managing "too much and too little water" through initiatives like rainwater harvesting, riverbed farming, contour trenches, and land-use zoning. He emphasized the effectiveness of local innovations backed by technical guidance and municipal support.

- **Dr. Shikha Thapa Magar** presented research from Climate Smart Villages, showcasing how communities are experimenting with climate-smart technologies, many of which are gender-sensitive. However, she cautioned that some technologies unintentionally increase women's workloads, especially when introduced without complementary social infrastructure and workload-sharing mechanisms.



Discussion session:

Following three presentations, the session moved into a rich discussion session, focusing on both the philosophy and practice of NbS. One of the disucssion was around the definition and ownership of "climate-smart technology" who defines what is smart, and how are local needs and labor realities accounted for, especially for women? Several participants expressed concern that well-intended technologies might increase unpaid care work or exclude marginalized groups if not properly assessed. Another key theme of discussion was embedding Locally Led Adaptation (LLA) into government planning processes; how can this be formally achieved in national and municipal planning documents? Voices from indigenous communities and women's groups urged for greater recognition of local governance systems, customary rights, and traditional knowledge. There was a consensus that while global frameworks offer structure, decolonizing NbS requires shifting decision-making power to local communities and ensuring adaptation pathways are not only technically sound but socially just.

Session 9: National context of Nature Based Solutions and their linkages with UNCCD and National Land Degradation Neutrality framework.

Keynote speaker: Dr. Buddi S. Poudel, Joint Secretary, MoFE

Dr. Buddi Sagar Poudel, Joint Secretary at the Ministry of Forests and Environment, delivered the keynote presentation on comprehensive policy-level overview of Nepal's national positioning on Nature-based Solutions, particularly in relation to its international commitments under the United Nations Convention to Combat Desertification (UNCCD) and its ambition to achieve Land Degradation Neutrality (LDN). Dr. Poudel outlined the strategic importance of embedding NbS in national planning frameworks to combat land degradation and enhance climate resilience. He emphasized

that NbS has already been integrated into several key policy instruments, including the National Landuse Policy and the National Adaptation Plan (NAP) 2021–2050. He underscored the need for a clearly defined national roadmap for NbS that harmonizes interventions across sectors and governance levels while ensuring alignment with global targets such as the UN Decade on Ecosystem Restoration and the LDN framework. The session highlighted the role of the LDN Target Setting Programme in identifying land degradation hotspots and prioritizing restoration interventions, while also advocating for inter-sectoral coordination mechanisms to overcome fragmented implementation.

Dr. Poudel also stressed the importance of establishing robust monitoring, verification, and reporting systems to track progress on both national and international indicators and emphasized the need to mobilize international climate and development finance by developing coherent, multi-sectoral proposals. He concluded by reiterating the government's commitment to promoting NbS not just as environmental interventions, but as a central pillar of Nepal's sustainable development strategy, requiring strong partnerships among government agencies, civil society, academia, and international development partners. This session reaffirmed that policy coherence, institutional alignment, and data-driven planning will be crucial for Nepal to meet its LDN targets and contribute meaningfully to global restoration goals.

Discussion session:

This final discussion was policy-focused, with participants seeking clarity on how Nepal's national frameworks align with international obligations under the UNCCD and LDN. There were questions on how provincial and local governments who are central to land management can be more actively engaged in implementing these global commitments. Participants also asked about the existence of a national NbS registry or database to track ongoing interventions and how that might be linked to the Sustainable Development Goals (SDGs) and national reporting to UN bodies. Concerns were raised over the fragmentation of data systems and whether monitoring frameworks for NbS, LDN, and climate strategies could be harmonized. Recommendation was also floored in developing a unified reporting platform and more transparent tracking tools to strengthen accountability and guide adaptive management.

Annexes

Annex 1: Summary of Presentation

Keynote presentation: Addressing Land Degradation through Nature Based Solution (NbS) Global and National Context & its Importance

Mr. Badri Raj Dhungana, Director General, DoFSC

The keynote presentation provided a comprehensive overview of the global and national context of land degradation and emphasized the importance of Nature-based Solutions as an integrated and strategic response. Drawing attention to alarming global trends such as the annual loss of 24 billion tons of fertile soil and the degradation of over 2 billion hectares of land, Director General highlighted Nepal's own challenges, including high soil erosion rates (25 tons/hectare/year) and widespread exposure to degradation in productive agricultural areas. The presentation framed land degradation as both a biophysical and governance challenge, driven by natural fragility, deforestation, unsustainable land use, chemical overuse, and encroachment, and called for action that addresses the root causes through systemic and landscape-level approaches.

The presentation outlined Nepal's policy response, beginning with its engagement in the United Nations Convention to Combat Desertification, the formulation of a National Action Programme (NAP), and its commitment to the Land Degradation Neutrality target-setting process. It traced progress made in recent years, including hotspot mapping and alignment with various national policies such as the National Forest Policy (2019), National Climate Change Policy (2019), and the NAP (2021–2050). It also discussed land degradation targets such as maintaining forest cover at 44.7%, increasing agricultural growth to 6%, and restoring 10% of degraded wetlands. Legal frameworks and cross-sectoral strategies, including the National River Basin Strategy (2023) and the Land Use Policy (2015), were also highlighted as critical enablers for scaling NbS.

Director General of DOFSC during his presentation emphasized that NbS in Nepal are not new. The Department of Forest and Soil Conservation, through integrated watershed management and community-based conservation, has long applied green (vegetative), blue (water), and grey (infrastructure) solutions. Examples included agroforestry, bioengineering, payment for ecosystem services, and wetland rehabilitation. However, the speaker identified several persistent gaps: fragmented programs, limited data and documentation, inadequate coordination, and insufficient financing. The way forward calls for updated degradation assessments, stronger inter-agency collaboration, integrated river basin management strategies, and the mobilization of new financing opportunities, especially through climate funds such as the GCF and GEF. The presentation concluded by linking the objectives of the workshop to the national need for collaborative, science-based, and community-anchored implementation of NbS for land restoration and climate resilience.

Nature-based Solution (NbS): its standards to address environmental and Societal Challenges

Narendra Man Babu Pradhan, PhD, IUCN Nepal

Nature-based solutions (NbS) refer to actions aimed at protecting, sustainably managing, and restoring natural or modified ecosystems to address societal challenges. According to the International Union for Conservation of Nature (IUCN), NbS are defined as strategies that tackle issues such as climate change, food and water security, and natural disasters in effective and

adaptive ways. A key aspect of NbS is its dual focus on overcoming societal challenges while simultaneously enhancing human well-being.

The concept of Nature-based Solutions has evolved over the past decade within the fields of environmental science and nature conservation. International organizations are increasingly looking for ways to work with ecosystems instead of relying solely on traditional engineering solutions. NbS aims to promote sustainable livelihoods while protecting natural ecosystems and biodiversity. These solutions are guided by principles of long-term sustainability, address multiple societal needs, involve all stakeholders, and are flexible enough to adapt to changing conditions.
There is an urgent need to recognize the interconnectedness of the various environmental and socioeconomic crises facing humanity today. Failing to do so risks compromising the integrity of nature, which in turn affects the livelihoods of local communities, human well-being, biodiversity, and other critical global challenges outlined in the Sustainable Development Goals (SDGs). These issues must be addressed in an integrated manner, acknowledging the essential role that nature plays in tackling these interconnected crises. Biodiversity is fundamental to human well-being, a healthy planet, and economic prosperity.

The IUCN Nature-based Solutions (NbS) standard consists of eight criteria and 28 indicators.

- Criterion 1 focuses on identifying the societal challenge that the NbS aims to address.
- Criterion 2 guides the design of the solution to ensure it is appropriate for the scale of the issue.
- Criteria 3, 4, and 5 correspond to the three pillars of sustainable development: environmental sustainability, social equity, and economic viability.
- Criterion 6 tackles the need to balance trade-offs and make choices that achieve both short- and long-term gains. It emphasizes the importance of a transparent, equitable, and inclusive process for determining these trade-offs.
- Criterion 7 highlights the necessity for adaptive management, which promotes continuous learning about system-wide processes and allows for the adaptation of NbS in response to systemic changes.
- Criterion 8 involves embedding the NbS concept and actions into policy or regulatory frameworks and linking them to national targets or international commitments.

The IUCN envisions that national governments, city and local governments, planners, businesses, donors, financial institutions (including development banks), and non-profit organizations will all be primary users of the Standard. The Standard applies to stakeholders working in various contexts, from protected areas to productive landscapes and urban environments, as well as across different regions and in both modified and intact ecosystems. Users can implement the Standard for interventions of both large and small scales.

Restoration of Drought Prone Watershed Through Nature Based Solutions : An Experience from Developing Climate Resilient Project (DCRL)

Prem Paudel, National Project Manager, DCRL

Introduction

The Mid Mountain watersheds of Nepal are prone to multi hazards (drought, landslides, and floods) and the impacts are magnifying due to its topographic settings, inappropriate anthropogenic activities, and adverse impacts of climate change. The disastrous trends are increasing and contributing to more multi hazard problems causing damages to agricultural

land, physical assets, economic properties, and ecosystem services. At the other, extreme water scarcity and climate-induced drought hazard has been emerging as one of the major challenges in the mid-hill watersheds in Nepal. The drought stresses in combinations with other hazards, and socio-economic conditions of local communities, the problem is exacerbating and making society more vulnerable, and sometimes becoming environmental causes of displacement. The clear witnessed of this evidence can be observed in Lowe Dudhkoshi Watershed, located in Khotang and Okhaldhunga districts, eastern Nepal. In this watershed the situation has created a critical condition for pronged agricultural, and hydro-meteorological drought. As a result of climate-induced slow-onset drought, deep-rooted chronic poverty, environmental migration and an unequal social structure are emerging and contributing to the serious environmental vulnerability, and people who do not bear enough capacity to adapt are seriously facing the consequences.

The above scenarios clearly reflect the urgent need for restoration of degraded land with faster and cheaper technology. To meet the purpose, the nature-based solution which can integrate the green, blue and grey structures are essential. To address this, as a pilot project, GON/UNDP/GEF : Developing Climate Resilient Livelihood Project (DCRL) implemented diverse nature of NbS activities to restore the functional integrity of Lower Dudhkoshi Watershed, located at Khotang and Okhaldhunga districts. In this paper it is summarized the effectiveness and experiences on restoration approaches through NbS.

Major Societal Challenges

- Drought : Agricultural, Meteorological, Hydrological droughts
- Water stress : Water source depletion, availability, quality/quantity
- Erosion : landslides, gully formation.
- Forest ecosystem : reduced organic matter, soil compaction, retarded growth.

Intervention Approaches

Based on integrated watershed management principles, multiple nature activities with their alignment each other were implemented in a concentrated approach. The main approaches were;

i. Evidence based planning and intervention: Base line study on drought, landslide, flood mapping, water stress, conservation farming, suitable species identification and community need was identified. Based on the identified hotspots on facing problems, multiple nature of activities with their alignment each other were intervened.
ii. Community led and partnership intervention : Formation of users committee, collaboration with different NRM groups, partnership and collaborative approach.
iii. Governance Mechanism: Programmatic guidance from multidisciplinary/multi-institutional officials representing 3 tiers of government, quality assurance from technical working experts groups, financial transparency through public hearing, partnership and collaboration were the main structural arrangement to control the governance mechanism.
iv. Sustainability : the operation and maintenance plan, institutionalization of users committee, capacity building and provision of seed money to sustained the activities after the completion of project.

Types of NbS intervention/Key activities

To conserve the soil, water, degraded land restoration, land productivity improvement green, blue and grey nature of activities were implemented with their complimentary and synergic ways. In addition, the relevant policies, directives, guidelines were also formulated.

Table : Types of NbS (actions)

Major activities	Achievement
Water source protection (No)	637
Conservation farming, degraded land restoration (hac)	2614
Establishment of water use/reuse system (hac)	664
Water lifting (sites)	5
Catchment ponds (no)	141
Pond for Majhi communities	21
Water holes (no)	25
Contour trenches for recharge (km`)	40
Cultivation of drought tolerant NTFP species (ha)	201
Farm Yard Manure/Cattle shed improvement (no)	850
Promotion of Improved energy efficient stoves (no)	1250
Hydro meteorological data establishment (sites)	7
NRM network formation for integrated approach (no)	7
Capacity building, strengthening NRM groups (no)	761

Lesson learned: The NbS captures the real essence on restoration of functional integrity of watershed and importance is growing mainly due to its economic efficiency, synergic effects, adaptation to local conditions, long term performance, active participation/ownership of stakeholders. In drought prone area, the integrated water management (protection, utilization, recharge) is essential and it should link with the economic opportunity through farming system improvement (cash farming, improved cropping pattern/intensity). For the sustainability, the capacity building and institutionalization processes are equally important.

Learning from EbA in Nepal - Approaches to Upscale NbS to combat land degradation and climate vulnerability.

Top Bahadur Khatri, EBA II

Abstract: Ecosystem-based Adaptation (EbA) emerged in the early 2000s as a response to growing global recognition that addressing environmental degradation and climate change requires integrated and holistic solutions. Introduced in discussions under the United Nations Framework Convention on Climate Change (UNFCCC), EbA is a people-centered approach that helps communities adapt to climate change by harnessing ecosystem goods and services. It reduces vulnerability and enhances adaptive capacities through nature-based solutions (NbS) and participatory methods. Defined by the Convention on Biological Diversity (CBD) in 2009, EbA uses biodiversity and ecosystem services as part of a broader climate adaptation strategy. EbA leverages natural ecosystems such as forests, wetlands and grasslands to mitigate climate change effects, offering sustainable and cost-effective resilience building solutions. In Nepal, several EbA projects have been implemented, the first one being the flagship mountain-based Panchase Project, EbA South, scaling up mountain EbA, EbA II and the Urban EbA initiative implemented by the Kathmandu Valley Development Authority (KVDA). These initiatives have contributed to ecosystem restoration and sustainable livelihoods crucial for enhancing resilience in climate vulnerable regions. Building on earlier experiences, the EbA II project (2019-2024), jointly implemented by the Ministry of Forests and Environment (MoFE), the Global Environment Facility (GEF), and the United Nations Environment Programme (UNEP) aimed to strengthen the adaptive capacity of local, provincial, and federal governments as well as communities in

degraded forests and rangelands in the mid hills of Achham and Salyan and Dolakha districts in high mountains.

The EbA II project implemented a wide range of NbS interventions including water source conservation, reforestation, rangeland restoration, soil and water conservation, terrace improvement, and the construction of filtering and check dams. It also promoted climate-resilient agriculture and supported local livelihoods through forest and agro-based enterprises. These interventions were implemented using participatory, community-based approaches involving local user groups, municipal authorities, and national institutions.

Capacity building played a significant role, with extensive training provided to government officials, local leaders, and community members to enhance planning, implementation, and monitoring of EbA interventions. Awareness on EbA was conducted through a combination of national campaigns, media training, and roll out of awareness and educational materials to a wide range of actors. Policy briefs were developed for policy influence and needful integration Local curricula on climate change and EbA measures for students of 6-8 grade students have been developed and rolled out in Bhimeshwor Municipality. Likewise, in collaboration with Curriculum Development Centre (CDC), curricula of 8-12 grades integrating climate change and EbA have been developed and will be rolled out soon. Likewise, research grants on EbA topics and fellowships were provided to students & researchers and media personnel, contributing to a broader knowledge base on EbA.

After six years of implementation, the EbA II project has generated valuable lessons, insights, and best practices. These have been documented and disseminated, culminating in the development of an EbA Upscaling Plan for Nepal, providing strategic direction for mainstreaming and scaling up ecosystem-based adaptation efforts across Nepal.

Key words: Ecosystem-based Adaptation, Nature-based Solutions, Climate Resilience, UNFCCC, CBD, KVDA, CDC, Participatory Approaches, Upscaling Plan, Nepal.

Designing and Implementing Nature-based Solutions Project: Sharing Experiences of WWF

Rajesh Sada, WWF Nepal

Abstract
This presentation highlights WWF's practical experience in designing and implementing Nature-based Solutions (NbS) projects through the application of the IUCN Global Standard for NbS. Focusing on the Lower Narayani River Basin in Nepal, it outlines a participatory design process that began with a series of stakeholder consultations to identify pressing societal challenges and explore nature-based responses rooted in local context. The project design process integrated ecological assessments, socio-economic analyses, and community inputs to co-develop solutions that align with the eight IUCN criteria. Key components included defining the project scope, setting measurable targets, ensuring inclusiveness, and assessing trade-offs. The session showcases examples where NbS interventions such as wetland restoration and forest restoration have enhanced biodiversity, improved community resilience, and delivered cost-effective alternatives to traditional infrastructure. The presentation shares insights into the challenges and opportunities encountered during this process, emphasizing the importance of multi-stakeholder engagement, adaptive planning, and evidence-based decision-making in designing robust, scalable, and sustainable NbS initiatives. By reflecting on both successes and challenges, the presentation aims to inform practitioners and policymakers on how to strengthen NbS design and implementation for lasting impact.

Harnessing the Role of National Climate Finance Accredited Entities in Scaling Up Nature-Based Solutions in Nepal

Dr. Manish Raj Pandey, Head – Department of Climate Change, National Trust for Nature Conservation, Khumaltar, Lalitpur, Nepal

Nepal faces persistent challenges from land degradation, particularly in the mid-hills, Chure, and Tarai regions, driven by a combination of anthropogenic pressures and environmental stressors. These challenges are further exacerbated by the impacts of climate change, posing serious threats to ecosystems, livelihoods, and the nation's long-term development trajectory. In this context, Nature-based Solutions (NbS) offer a transformative, integrated approach to restoring degraded ecosystems. NbS hold significant potential for climate change mitigation and adaptation, while reducing disaster risks and delivering wide-ranging socio-economic co-benefits.

Nepal has demonstrated strong policy commitment to advancing NbS through strategic instruments such as the National Adaptation Plan (2021–2050), updated Nationally Determined Contributions (NDC 3.0), the Green, Resilient, and Inclusive Development (GRID) framework, and the Long-Term Strategy for Net-Zero Emissions by 2045. These frameworks prioritize the mainstreaming of NbS across multiple sectors, with a focus on forest management, ecosystem-based adaptation, and community-led conservation initiatives. However, implementation remains constrained by fragmented governance structures, capacity and data limitations, and inadequate financial flows.

Nepal's climate finance landscape reflects notable progress, yet underscores critical concerns over the sustainability of debt-reliant financing models—particularly for Least Developed Countries. Addressing the widening climate finance gap necessitates a transition toward innovative and diversified mechanisms—such as blended finance, Payment for Ecosystem Services (PES), green insurance, public subsidies, and strategic government investments.

National Climate Finance Accredited Entities to UNFCCC financial mechanisms —such as the Green Climate Fund and Adaptation Fund—play a vital role in accessing, managing and mobilizing international finance and in designing bankable NbS proposals. NGOs, civil society, and private sector actors also play critical roles in fostering local capacity, promoting policy uptake, and scaling sustainable practices.

To fully realize the potential of NbS, Nepal must embed them within national development strategies, foster inclusive multi-stakeholder collaboration, and reframe NbS as strategic investments in climate resilience, equitable development, and green economic transformation.

Keywords: Nature-based Solutions, climate finance, land degradation, adaptation, mitigation, accredited entities, resilience.

Role of Subnational Governments to Address Land Degradation and Nature Based Solutions

Dr. Popular Gentle, Clim Adapt

Land degradation has a long history in Nepal. It is not simply due to population growth, local use of natural resources and subsistence agriculture, rather a complex process guided by centralized mindset to control over resources, lack of land use planning, unplanned settlement, institutional mismatch and governance in natural resource management as major drivers. In recent

decades, the impacts of climate change and climate induced disasters are further compounding the intensity and magnitude of resource degradation. A political economy analysis helps to understand how political and economic forces interact and how underlying power dynamics, interests, incentives and ability of key actors determine to shape policy decisions and outcomes for land degradation.

The constitution of Nepal provides absolute and concurrent authority to federal, provincial and local governments in natural resource management. However, unclarity in unbundling concurrent authorities have resulted in continuing contested interest between key actors due to policy and institutional overlaps and ambiguity.
Community based natural resource management approaches such as community forestry, farmer managed irrigation systems, community based integrated watershed management are some of the successful examples to reduce land degradation and sustainable management of resources. These practices are also effective in blending local and traditional knowledge and practices with scientific knowledge to provide nature based solutions. However, unprecedented impacts of climate change and market based socio-economic changes are challenging local efforts to combat resource degradation.

The role of sub-national governments is important to plan and implement context specific resource management at different scales. A clarity of roles and responsibilities and agreed coordination and collaboration mechanisms may provide better space for federal, provincial and local actors for collaboration. However, delay in promoting and adopting collaboration, coordination and co-existence – the guiding principles of the constitution- may have missed opportunity to collectively manage resources to address resource degradation and impacts of climate change.

Decolonizing Nature-Based Solutions: Blending Locally Led Adaptation and Community-Based Adaptation Approaches

Presenter: Dr. Bimal Raj Regmi, Clim Adapt

This presentation critically examined the prevailing global discourse on Nature-based Solutions, calling for a more inclusive, equitable, and context-specific adaptation paradigm. It proposed a framework to "decolonize" NbS by integrating principles from Locally Led Adaptation (LLA) and Community-Based Adaptation (CBA). The analysis was framed around growing systemic risks such as climate change, loss and damage, weak governance, and the inequitable distribution of adaptation benefits. It highlighted that dominant NbS models often externally designed and top-down; risk overlooking the lived experiences and adaptive capacities of vulnerable communities, particularly women, Indigenous Peoples, and marginalized groups. The presentation outlined a set of locally grounded principles for transforming NbS into more just and effective solutions. These included securing local resource rights, co-designing interventions based on climate risk and vulnerability assessments, strengthening local governance institutions, and improving access to climate finance at the grassroots level. Drawing on practical examples from integrated resilience programs such as the CAFS-Karnali project, the presentation showcased layered and sequenced adaptation actions such as community seed banks, agroforestry, and climate-resilient farming systems as evidence of scalable and community-driven NbS practices.

The need to harmonize national policies and institutional frameworks with the principles of LLA was emphasized, along with the importance of building adaptive learning systems, early warning mechanisms, and social safety nets to support the most vulnerable. The presentation concluded by asserting that NbS must not only serve ecological functions but also foster climate justice,

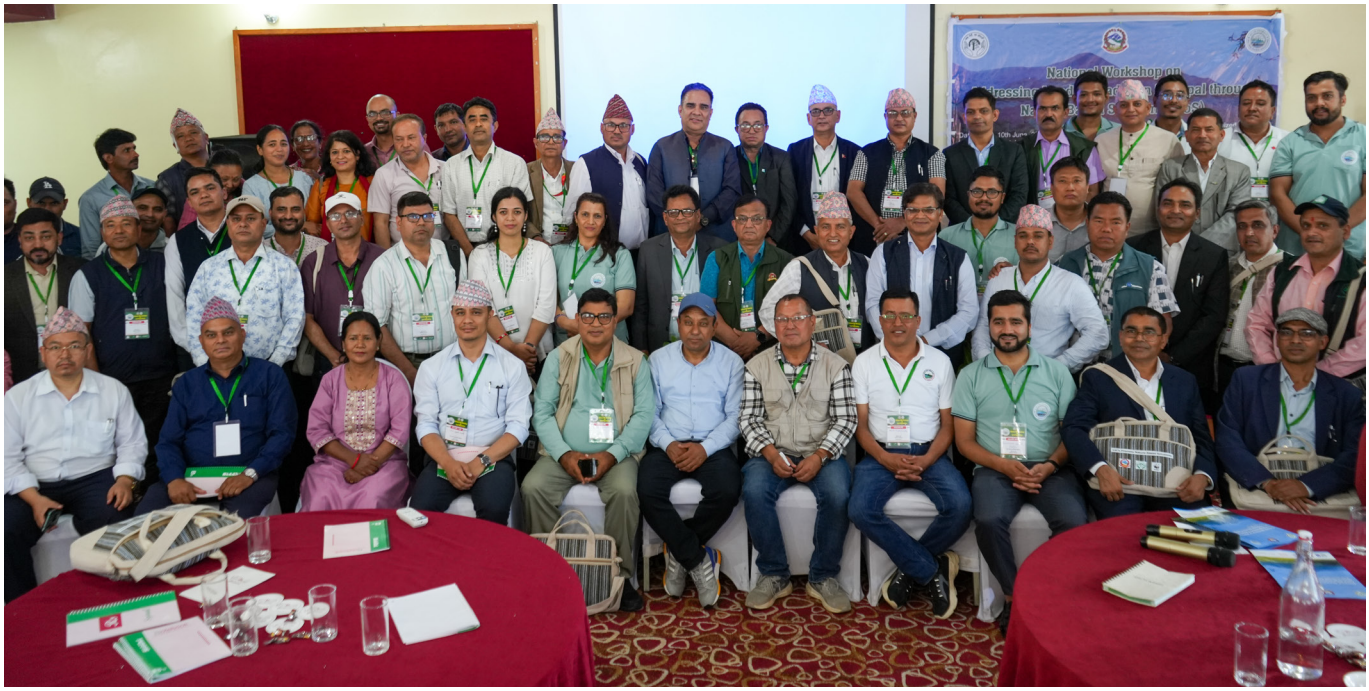
agency, and dignity. Central to this approach is the recognition of local people not merely as beneficiaries of NbS interventions, but as active architects and leaders of transformational adaptation and ecosystem stewardship.

National Context of Nature-Based Solutions and Their Linkages with Land Degradation Neutrality Targets in Nepal

Presenter: Dr. Buddhi Sagar Poudel, Joint Secretary, Ministry of Forests and Environment

This presentation provided a comprehensive policy and technical overview of Nepal's integration of Nature-based Solutions into its national strategies for land restoration and climate resilience, with a particular focus on achieving Land Degradation Neutrality by 2030. NbS were positioned as a cross-cutting solution aligned with the objectives of the three Rio Conventions; UNCCD, UNFCCC, and CBD and reflected in Nepal's Constitution, the 16th Five-Year Plan, and key sectoral policies such as the National Forest Policy (2018), Climate Change Policy (2019), and the Long-Term Strategy for Net-Zero Emissions (2021). The presentation emphasized Nepal's quantified mitigation targets, including maintaining 46% forest cover and advancing sustainable forest management, agroforestry, and the restoration of degraded lands. On the adaptation front, priority programs were highlighted, focusing on watershed management, wetland conservation, and nature-based livelihoods. It was noted that NbS will play a critical role in achieving Nepal's net-zero emissions target by 2045, particularly in forestry, agriculture, and biodiversity sectors. Globally, NbS were estimated to contribute up to 37% of the climate mitigation potential, with a high return on investment. The presentation further introduced national LDN targets supported by spatial assessments, advocating for a three-pronged strategy to avoid, reduce, and reverse land degradation through sustainable land management and ecosystem restoration practices.

Key enabling conditions discussed for scaling up NbS included the need for integrated land use planning, supportive legal frameworks, increased public and private investment, and robust community-based governance models. The presentation concluded by positioning land degradation not only as an environmental issue, but as a developmental challenge that intersects with multiple Sustainable Development Goals (SDGs), particularly SDG 15.3. The case was made for embedding NbS into Nepal's development planning architecture through long-term financing, intersectoral coordination, and transparent monitoring systems.



Annex 2: Declaration from the workshop

Godavari Declaration on Addressing Land Degradation in Nepal through Nature-based Solutions (NbS)

Recognizing the Urgency of Land Degradation: We recognize the growing threat of land degradation in Nepal, which is worsened by climate change, biodiversity loss, and unsustainable land use practices. These conditions necessitate rapid and coordinated action to protect ecosystems and livelihoods.

Affirming the Role of Nature-based Solutions (NbS): We reiterate that NbS provide a sustainable, cost-effective, and holistic approach to land degradation while also benefitting biodiversity conservation, climate resilience, social and economic prosperity, and water resource management. This can be further enhanced through more integrated and economically viable options that incentivizes stakeholders to invest on NbS.

Sharing and Scaling Innovations and Best Practices: We recognize the successes of on-going initiatives of various projects on Nature-based Solutions (NbS) and/ or Ecosystem-based Adaptation in providing triple benefits namely, biodiversity conservation, human well-being and climate resilience through a landscape, watershed and integrated resource management approach.

Strengthening Knowledge, Data, and Capacity Building: We advocate for investments in research, data gathering, and local capacity building to enable effective NbS design and implementation, such as the development of collaborative knowledge platforms. We also pledge to recording, sharing, and scaling effective NbS case studies, traditional and indigenous knowledge, and innovations from Nepal and beyond in order to improve evidence-based decision-making and replication.

Promoting Locally Led Adaptation (LLA) Approaches: We recognize the value of community-led efforts and indigenous knowledge in creating context-specific and inclusive NbS. We emphasize the necessity of aligning NbS with LLA principles to provide solutions that are inclusive, culturally acceptable, and sustainable. Also, we stress the importance of building the technical capacities of local governments in the uptake of NbS measures across the country.

Achieving national LDN and other policy targets: We believe that achieving national LDN target, including other targets on climate change and desertification, will help to firmly address rural migration while restoring adequate workforce for resilient agriculture in hills.

Fostering Multi-Stakeholder Collaboration: We commend provincial and local governments' strong commitment to preserving and scaling up the best practices and accomplishments evidenced by various NbS programs and interventions. We advocate for more coordination and collaboration across government institutions, political actors, civil society, international organizations, academia, and local communities in order to successfully encourage nature-based solutions, co-create, and execute NbS initiatives.

Driving Policy Integration and Actionable Outcomes: We recommend integrating NbS into national and local development, climate, and environmental plans and policies. The workshop calls for the urgency to prepare national framework on NbS to enhance common understanding of NbS, standardize its implementation, benefitting people, climate and biodiversity.

10 June 2025
Godavari, Lalitpur

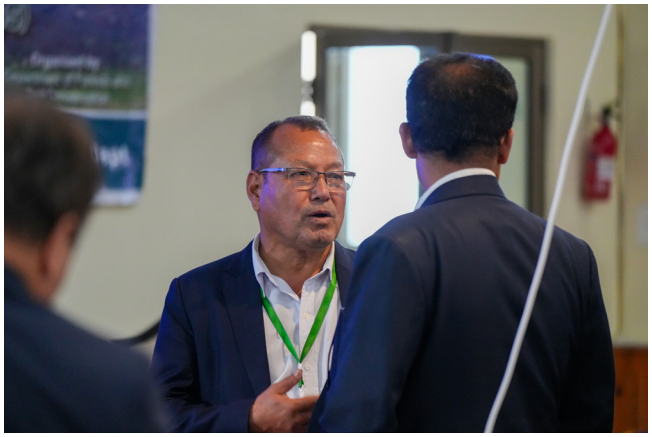
Annex 3: Workshop schedule

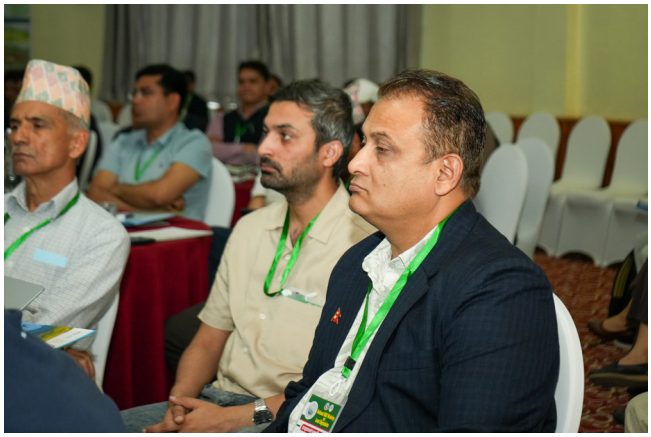
Day 1: 9th June 2025

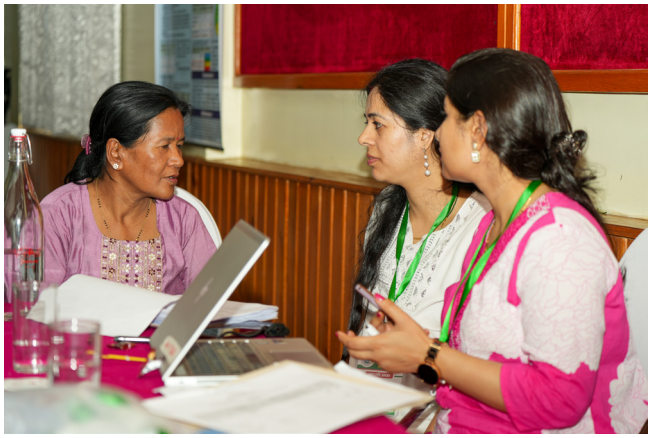
Time	Agenda	Responsibility
Opening and Inaugural Session		
10:00-10.30	Registration and Welcome Coffee	
10.30-12:15	- Inauguration and Opening Remarks - Introduction to Workshop Objectives and Agenda	- Welcome and objective of the workshop. - Keynote Presentation- Mr BR Dhungana - Inaugural Address by Guest/Special/Chief Guest - Remarks by Chair
12:15-13:15	Lunch	
Theme One: Understanding the significance of Nature Based Solutions in addressing the land degradation issues		
13:15 -13:40	Session 1: Global Context of NbS initiatives, it's standards to address environmental and Societal Challenges	Speaker: Dr Narendra Pradhan, IUCN
13.40-14.00	Q &A and discussions	
14:00 - 15:30	Session 2: Restoration of Drought Prone Watershed Through Nature Based Solutions: An Experience from Developing Climate Resilient Project (DCRL). 20 minutes Keynote speech, 40 minutes Panel discussion and 30 minutes Q&A	Speaker: Dr Prem Paudel, National Project Manager, DCRL Panellists: - Mr Ganesh Paudel, Joint Secretary, MOFE - Dr Indra Sapkota, Province Forest Director, Koshi Province - Mr Pragyajan Y Rai, UNDP - Ms. Bimala Rai, Mayor Halesi Tuwachung Municipality
15:30-15:45	Tea and Coffee	
Theme Two: Innovations, learning, and good practices on Nature based Solutions		
15:45 – 16:05	Session 3: Learning from EbA in Nepal - Approaches to Upscale NbS to combat land degradation and climate vulnerability.	Speaker: Mr. Top B Khatri, EBA II
16.05- 16:25	Q &A and discussions	
16:25- 16:45	Session 4: Designing and Implementing NbS projects: An experience from WWF Nepal	Speaker: Mr. Rajesh Sada, WWF Nepal
16:45-17:15	Q&A and group discussions	
17.15-17:30	Wrap up and closing of day One	

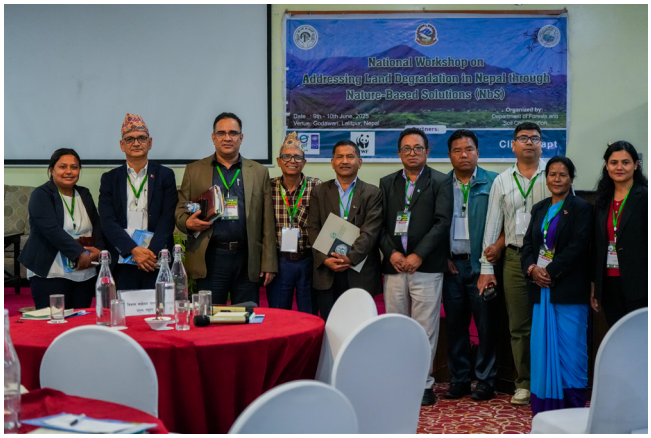
Day 2: 10th June 2025

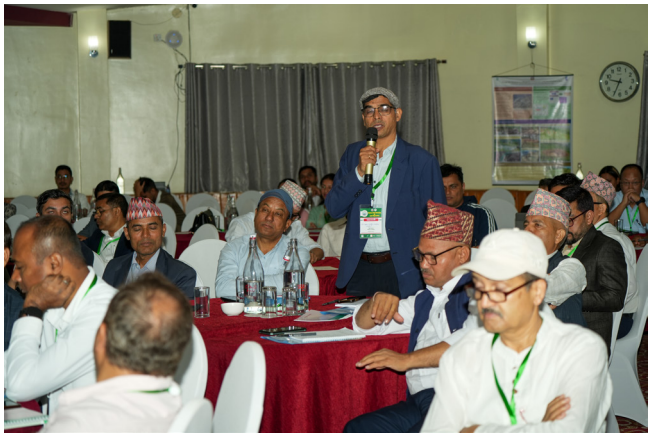
Time	Agenda	Responsibility
09:00 - 09:15	Recap of Day 1 and Introduction to Day 2	
9:15-9:35	Session 5: Harnessing the Role of National Climate Finance Accredited Entities in Scaling Up Nature-Based Solutions in Nepal.	Speaker: Dr Manish Raj Pandey, NTNC
9:35-10:00	Q&A and discussions	
10:00-10:40	Session 6: Incentivizing NbS	Speaker: Dr Narendra Pradhan, IUCN
10:40: 11:00	Q &A and discussions	
11:00-11:15	Tea break	
Theme 3: Understanding the nexus of Locally Led Adaptation and Nature Based Solutions		
11:15: 12: 45	Session 7: Role of Local Government to address land degradation and NbS. 20 minutes Keynote speech, 40 minutes Panel discussion and 30 minutes Q&A	Speaker; Dr Popular Gentle Panellists: - Dr Manohara Khadka, CR, IWMI - Apsara Lamichhane, Vicechairperson, Helambu Rural Municipality - Mr. Prabhat Sapkota, Province Forest Director, Lumbini Province - Dr Naya Sharma Poudel
12:45-13:45	Lunch	
13:45-14:45	Session 8: Decolonizing Nature Based Solutions: Blending Locally Led Adaptation and Community Based Adaptation Approaches and Practices 20 minutes Keynote speech, 20 minutes experience sharing and 20 minutes Q&A	Speaker: Dr Bimal Raj Regmi, Clim Adapt (20 minutes presentation) Experience Sharing session (20 minutes): 1. Nagdev Yadav, Chairperson, CDAFN: Blending LLA with Nature based Solutions (example of Chure) 2. Dr Sikha Thapa Magar, Executive Director, NDRI: Inclusion of vulnerable groups in Climate smart Village
14:45-15: 05	Session 9: National context of Nature Based Solutions and their linkages with UNCCD and National Land Degradation Neutrality framework. 20 minutes presentation and 10 minutes Q&A	Speaker: Dr Buddi S Poudel, Joint Secretary, MOFE
15:05-15:45	Closing Remarks	Final reflections and feedback from participants Remarks from Session Chair
15:45-16:00	High Tea and coffee	

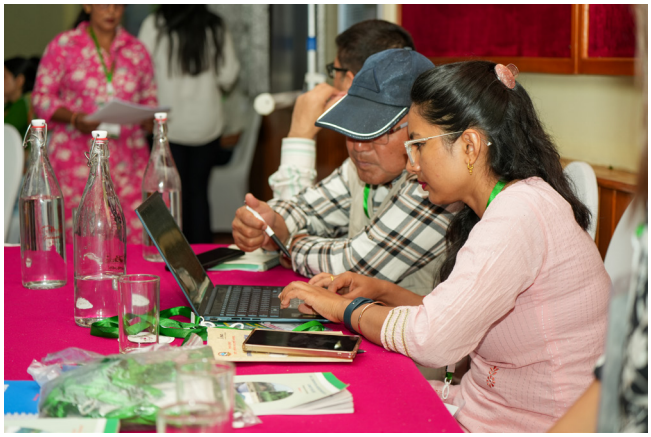


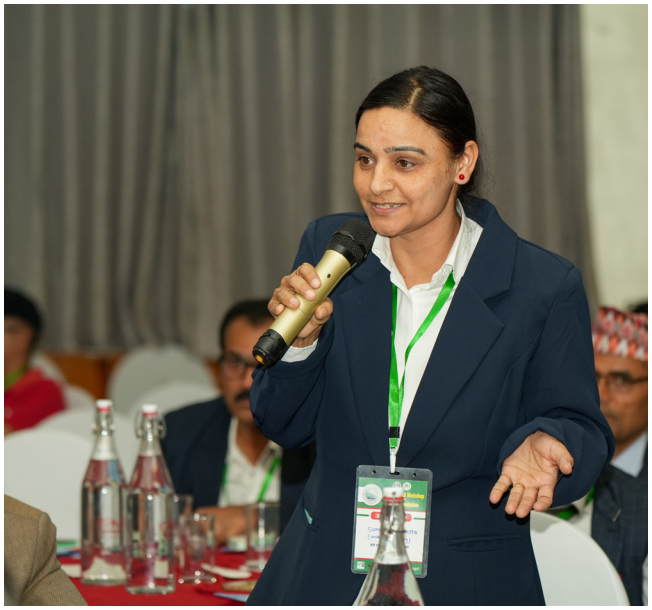


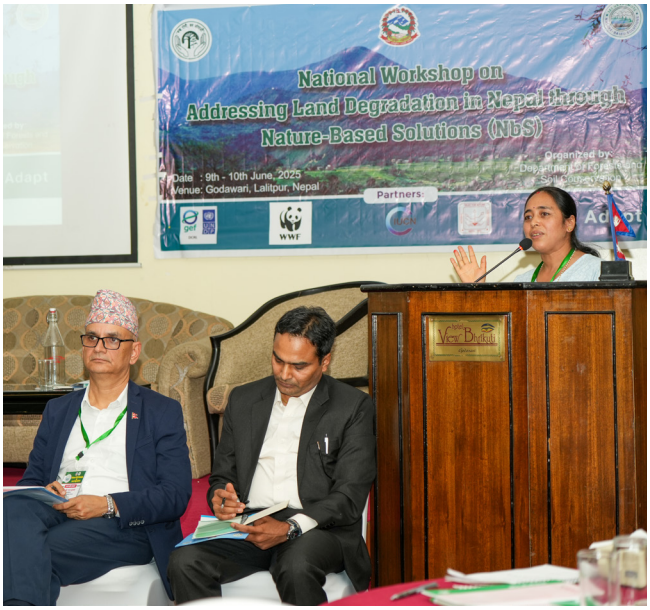


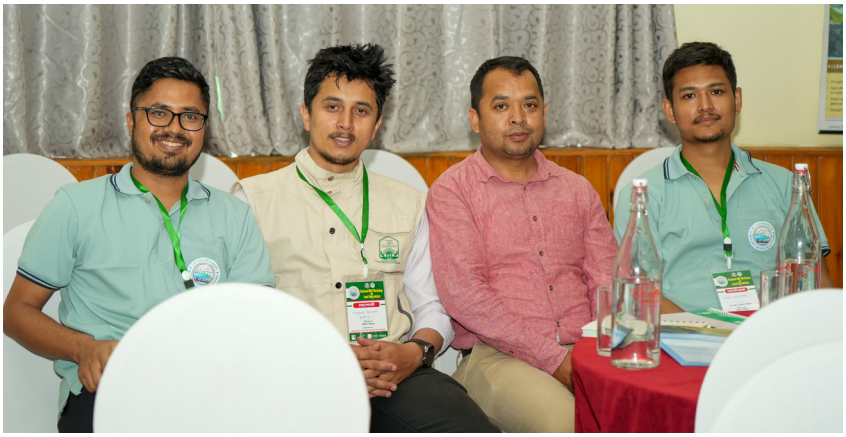

National Workshop on
Addressing Land Degradation in Nepal through
Nature-Based Solutions (NbS)








National Workshop on
Addressing Land Degradation in Nepal through
Nature-Based Solutions (NbS)
Date : 9th - 10th June, 2025
Venue: Godawari, Lalitpur, Nepal
Partners:
WWF



Government of Nepal
Ministry of Forests and Environment
Department of Forests and Soil Conservation
Babar Mahal, Kathmandu, Nepal

Phone: 01-5320303
Email: info@dofsc.gov.np