PROJECT OVERVIEW

PunarUtthan

PROMOTING NATURE-BASED SOLUTIONS FOR MITIGATING WILDFIRE RISKS AND RESTORING THE FARM-FOREST-WATER NEXUS THROUGH LOCALLY LED APPROACHES IN NEPAL

PROJECT GOAL

Enhance wildfire and environmental resilience, human well-being and ecosystem health of Nepal's farm-forest-water nexus through locally led research and action on nature-based solutions (NbS).

Nepal's farm-forest-water nexus sustains rural livelihoods, ecological balance and food security, but is increasingly threatened by the growing frequency and intensity of wildfires fueled by changing weather patterns and human activity. Provinces such as Lumbini, Karnali and Sudurpaschim recorded more than 40,000 fire incidents between 2001 and 2023, degrading ecosystems, disrupting agriculture and endangering nearly 7.5 million people. Smallholder farmers, Indigenous groups and marginalized communities are among the most affected.

These regions are home to more than 1,000 community forests and 2.1 million people who depend heavily on agriculture and forest resources. Yet many Community Forestry User Groups (CFUGs) face governance challenges, declining capacity and limited resources to manage wildfire risks. Government responses remain constrained by scarce resources, limited policies and inadequate access to science-based, locally relevant solutions.

The PunarUtthan Project addresses these urgent threats by piloting and scaling nature-based solutions (NbS)—practical approaches that restore and manage ecosystems to address community challenges. Examples include agroforestry, soil and water conservation, fire-resistant crops and tree species, and community-led fire monitoring systems. By combining local knowledge with modern tools such as Geographic Information System (GIS), remote sensing, artificial intelligence and early warning systems, the project helps restore

degraded ecosystems, reduce wildfire risks and strengthen socio-ecological resilience. Special attention is given to the leadership of women, children, elderly and marginalized groups to ensure participatory decision-making.

PROJECT APPROACH

PunarUtthan applies a research-to-action model that identifies, pilots and validates NbS suited to local landscapes. Through participatory vulnerability and needs assessments, the project co-develops a "basket of choice" of NbS options for farming and forest-dependent communities. Action research then tests these solutions in multiple locations, generating evidence to scale effective practices.

Key program areas include:

- **Risk assessment** using participatory and science-based methods to map vulnerabilities across farms, forests and water systems.
- **Piloting NbS** such as water efficient irrigation technologies, agroforestry models, soil and water conservation measures, and fire-resistant crop and tree species.

- **Strengthening community enterprises** through customized business plans, market linkages and financial access to expand NbS adoption.
- **Policy integration** by co-developing strategies and guidelines with local governments and mainstreaming NbS into existing climate, agriculture and biodiversity policies.
- **Knowledge sharing** through communities of practice, knowledge hubs, media outreach and academic partnerships, ensuring local ownership and wider uptake.

PARTNERS

The four-year project (March 2025–January 2029) is implemented by Lutheran World Relief in partnership with Rupantaran, the Global Institute for Interdisciplinary Studies (GIIS), Nature Media Network (NMN) and Kathmandu University-KUSOM. Activities take place in Sitganga Municipality (Arghakhanchi), Buddhabhumi Municipality (Kapilvastu), Bheriganga Municipality (Surkhet) and Chure Rural Municipality (Kailali).

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EXPECTED RESULTS

- **Capacity building**: **20,000 people** improve their knowledge and skills in wildfire risk management across farms, forests and water resources.
- **Livelihoods**: **3,000 households** benefit from enhanced food security, incomes and productivity through NbS; **1,440 households** are supported by strengthened small and medium enterprises; **480 households** are linked to financial services.
- **Ecosystem restoration**: **40 hectares** of degraded farmland, forests and water resources are restored through conservation and rehabilitation practices.
- **Community resilience**: **240 leaders** are trained to use the Forest Fire Detection and Monitoring System; **four local governments** are equipped with fire detection and response resources; community-led early warning systems benefit **20,000 people**.
- **Policy and governance**: **12 wildfire mitigation guidelines and plans** are co-created with local governments and communities and integrated into official policies.
- **Research and innovation**: **45 NbS practice packages** are piloted across diverse landscapes; **four master's theses** are funded; **at least eight journal articles and policy briefs** are published to capture evidence and best practices.
- **Awareness and knowledge sharing**: **48,000 people** are reached with wildfire risk information through radio, television and social media; communities of practice and knowledge hubs are established to sustain collaboration.

CORUS

The Corus Effect

Lutheran World Relief is part of Corus International, an international development organization that unites an array of nonprofit organizations and businesses, each with specialized expertise — from health to technology to economic development to emergency response. Alongside communities and local partners in fragile settings, our expert teams integrate disciplines, approaches and resources to overcome poverty and suffering for those living in the world's toughest and most difficult circumstances. Our traditional and nontraditional approaches bring together the multi-dimensional, holistic solutions needed to truly achieve lasting change.

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NATURE MEDIA NETWORK

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