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About Us

The Bhutan Ecological Society (BES) is a non-profit organization dedicated to bridging science, business, and policy to sustain resilient communities and functional landscapes.

The organization works to harmonise ecological integrity with human well-being by promoting approaches that address climate change, biodiversity loss, and responsible resource use.

Through research, education, strategic partnerships, and practical implementation, BES strives to create and sustain both natural and built environments that meet human needs, support prosperity, and safeguard the long-term health of ecosystems.

**“DOING WHAT
MATTERS”**



ANNUAL BOARD MEETING

The Bhutan Ecological Society convened its 7th Board Meeting on 4 August 2025. The meeting was attended by our esteemed Board Members, including both in-person and online.

The session began with the opening remarks from the Board Chair, Dasho Paljor J. Dorji, who acknowledged the presence and continued support of the Board in guiding the Society's strategic direction. The Executive Director and the Director then presented updates on BES's key programs, partnerships, and institutional developments over the past year.

Key Agenda items discussed included:

- Progress and impact of BES's flagship projects across conservation, research and education, and community-based initiatives
- Financial report and review for 2024
- Outlook 2025-2026 and Major Thrust Areas
- Revenue Forecast 2025-2026 and Beyond

The Board Members provided valuable insights, suggestions, and endorsements on proposed plans and reaffirmed their commitment to BES's mission to foster sustainable livelihoods and steward Bhutan's rich natural heritage through evidence-based research, education, and community-based action.

The meeting concluded with expressions of gratitude to the Board for their active engagement, and a shared commitment to deepening BES's impact in the years ahead.



JIGME SINGYE WANGCHUCK OUTSTANDING ENVIRONMENTAL STEWARDSHIP AWARD

The Jigme Singye Wangchuck Outstanding Environmental Stewardship Award (JSWOESA), an initiative of the Bhutan Ecological Society under the patronage of Her Royal Highness Ashi Chimi Yangzom Wangchuck, recognizes outstanding contributions to environmental protection and sustainability, honouring the legacy of His Majesty the Fourth Druk Gyalpo, Jigme Singye Wangchuck. In 2025, the award was presented to:



1. Acción Andina – A regional restoration initiative that has planted over 12.5 million native trees and restored 5,000+ hectares across the Andes, working with 140+ indigenous communities. Led by Constantino (Tino) Auca Chutas, it is recognized as a UN World Restoration Flagship and Earthshot Prize laureate.



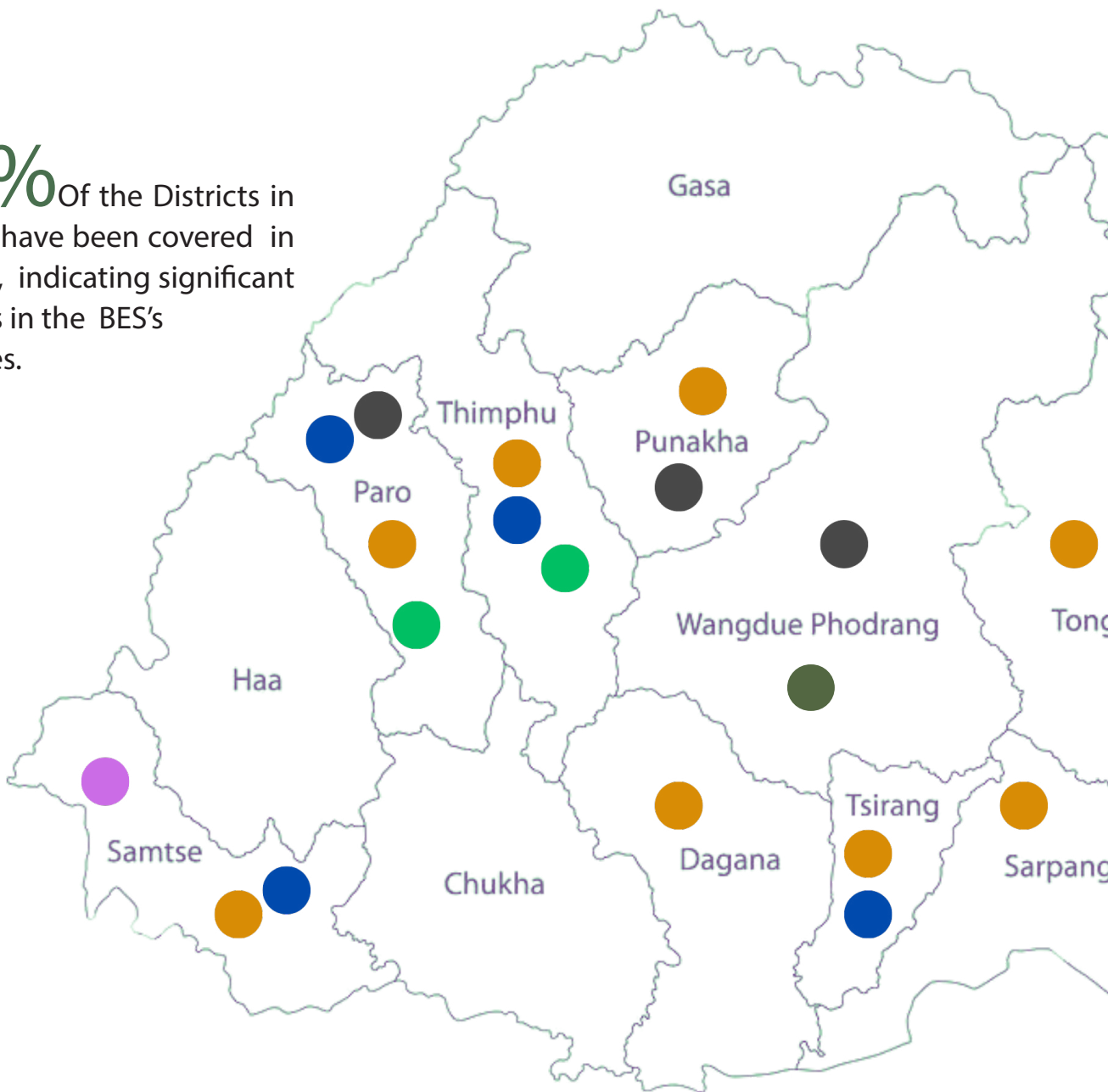
2. Bhutan Trust Fund for Environmental Conservation (BTF) – The world's first environmental trust fund, supporting Bhutan's protected areas and conservation efforts for over 25 years, and accredited to both the Green Climate Fund and Adaptation Fund.

OUR IMPACT

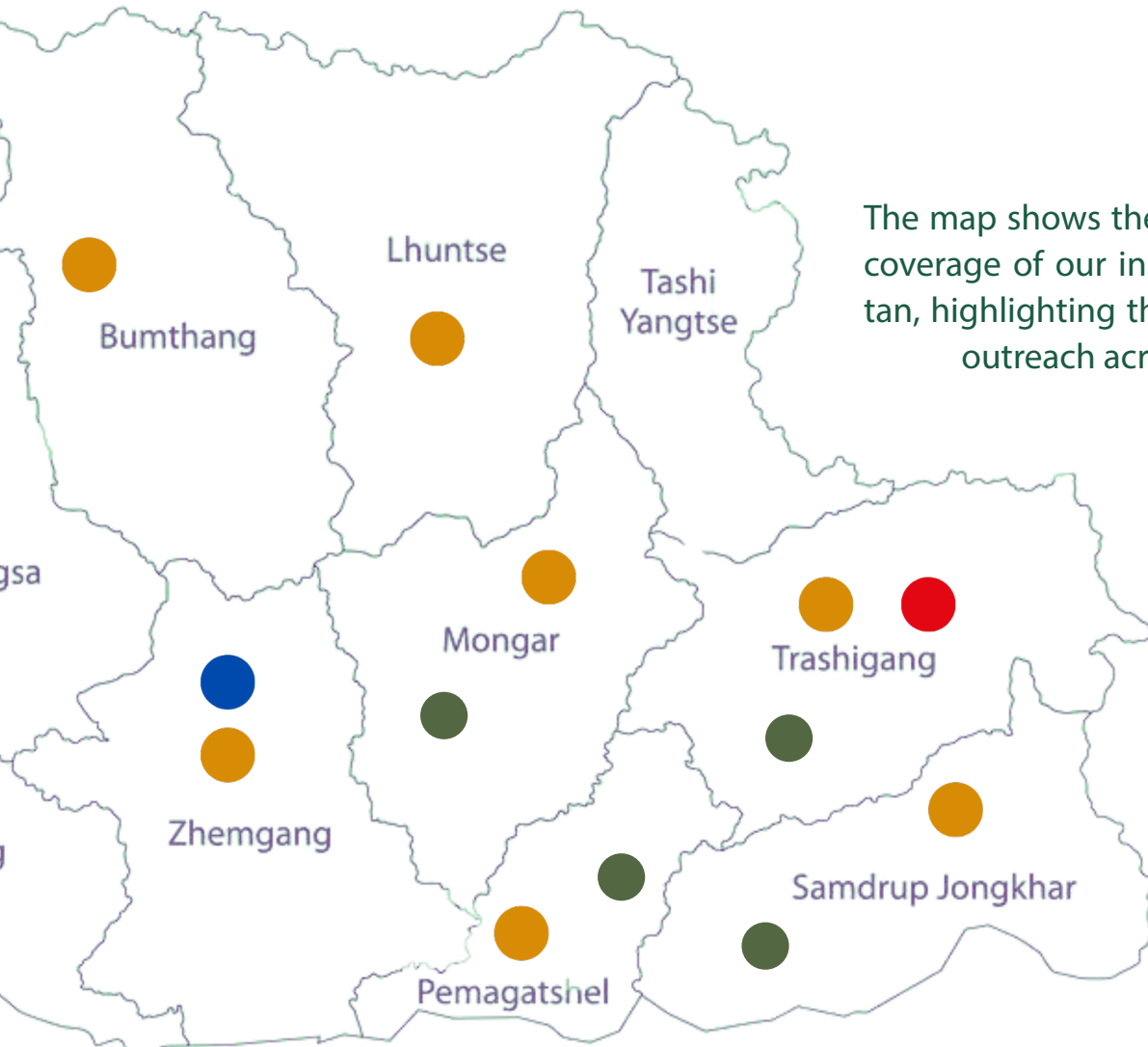
CY 2025

- Farm and Forest Restoration
- Water Security
- Renewable Energy
- Waste
- Carbon and Climate

85% Of the Districts in Bhutan have been covered in CY 2025, indicating significant progress in the BES's initiatives.



- Mountains to Mangroves
- Million Plus Trees
- PLEASE Project
- Clean Energy
- Bhutan Rural Biogas Initiative
- Human-Elephant Coexistence Solutions
- Renewable Energy and Energy Efficiency



The map shows the overall district coverage of our initiatives in Bhutan, highlighting the extent of our outreach across the country.

MOUNTAINS TO MANGROVES INITIATIVE

1. PLANTATIONS

2. RESTORE BHUTAN

The Mountains to Mangroves (M2M) Initiative is a landscape-scale environmental partnership that promotes integrated ecosystem management across entire river basins from upland mountain ecosystems through forests, rivers, agricultural landscapes, and wetlands to downstream coastal mangroves supported by the conservation International (CI).

The initiative focuses on restoring degraded ecosystems, strengthening climate resilience, and improving sustainable livelihoods while maintaining biodiversity and ecosystem services. By working across the full landscape continuum, M2M supports solutions that address issues such as land degradation, water security, biodiversity loss, and climate change.

Key areas of work typically include:

- Landscape restoration and agroforestry
- Sustainable land and water management
- Climate adaptation and resilience building
- Nature-based solutions and carbon sequestration
- Strengthening governance and cross-sector coordination
- Community-based livelihoods and sustainable value chains

The initiative is implemented in four countries across South Asia, including Bangladesh, Bhutan, India and Nepal.

The initiative brings together government agencies, development partners, and local communities to design and implement projects that deliver environmental, social, and economic benefits across the landscape.

In Bhutan, the Mountains to Mangroves partnership supports efforts to strengthen ecosystem connectivity, enhance restoration and agroforestry initiatives, and mobilize climate and nature finance, contributing to national priorities on sustainable land management, biodiversity conservation, and climate resilience.

PLANTATIONS



230,248 Trees planted

125,603 fruit trees and 104,645 high-value timber species has been planted. These saplings were distributed to 1,377 households.



4,131

Indirect Beneficiaries

1,377

Direct Beneficiaries

318 ha Area Restored

RESTORE BHUTAN

Memorandum of Understanding



THE INITIATIVE AIMS TO RESTORE 50,000 HECTARES OF DEGRADED LAND OVER THE NEXT DECADE, ENHANCING CLIMATE RESILIENCE, BIODIVERSITY CONSERVATION, AND COMMUNITY WELLBEING.

A Memorandum of Understanding (MoU) was signed on 28 November 2025 among the Ministry of Energy and Natural Resources (MoENR), Conservation International (CI), the Bhutan Trust Fund for Environmental Conservation (BT FEC), and the Bhutan Ecological Society (BES) to accelerate large-scale nature restoration in Bhutan. The partners also established a Project Steering Committee (PSC) to provide strategic guidance.

The initiative aims to restore 50,000 hectares of degraded land over the next decade, enhancing climate resilience, biodiversity conservation, and community wellbeing.

RESTORE BHUTAN LAUNCH



In the presence of Princess Chimi Yangzom Wangchuck, Royal Patron of BES, government representatives and partners launched Restore Bhutan - a national initiative to restore 50,000 hectares of degraded forests, farmlands, and urban areas over the next decade. The programme aims to remove at least 1.96 million tons of CO₂ equivalent, valued at over USD 100 million.

Situated in the Eastern Himalaya, Bhutan faces growing ecological and climate pressures, including forest fires, fallow agricultural lands, and localized degradation.

The initiative focuses on three pathways:

1. **Reviving Forests (~28,000 ha)**
Enhance carbon storage, biodiversity, and reduce fire risks.
2. **Regenerating Farmlands (~21,000 ha)**
Restore fallow lands through agroforestry and improved land management.

3. **Restoring Urban Areas (~1,000 ha)**
Support climate resilience and community well-being.



RESTORE BHUTAN reflects a strong national commitment to ecosystem restoration, climate resilience, and sustainable livelihoods.

A MILLION PLUS TREES

Building Community Carbon Banks

The BES, with support from Bhutan Foundation, is implementing the A Million Plus Trees initiative to promote community-driven reforestation and carbon sequestration across degraded landscapes in Bhutan. The project aims to plant one million trees, enhancing forest cover, biodiversity, and ecosystem services while supporting Bhutan's carbon neu-

trality goals.

By engaging communities, schools, and monastic institutions, the initiative strengthens sustainable forest management and generates community carbon credits to support livelihoods and conservation.



- Across four districts, 94.9% survival rate in plantations within orchards, institutional lands, community forests and farmlands.
- THE 100,000+ saplings raised
- 7000 trees planted in 2025
- Launch of <https://restoration.bt/>

Key achievements in 2025

1 Monitoring of plantations: Across four dzongkhags/districts, plantations in orchards, institutional lands, community forests, and farmlands recorded a 94.9% survival rate, though continued monitoring is required for long-term validation.

2 Nursery and plantation efforts: BES nurseries in Gelephu and Wangdue raised over 100,000 saplings for future planting, with around 7,000 trees planted in 2025.

3 Digital innovation: Launch of restoration.bt, an online platform enabling individuals, institutions, and communities to request saplings, improving coordination and participation in restoration efforts.

The initiative continues to deliver ecological, economic, and community benefits by combining reforestation, technology, and local engagement to support Bhutan's sustainable development pathway.



PLEASE PROJECT

Reimagining Effective Partnerships for Tackling Plastic Waste and River Pollution in Bhutan

In 2025, the BES implemented an integrated waste management approach under the PLEASE Project and supported the Clean Thimphu City Initiative (CTCI) and Clean Paro Initiative (CPI). This initiatives under the PLEASE Project aimed to reduce plastic waste leakage into river systems through a combination of community engagement, infrastructure development, data-driven planning, and policy support.

Together, these initiatives combined:

- Community action
- Smart technology
- Infrastructure development
- Policy and institutional strengthening

to transform waste management systems and reduce plastic pollution across Bhutan.





PLEASE Project

Plastic Free Rivers and Seas for South Asia

PLEASE Project

- Reduce plastic waste and river pollution
- Strengthen partnerships across sectors
- Build knowledge and capacity
- Empower women in waste management

CTCI-CPI Initiative

- Reduce landfill waste from ~80% to below 20% by 2030
- Promote recycling, composting, and reuse
- Increase public awareness and behavior change
- Improve monitoring, transparency, and enforcement
- Develop scalable models for other cities





Key achievements in 2025

- 1** Waste Reduction & Environmental Impact
 - 47.29 MT waste collected (PLEASE)
 - 34.9 MT recycled/upcycled
 - 6,035 kg river waste removed
 - 44.5 MT waste removed through city-wide campaigns (CTCI-CPI)
 - 12 river interceptors installed

2 Infrastructure & Systems

12 waste storage centers

754 segregation bins distributed

Recycling Hub (Bjemina) operational (500 kg/day capacity)

34 smart bins (AI-enabled, 4G sensors) installed

29 CCTV surveillance cameras deployed

Waste facilities upgraded in Paro (including plastic shredding unit)

3 Smart Innovation & Technology

Bhutan's first AI-enabled waste surveillance system

Integrated IoT dashboard: Smart bins (fill-level monitoring), CCTV (illegal dumping detection), GPS fleet tracking

61,000+ annotated images used for AI training

26 illegal dumping cases detected, with declining trend

4 Community Engagement & Awareness

5,000+ people engaged (PLEASE)

5,000+ residents mobilized (CTCI-CPI campaigns)

4,122 women and 505 youth trained

Awareness programs across schools, businesses, and communities

Clean-up campaigns including Taktsang Trail

5 Women Empowerment & Livelihoods

Women lead waste management in 75%+ households

21-day women's training program

Women-led recycling groups supported (Paro)

13 jobs created

6 Youth, Innovation & Education

570+ youth engaged through Plastics Expo

Eco Ambassador Movement launched

Waste education integrated into school programs

7 Urban Transformation & Beautification

3 major dumping sites restored and landscaped

Grass planting and city beautification initiatives

Cleaner public spaces through outsourced maintenance systems

8 Policy & Institutional Impact

Policy dialogues and policy brief submitted

Strong collaboration: Government, Private sector & recyclers, & RNP

Introduction of “Norzin Model” (performance-based sanitation PPP)

Institutional commitment for long-term sustainability



Empowering Highland Communities: Clean Energy for Sustainable Livelihoods in Merak and Sakteng



The BES, in partnership with the Department of Energy (DoE) and supported by the UNDP/GEF Small Grants Programme, is implementing a clean energy project in Merak and Sakteng under the Sakteng Wildlife Sanctuary, Trashigang Dzongkhag. Running from May 2025 to June 2026, the project aims to reduce firewood dependency by introducing energy-efficient electric cooking and heating technologies, improving household health, lowering carbon emissions, and supporting biodiversity conservation.

Key implementation activities include stakeholder consultations, beneficiary selection, procurement of clean energy equipment, baseline surveys, and awareness campaigns on energy efficiency and environmental conservation.

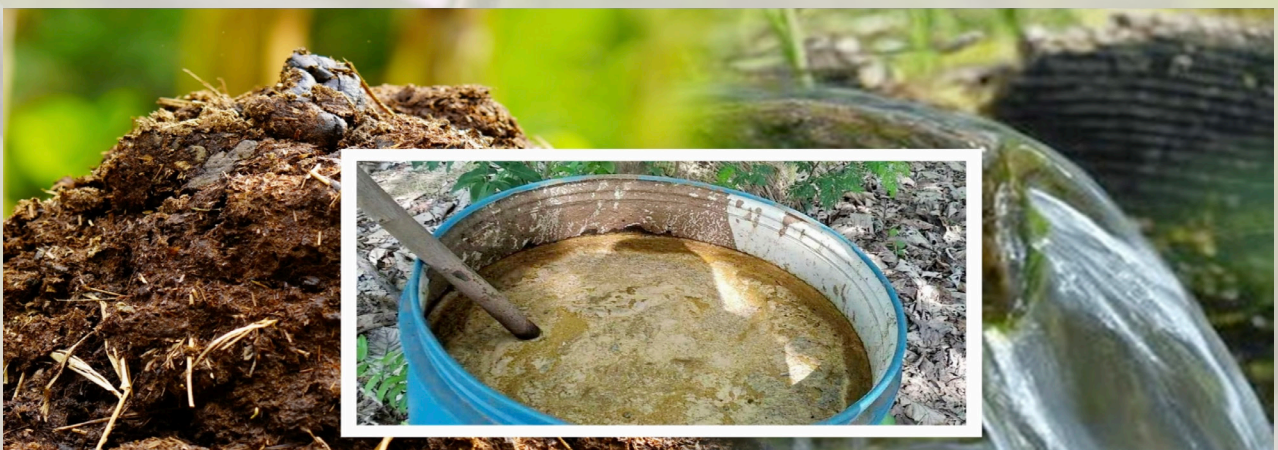
The project has expanded its reach from 125 to 180 households, with an estimated 794 households (5,138 people) benefiting indirectly. Community participation, including cost-sharing contributions of approximately USD 4,070, has strengthened local ownership. Systems for monitoring energy use and emissions reduction have also been introduced, alongside increased awareness of clean energy solutions.

With a total project value of around USD 55,500, the initiative is supported by strong collaboration among BES, DoE, local government bodies, and communities, ensuring effective implementation and long-term sustainability.

BHUTAN RURAL BIOGAS INITIATIVE

The BES implemented a pilot phase of the Bhutan Rural Biogas Initiative, aimed at promoting clean and renewable energy among smallholder dairy farmers by converting livestock waste into biogas using Sistema technology, with support from the Ministry of Agriculture and Livestock. Following this initial phase, future stages of the project will be financed by Shell Singapore. The initiative involves key partners, including the Departments of Livestock, Agriculture, and Energy with technical support from Sistema.bio, India.

The initiative aims to install 12,000 biodigesters across 20 dzongkhags between June 2026 and December 2028, benefiting approximately 12,000 households (around 60,000 people). Over a 10-year period, the project is expected to reduce 1.44 million tCO₂e by improving manure management and reducing firewood use, while also supporting monitoring, reporting, and verification (MRV) through 2035.



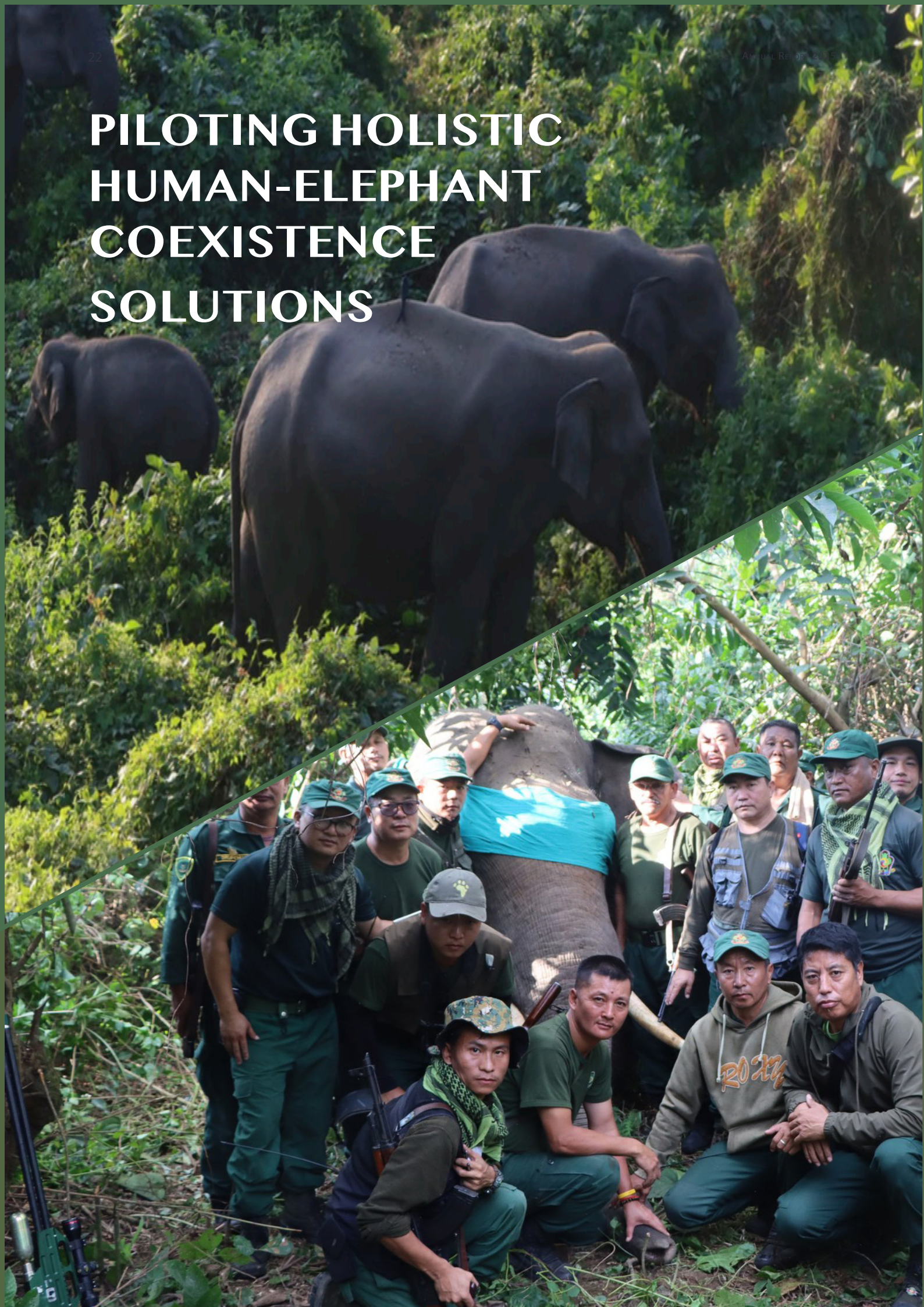
The project seeks to enhance rural livelihoods, reduce greenhouse gas emissions, limit biomass depletion, promote organic farming through bio-slurry use, and decrease reliance on imported LPG.

Initial groundwork has demonstrated strong potential, including the successful piloting of 26 biogasifiers across multiple dzongkhags, extensive stakeholder consultations in 205 gewogs, and high community interest in adopting the technology. Monitoring systems, training materials, and a digital farmer registration platform have been developed to support implementation. While early experiments to improve cold-climate performance require further testing, the pilot phase has confirmed feasibility and demand.

With implementation set to begin in July 2026 following final agreements, the initiative represents a significant step toward sustainable rural energy, climate mitigation, and improved agricultural productivity in Bhutan.



PILOTING HOLISTIC HUMAN-ELEPHANT COEXISTENCE SOLUTIONS



Piloting Human–Elephant Coexistence Solutions

The BES in partnership with the Department of Forests and Park Services, is implementing the “Piloting Holistic Human-Elephant Coexistence (HWC) Solutions in the Kangchenjunga Landscape in Bhutan” (July 2025–December 2026), with support from ICIMOD.

The project aims to strengthen the capacity of at least 300 households in Samtse and Gedu to manage human-elephant conflict (HEC) through livelihood interventions, technology, and awareness initiatives.

Outcome: Strengthened community capacity to address HEC.

- Baseline surveys completed covering 379 households in Tashicholing and Tading (Tenpaling).
- Two elephants (Peldon and Gembo) successfully fitted with GPS collars to monitor movement.
- Community support systems strengthened: Quick Response Team (QRT) established in Tenpaling with bylaws developed.
- Watchtower at Singaygang renovated as a safe monitoring and refuge space.
- These efforts have improved monitoring, reduced risky encounters, and enhanced community preparedness and tolerance toward elephants.

1. Livelihood & Technology Interventions

1.1. Distribution and installation of:

- 29 solar lamps, additional units procured for future use
- 40 headlamps and 4 radio communication handsets for QRTs
- 20 energy-efficient cookstoves, prioritizing women and firewood-dependent households

1.2. Installation of solar lighting in key HEC hotspots to improve visibility and safety

1.3 GPS collaring initiated for elephant tracking (2 completed; 1 planned for Gedu).

2. Awareness & Community Engagement

2.2. Awareness programs conducted for:

- Peljorling Higher Secondary School and Samtse College of Education
- Community members and QRTs

2.3. Over 500 participants (students, staff, and community members) reached

2.4. Activities included:

- Safety training on elephant encounters
- Art and quiz competitions promoting coexistence
- Exposure/study trip to West Bengal, India for 25 participants

2.5. 4 awareness products (art-based) developed with students

2.6 Awareness delivered in local language (Lhotshamkha) for community engagement.

BHUTAN WILD CAT HEALTH PROJECT: MONITORING THE HABITAT USE & HEALTH OF WILD FELIDS IN BHUTAN

BES in collaboration with the Felidae Conservation Fund and the Department of Forests and Park Services, Ministry of Energy and Natural Resources, initiated the implementation of Bhutan Wild Cat Health Project. The Bhutan Wild Cat Health Project is a groundbreaking initiative focused on protecting Bhutan's nine native wild cat species, ranging from the iconic snow leopard and tiger to the elusive

clouded leopard and other small felids. As tourism expands and free-ranging domestic dogs encroach on protected areas, threats to wildlife health and habitat connectivity are on the rise. The project is being implemented in Jigme Dorji National Park, Wangchuck Centennial National Park, Jigme Singye Wangchuck National Park and Thimphu Divisional Forest Office.



Project Goals:

1. Measure the influence of human activity and domestic dogs on wild felid activity: Using camera traps, we will collect baseline animal presence data to quantify the impacts of domestic dogs and humans on wild felids

across Bhutan's four largest natural areas. This will allow us to model the influence of human- and environmental-related factors that may influence wild felid occurrence across our study areas while also highlighting areas where dog presence is highest.

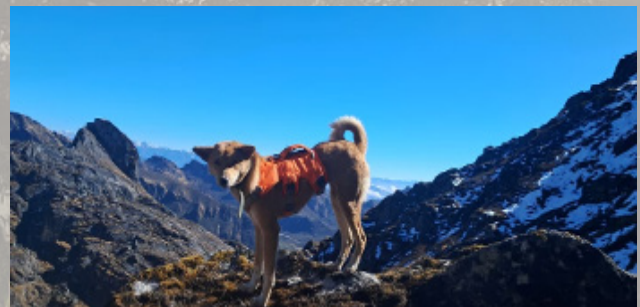
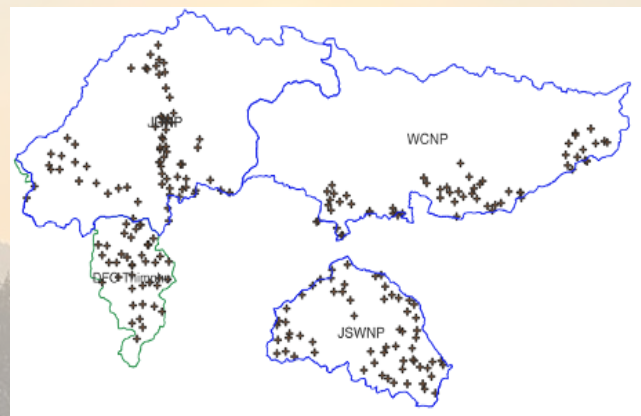
2. Assess the Risk of Disease Exposure: Measure wild felid population health through collection of fecal samples throughout our study areas. Analysis of scat for parasites and diseases of interest will allow us to identify the regions where the risk of transmission from domestic dogs is greater.

Progress:

The project has achieved significant technical milestones since its inception:

- **Camera Trap Deployment:** 220 camera traps have been deployed across 240 stations. Data from the first 120 stations (Monitoring Cycles 1 and 2) have been uploaded.
- **Species Detection:** Initial data reveals high detection frequencies for humans, barking deer, and cattle, alongside sightings of Asiatic golden cats, tigers, marbled cats, and clouded leopards.
- **Scat Detection Program:** Four conservation dogs have been fully trained for scat detection. Together with eight trained rangers, they have collected over 200 samples, 150 of which are preserved for laboratory analysis.
- **Capacity Building:** A one-week training workshop for field rangers was conducted in Paro to standardize camera trap and scat collection protocols.

3. Foster public awareness about the link between wildlife and human health: Collaborate with community leaders, government officials, and local outfitters to develop and distribute educational materials highlighting the link between ecosystem and human health. We will also share information on best practices for viewing wildlife and how to minimize negative impacts on wildlife through interactions with feral domestic dogs.



THE SCHOOL FOR FIELD STUDIES (SFS)

BHUTAN PROGRAM

IN 2025, A TOTAL OF SIXTY-NINE UNDERGRADUATE STUDENTS FROM VARIOUS COLLEGES AND UNIVERSITIES ACROSS THE UNITED STATES PARTICIPATED IN THE PROGRAM.

The School for Field Studies (SFS) is an international environmental field program in which undergraduate students from various educational institutions in the United States (US) undertake a semester-long study across twelve countries worldwide. The SFS Program in Bhutan focusses on key environmental themes such as natural resource, water management, climate change, and sustainable livelihoods, and is currently co-hosted by BES, the Royal University of Bhutan (RUB)/ College of Natural Resources (CNR), and the SFS headquarter based in Boston, United States.

The SFS Program in Bhutan operates year-round, offering two semesters (Spring and Autumn) along with a six-week summer session in between. The program provides students with opportunities to explore diverse aspects of mountain ecology, land use and natural resource management, as well as the political and socio-economic dimensions of environment in Bhutan. It also facilitates to engage and learning from policy makers, planners, relevant experts, and local communities through guest lectures, field visits, and directed research projects.



GENDER-RESPONSIVE RENEWABLE ENERGY & EFFICIENCY POWERED DECENTRALIZED LIFT IRRIGATION SYSTEMS IN BHUTAN

The project “Promoting Gender-Responsive Renewable Energy and Energy Efficiency (REEE) Powered Decentralized Lift Irrigation Systems in Bhutan”, implemented by the Bhutan Ecological Society (BES) in partnership with the Department of Energy and supported by ICIMOD, aims to address irrigation challenges while advancing gender equity in agriculture. Initiated across key districts including Paro, Punakha, and Wangdue Phodrang. The project promotes renewable energy-powered lift irrigation systems to improve year-round water access, enhance climate resilience, and empower women farmers. In 2025, significant progress was made through feasibility studies, rollout of the PURE platform, and delivery of technical, operational, and entrepreneurship trainings for both engineers and farming communities.

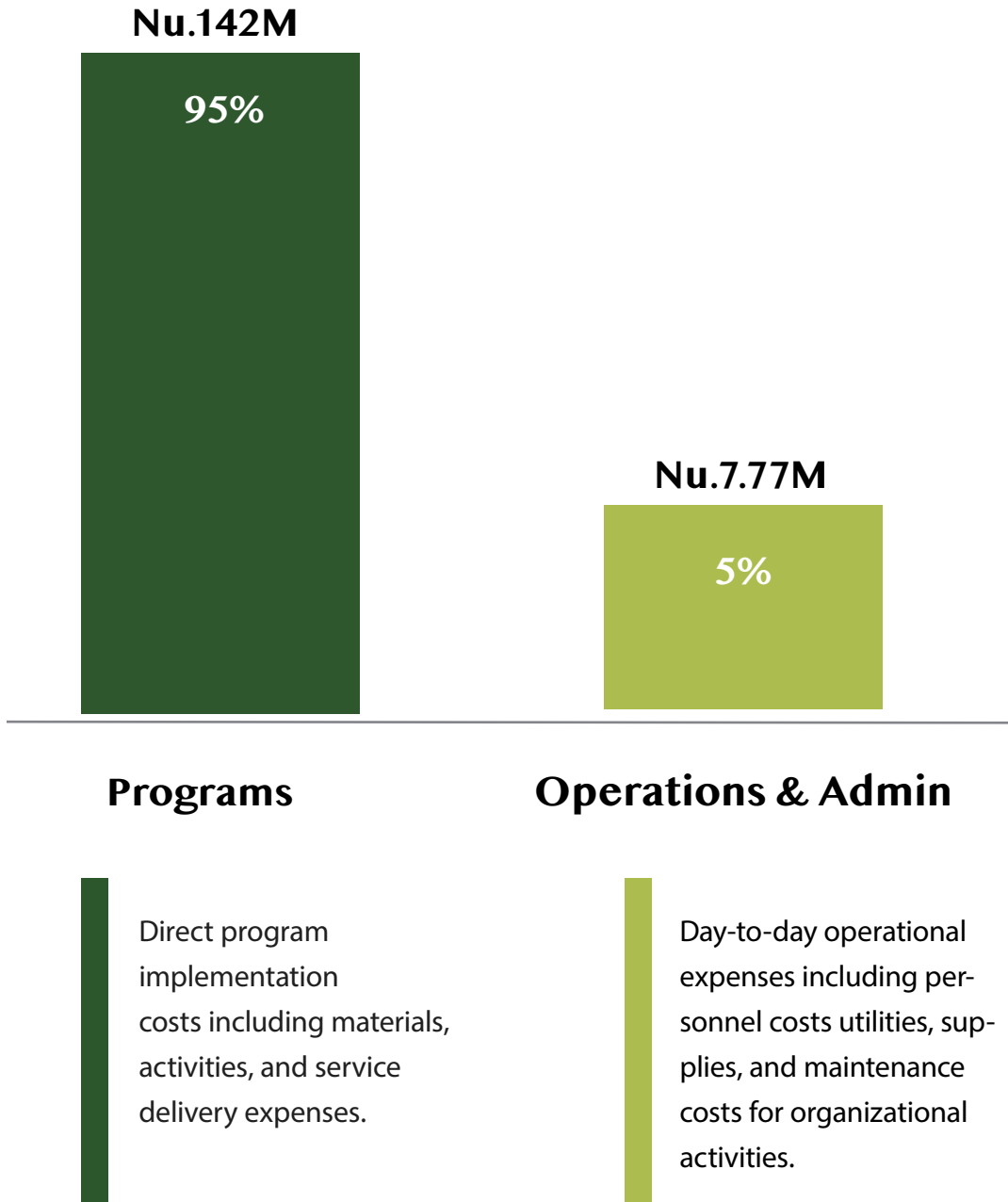




Implementation efforts were particularly concentrated in Punakha, where sites such as Humpathang, Temakha, and Tshogkorna served as key demonstration areas. Impact assessments in Shaba, Paro highlighted early benefits in agricultural productivity and livelihoods, while documentation and knowledge-sharing initiatives strengthened project visibility. Despite budget constraints and extended technical requirements, the project has laid a strong foundation for scaling gender-responsive, climate-resilient irrigation solutions across Bhutan, with further expansion and community engagement planned in the coming phases.



FINANCIAL SUMMARY



OUR PARTNERS

Local Partners

- Bhutan Foundation
- Bhutan Trust Fund for Environmental Conservation
- College of Natural Resources
- Department of Forests and Park Services, MoENR
- Ministry of Agriculture and Livestock
- Royal University of Bhutan

International Partners

- Conservation International
- Felidae Conservation Fund
- GEF Small Grants Programme
- Global Environment Facility (GEF)
- International Centre for Integrated Mountain Development (ICIMOD)
- Karuna Foundation
- School for Field Studies
- Sitema.Bio India
- South Asia Co-operative Environment Programme (SACEP)
- The World Bank
- United Nations Development Programme (UNDP)
- United Nations Office for Project Services (UNOPS)

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