

BHUTAN ECOLOGICAL SOCIETY



ANNUAL REPORT 2021

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ABOUT US

WHO WE ARE

Bhutan Ecological Society is a non-profit organization that connects science, business, and policy with the goal of building and sustaining resilient communities and functional landscapes. Leveraging the power of enterprise, BES aims to create and sustain *impactscales* - large landscapes, both rural and urban, which are functional and provide for food, energy, water and species. Such impactscales will create jobs, increase self-sufficiency, build resilient communities, proactively adapt to climate change and ensure the persistence of biodiversity. We pilot and upscale climate adaptation strategies in collaboration with communities, academia, civil society and the government. Additionally, we deliver environmental education programs and address key policy, applied and basic science research needs.

WHAT DO WE DO

- Put land to productive use;
- Ensure functional integrity of large forest landscapes;
- Help build smarter;
- Champion solar & renewables;
- Innovate and pilot water solutions; and
- Deliver environmental education, promote science and encourage discourse.

WHY DO WE DO IT

We believe climate change is the single biggest threat to our common prosperity and well-being. We also believe that it is possible to build a world that is sustainable, resilient and prosperous. Through connecting ecological, social, political and economic perspectives, we seek to maximize positive impacts on human lives and livelihoods whilst attending to the urgent call to action demanded by a rapidly-changing planet.

IMPACT



While adjusting to the “new normal” of the COVID-19 pandemic, we continued to work towards our mission in 2021.

BUILDING COMMUNITY CARBON BANKS WHILE REVIVING FALLOW LANDS

The Bhutan Ecological Society, in partnership with the Bhutan Foundation, launched the Million Trees Project on April 13, 2021 in Kabisa, Thimphu. The launch was graced by HRH Ashi Chimi Yangzom Wangchuck, the Royal Patron of BES, along with the Minister for Agriculture and Forests. The Million Trees Project is aimed at promoting ecologically fecund and economically productive landscapes which can also serve as community carbon banks in the long run. By planting a million high value trees over the next five years in lands currently fallow, the project will help improve livelihoods of communities while nurturing the environment.

Out of the Bhutan's available arable land of about 3.7% of its total land cover, more than 66,100 acres currently remains fallow* due to labor shortage, human wildlife conflict, lack of adequate water supply and access to markets. Proper utilization is further compromised by climate change related events, such as untimely rainfall and increasing incidences of pests and diseases.



Planting an average of about 200 to 300 trees per acre, the project will nurture over a million high value tree crops across Bhutan in next five years (2022-2026). Depending on the impacts of the project and also interest of rural farmers, BES shall attempt to expand the project to second phase with more robust and rigorous plans. The project will generate annual and long-term income for rural farmers and serve as community carbon banks. Ecologically productive landscapes will also significantly add to biodiversity and help buffer the impacts of climate change.



* MoAF, 2020. Agricultural Land Use Statistics for Effective Decision Making, RNR Statistical Release, Thimphu.

INNOVATING FOR CRISIS-RESILIENT LIVELIHOODS

The Bhutan Ecological Society is helping the River Guides of Panbang (RGP) expand their revenue source through pioneering aquaponics and virtual tourism in Bhutan. The COVID-19 pandemic completely extinguished the traditional revenue source of the RGP as local and international travel came to a grinding halt. In response to the crisis, we are introducing two novel concepts to the RGP and in Bhutan - aquaponics and virtual tourism. Aquaponics, a new and exciting method of farming, has the potential to improve food security as well as revive interest in farming, and virtual tourism is an innovative tourism product that will not only expand the customer base, but allow the River Guides to pursue their primary profession as a viable source of income even in times of crisis.

RGP is Bhutan's first and only community-based rafting company that specializes in environmentally responsible ecotourism located within Royal Manas National Park (RMNP). Native to the area, the River Guides offer an opportunity for visitors to experience living landscapes with intact biological communities that also support local communities.

RMNP is home to countless wildlife species and is a genetic depository of valuable plants.



Some of the endangered wildlife species include the Bengal tiger, golden langur, Rufous necked hornbills and one-horned rhinoceros. The Manas River is also home to three species of rare migratory game fish: the deep-bodied mahseer, golden mahseer, and chocolate mahseer.

However, the local population along the river basin experiences one of the highest incidences of poverty in Bhutan, and the local landscape faces increasing pressures from human development. Therefore, pursuing sustainable livelihood strategies in this region is crucial to sustain this landscape, the services it provides, and the diverse biological communities it supports.



DEVELOPING AN AGROFORESTRY STRATEGY AND A NATIONAL AGROFORESTRY PROGRAMME

The Bhutan Ecological Society led the development a 'National Agroforestry Strategy' and an 'Action Plan for a National Agroforestry Programme in Bhutan' for the Ministry of Agriculture and Forests. Among other things, BES conducted research (in 10 selected Dzongkhags), held stakeholder consultations (with 22 central agencies and 65 local leaders and farmers), and performed cost-benefit analysis to inform the Strategy and Action Plan. The work was conducted in partnership with DIBcoop (Dutch International Business Cooperative).

Agroforestry is a collective name for land use systems in which woody perennials (trees, shrubs, bamboo) are grown in association with herbaceous plants (crops, pasture/forage species) and/or livestock in a spatial arrangement or rotation (or both), and in which there are ecological and economic interactions between the tree and non-tree components of the system.

The National Agroforestry Strategy proposes strengthening traditional agroforestry systems and setting up of entrepreneurial agroforestry systems by taking into consideration the technical and marketing conditions and opportunities so that the agroforestry programmes not only help to



strengthen the rural household income, but also contribute to achieving national development goals such as climate action and biodiversity conservation. Based on the strategic choices and objectives laid out in the National Agroforestry Strategy, the National Agroforestry Programme document outlines programme activities for promotion of Agroforestry in Bhutan.

The work was supported by the EU Technical Assistance Complementary Support Project (EU-TACS) as a part of technical assistance to the Royal Government of Bhutan.





BES is **pioneering aquaponic agriculture** in Bhutan in order to provide sustainable livelihoods and build resilience in communities living with wildlife to ensure continued protection of Bhutan's rich biodiversity.



LEADING NATIONAL DIALOGUE IN LANDSCAPE-BASED CONSERVATION APPROACHES

The Bhutan Ecological Society conducted community consultations and facilitated a national policy dialogue for mainstreaming 'Socio-Ecological Production Landscapes and Seascapes (SEPLS) conservation approach and attaining financial sustainability of such landscape approaches as a part of the Phase III the Satoyama Initiative's flagship program, Community Development and Knowledge Management for the Satoyama Initiative (COMDEKS). Utilizing the SEPLS approach, the GEF-SGP and UNDP Bhutan, in collaboration with the Royal Government of Bhutan (RGOB), fund projects related to biodiversity conservation, climate change, sustainable forest management, chemical and waste-water treatment and land degradation with the overall aim to improve environmental resilience as well as community livelihoods.

BES consulted around 150 individuals including community members from 12 project sites such as farmers and members of community-based organizations, local government representatives, agriculture and forestry field officers, mid and senior level government officials from Ministry of Agriculture and Forests, Gross National Happiness Commission, National Environment Commission)



and representatives from civil society organizations (CSOs) to arrive at the recommendations for mainstreaming landscape approaches and attaining financial sustainability of such interventions. The National Policy Dialogue explored ways to integrate a landscapes approach into national and sub-national policies as a critical contribution to the SDGs and the Post-2020 Global Biodiversity Framework; as well as financing mechanisms for biodiversity conservation and sustainable use of natural resources through an integrated landscape approach.

The COMDEKS report detailing the consultation and recommendations and a video of the project are available at the BES website (bes.org.bt).



PROMOTING DIALOGUE AND STIMULATING ACTION TO ADDRESS CLIMATE CHANGE

In the run-up to the United Nations Conferences of Parties (COP26) to be held in Glasgow from 31 October – 12 Nov 2021, the Bhutan Ecological Society was part of the collaborative effort for organizing a series of events under the banner “Raising Climate Ambition: Voices from Bhutan” from May to October 2021. The five-part Climate Series was organized by the Bhutan Ecological Society, and the initiative was led by National Environment Commission and supported by the Bhutan Foundation, Royal University of Bhutan, WWF Bhutan, UN Capital Development Fund and UNDP Bhutan.

The Climate Series aimed to promote dialogue and raise awareness on climate change in Bhutan, and to collect voices from Bhutan to influence the global discourse and decisions on climate change. Over six months, various events were held across the country that highlighted, among other things, impacts of climate change, grassroots actions to address climate change, national policies and documents to address climate change, youth actions and perspectives on climate change and further actions required to tackle the impacts of climate change.

The themes of the events were:

Series I – Witness to Warming: Local needs, stories, and solutions (21 May, International Day for Biological Diversity), featuring local stories and experiences of climate change and the launch of climate research roadmap and strategy as well as gender and climate change study.



Series II – Keeping the Promise: Low Carbon and Resilient Development (5 June, World Environment Day), featuring the launch of several important National Actions including the 2nd Nationally Determined Contributions (NDCs), The Third National Communication (TNC) to the UNFCCC, Low Emission Development Strategies (LEDS) for Food Security, Human Settlement, Surface Transport and Industries, and an upgraded national Clearing House Mechanism (CHM) portal under Convention on Biological Diversity.

PROMOTING DIALOGUE AND STIMULATING ACTION TO ADDRESS CLIMATE CHANGE

Series III – Taking Stock: Climate Fairness, Capacities and Finance (6 – 7 July), featuring presentations and discussions on topics of policy and legal frameworks under Bhutan's carbon neutral commitment, green finance, and transformative actions and opportunities.



Series IV – Youth matters: Voices and Action in Climate Change (12 August, International Youth Day), featuring presentations from schools, panel discussion among students and conversation on how to engage youth in climate change discussion and action.

Series V – Climate Action Week (25 – 29 October), featuring mix of panel discussions, student engagements and field trips, exhibition showcasing climate solutions, expeditions to observe climate change, and climate action pledges from Bhutanese institutions.





BES demonstrated **Virtual Tourism Technology** at the Climate Smart: An Exhibition, as a part of the Climate Series.

STRENGTHENING INSTITUTIONAL AND TECHNICAL CAPACITIES FOR ENHANCED TRANSPARENCY

The Bhutan Ecological Society contributed to strengthening Bhutan's national capacity to submit reports consistent with the requirements of the Paris Agreement's Enhanced Transparency Framework (ETF). Bhutan will need up-to-date inventories of emission sources and sinks using advanced IPCC guidance and information to track progress against priority actions identified in Bhutan's Nationally Determined Contributions. As the national consultant, BES contributed to the project by:

- Assisting the Food and Agriculture Organization (FAO) to conduct literature review and collect baseline related to Bhutan's climate change status and commitments and proposed a consultation design framework to help gauge and reconfirm the project scope, operational arrangements, and financing mechanism;
- Planning consultation meetings with government, national and international partners, and the FAO team; and
- Drafting a project document based on the outcome of the stakeholder consultations.



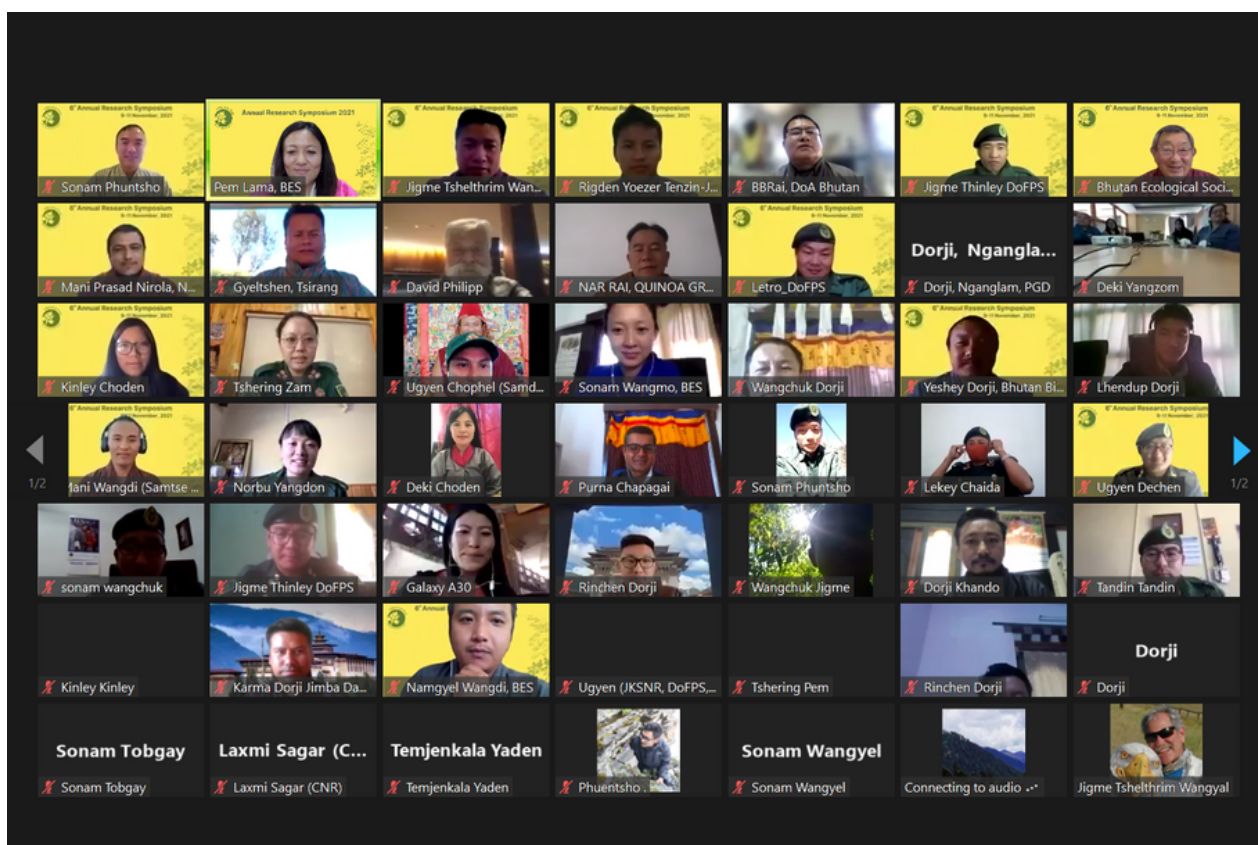
Through improving livelihoods, BES works ensure the persistence of Bhutan's rich biodiversity. Bhutan is home to many vulnerable, threatened and endangered wildlife such as the Rufous-necked Hornbill, a bird classified as 'vulnerable' under the International Union for Conservation of Nature (IUCN).



PROVIDING A PLATFORM FOR RESEARCH AND OUTREACH

The Bhutan Ecological Society organized two BLISS (Bhutan Lectures on Innovation, Science and Society) events this year, in April and December 2021. BLISS is a public-benefit event that aims to bring forward transformative ideas, plans and policies to a wider audience in order to inform, educate, empower and inspire people in Bhutan and worldwide. The BLISS events this year covered a variety of topics such as private sector growth, renewable energy, tourism after COVID-19, future of social work, and managing a pandemic.

In addition, we organized the 6th Annual Research Symposium on 9-11 November 2021. The objectives of the Symposium are to bring about useful information to policy makers and provide opportunities for researchers to contribute and learn about research happening in various fields. The Symposium, held virtually this year, drew national and international researchers from various universities, government sectors, educational institutions, and civil society organizations. The three-day research symposium featured talks by 31 presenters who presented on the themes of sustainable livelihoods, climate change, food systems, ecosystem services and biodiversity.





At **5th BLISS**, themed "Anticipating the Future", H.E. Lyonpo Dasho Dechen Wangmo talked about Bhutan's journey through the pandemic and building a resilient health system for future.

Find BLISS talks **at www.bliss.bt**

OTHER INITIATIVES

BES provided a week-long training on R programming to 20 faculty members and graduate students at College of Natural Resources, Lobesa, Punakha. The training, held from 5-9 April, 2021, was the first of its kind and introduced participants to the basics of R programming.



BES led 25 students and 9 teachers from Mothithang Higher Secondary School in a three-day ecological and cultural expedition from Punakha to Thimphu along the traditional migratory route. The initiative was supported by the UN Resident Coordinator's Office (UNRCO), Tourism Council of Bhutan, Dhumra Farm Resorts, Mothithang Higher Secondary School and Etho Metho Tours and Treks.

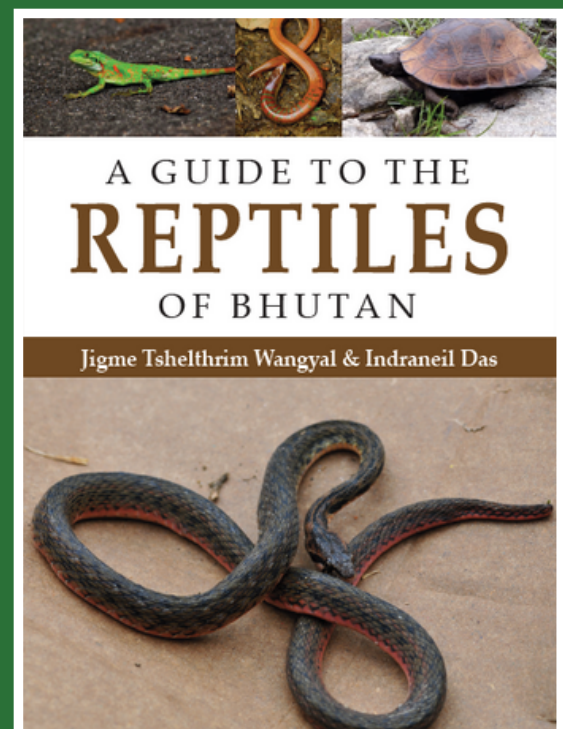
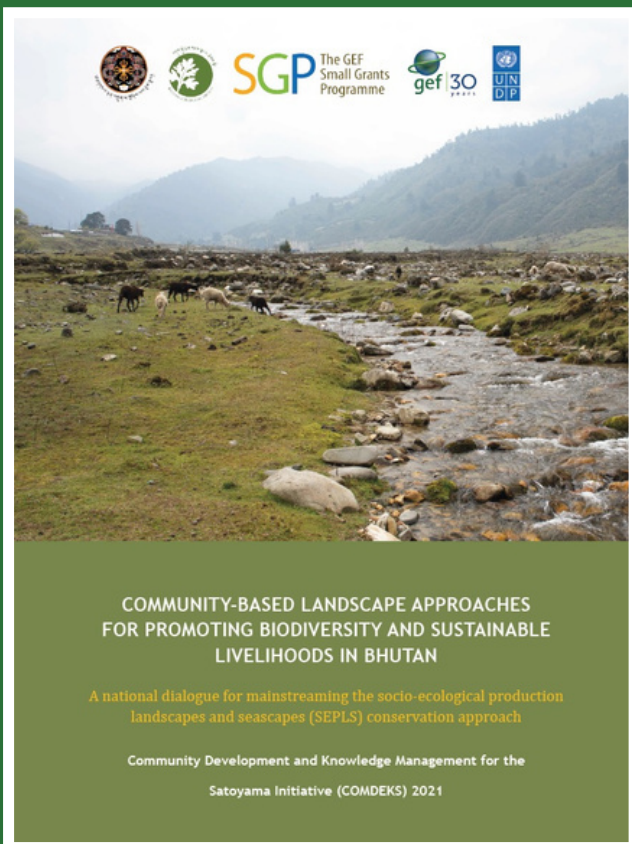
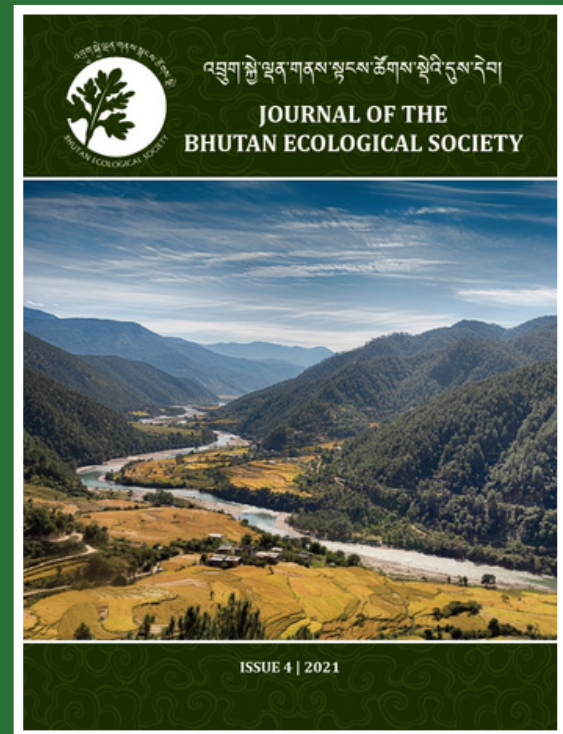
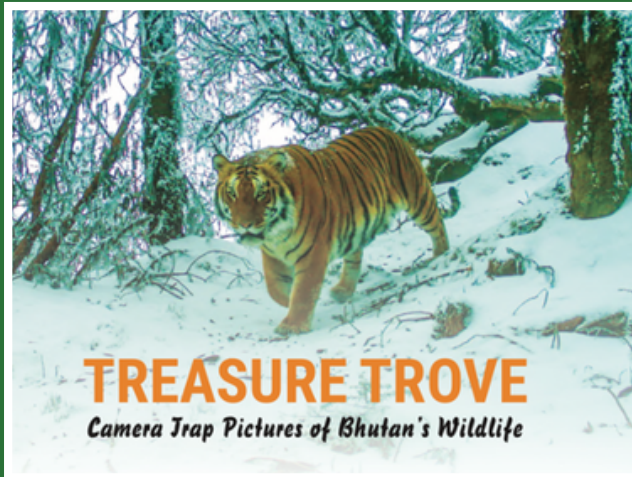
BES collaborated with WWF Bhutan, Bhutan For Life and Royal Society for Protection of Nature to observe the World Water Week in August 2021. BES led a webinar featuring panelists who shared their actions and research on water-related initiatives in Bhutan.



BES installed room insulation and water geyser heating system in Sha Dechencholing Goenpa in Kazhi, Wangdue Phodrang, which will reduce fuel wood consumption and benefit the around 10 monks who reside there.

PUBLICATIONS

In 2021, the Bhutan Ecological Society published the fourth issue of the BES Journal, a coffee-table book of camera trap pictures capturing Bhutan's wildlife, a Guide to Reptiles of Bhutan, and a report of the national dialogue for mainstreaming the socio-ecological landscapes and seascapes (SEPLS) conservation approach.



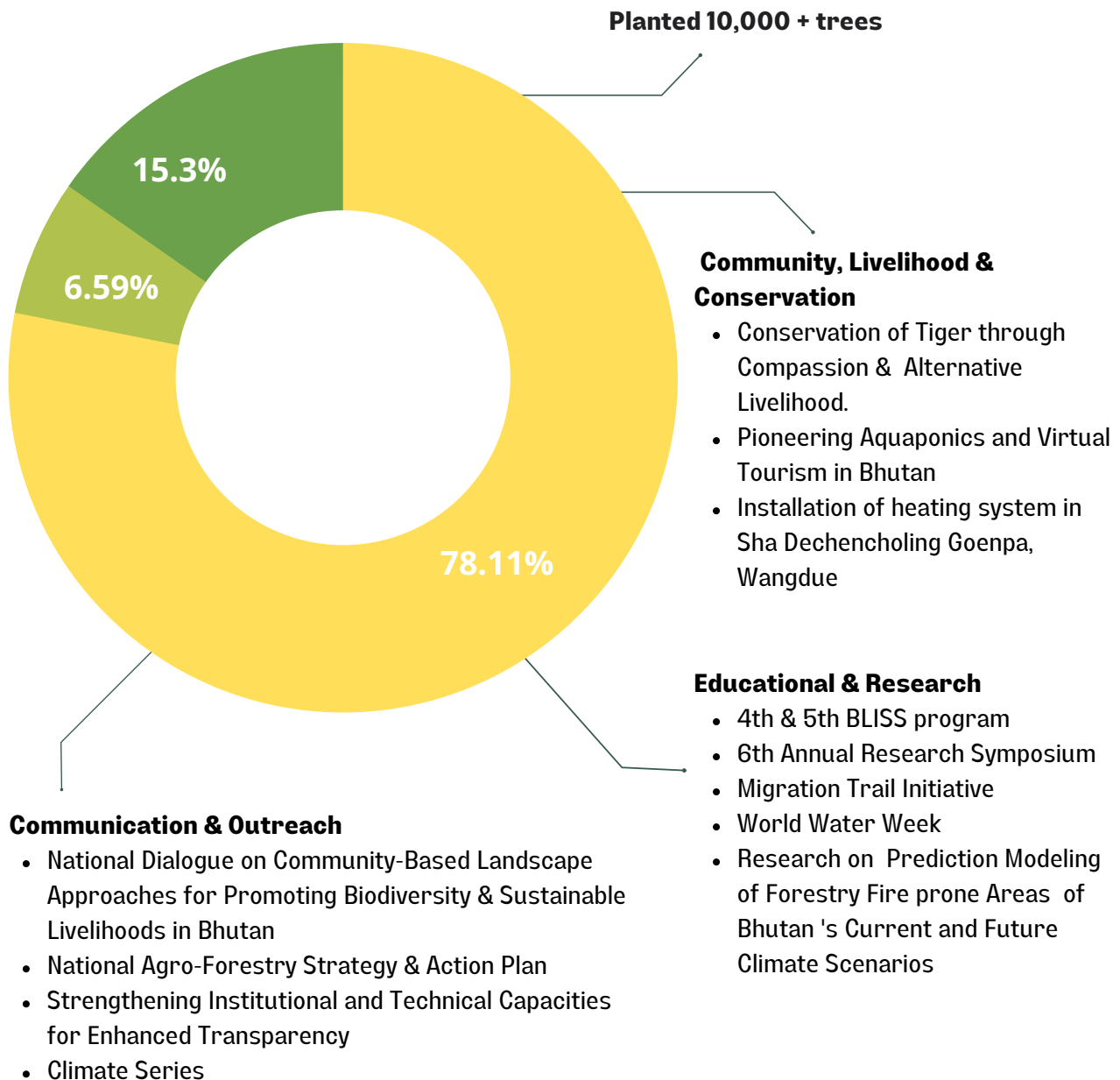
FINANCIALS

Your support has contributed to our mission through various programmes and projects in 2021.

Total funds received

Nu. 28,120,823

| | | |
|--|----------------------------|-------------------------------|
| ■ | Projects executed | Nu.21,965,174 (78.11%) |
| ■ | Ongoing project | Nu.1,853,162 (6.59%) |
| ■ | Operational support | Nu. 4,302,485 (15.30%) |



SUPPORTERS



Food and Agriculture
Organization of the
United Nations

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