KINGDOM OF BHUTAN

THIRD NATIONALLY DETERMINED CONTRIBUTION (PROVISIONAL)

Royal Government of Bhutan

Thimphu

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Contents

1. Introduction

The Kingdom of Bhutan is pleased to submit its Third Nationally Determined Contribution (NDC3.0) for the period up to 2035 pursuant to obligations under Article 4 of the Paris Agreement and in accordance with Decisions 4/CMA.1 (ICTU), 6/CMA.3 (common time frames) and guided by the outcomes of the First Global Stocktake (1/CMA.5).

Bhutan graduated from Least Developed Country (LDC) status on 13 December 2023, marking an important milestone in its pursuit of holistic and sustainable development. Despite this achievement, Bhutan continues to face structural constraints and challenges as a small, mountainous, landlocked developing country (LLDC), and remains particularly vulnerable to the adverse impacts of climate change. Nevertheless, under its Third NDC, Bhutan reaffirms its ambitious commitment to remain carbon neutral while pursuing sustainable, inclusive, and climate-resilient economic growth that aligns with its long-term development vision.

The Third NDC was developed through an intensive and inclusive process that combined technical assessments, capacity building, and extensive stakeholder consultations across all sectors. The process was led by the Department of Environment and Climate Change (DECC) under the Ministry of Energy and Natural Resources (MoENR), with guidance from a cross-sectoral NDC Task Force. The broad participation from government agencies, the private sector, civil society organizations, children and youth, with support from UNDP's Climate Promise, GCF Readiness, NDC Partnership, GIZ and UNICEF were instrumental in preparing the document.

A stocktake of Bhutan's Second NDC informed the preparation process, and the NDC 3.0 was developed in parallel with the revision of Bhutan's Long-Term Low Greenhouse Gas Emission and Climate Resilient Development Strategy (LTS 2023). The LTS 2023 was revised following the launch of major long-term initiatives aimed at transforming Bhutan's economy, including the *21st Century Economic Roadmap: 10X National Economic Vision 2050*[1], and the creation of the *Gelephu Mindfulness City (GMC)*[2] — a Special Administrative Region founded on the bold vision that economic prosperity can coexist with spiritual mindfulness and environmental sustainability.

In revising the LTS 2023, the targets and actions covered under the period of the Second NDC were also updated to align with these long-term transformative initiatives, ensuring coherence, continuity, and enhanced ambition. Likewise, sectoral Low Emission Development Strategies (LEDS) for key sectors are being revised and updated to support the implementation of the NDCs in line with Bhutan's evolving long-term development vision and national priorities.

Progress in implementing climate actions since the Second NDC

Bhutan has continued to maintain its carbon neutral status, as confirmed in the latest estimates of national emissions and removals of greenhouse gases (GHG) for 2022, reported in its First Biennial Transparency Report (BTR1)[3]. Bhutan also continues to pursue low carbon and climate-resilient development as an integral part of its development efforts by integrating climate action

[1] *Bhutan 21st Century Economic Roadmap: 10X National Economic Vision.* Royal Government of Bhutan (2025)

[2] https://gmc.bt/

[3] *First Biennial Transparency Report to the UNFCCC*, Royal Government of Bhutan, (2024).

and environmental sustainability as key pillars in its short-, medium- and long-term development plans. The carbon-neutral commitment, together with the urgent need for adaptation and resilience has been integrated into the 13th Five Year Plan (FYP 2024-2029) and the 10X National Economic Vision 2050.

New sectoral policies, such as the National Energy Policy 2025, highlight the key role of hydropower and expansion of solar and other renewable energy sources in sustaining Bhutan's carbon-neutral commitment. The policy integrates the enhancement of climate resilience and mitigation as a central objective in the country's future energy pathway.

The sectoral targets of the Second NDC were derived from the four sectoral LEDS, the National REDD+ Strategy and Action Plan, and other sectoral strategies and plans. Projects and activities based on these frameworks were prioritized through the five-year development plan process and implemented according to the level of support mobilised and received. Progress towards the achievement of these sectoral targets and priorities was assessed through a stocktake of the Second NDC, conducted prior to the preparation of the Third NDC, and with progress until 2022 also reported in Bhutan's BTR1. Progress has varied across sectors, depending largely on the level of financial and technical support available for implementation. Bhutan will continue to pursue the implementation of NDC priorities and actions under the 13th and subsequent FYPs, commensurate with the international support received. Progress on actions implemented and support received will be reported in future BTRs.

Although Bhutan has graduated from LDC status, its unique circumstances as a small, landlocked, and mountainous developing nation continue to render it highly vulnerable to the impacts of climate change. Growing adaptation and mitigation needs require sustained international cooperation and support to enable Bhutan to uphold its carbon-neutral commitment and pursue resilient, inclusive development.

2. Mitigation

NDC Target and Mitigation Potentials

In presenting the Third NDC, Bhutan reaffirms the commitment to remain carbon neutral as first pledged in 2009 and restated in the First and Second NDCs. This target is economy-wide, where emissions of GHG do not exceed total removals by its forests and land-based sinks.

The updated LTS 2025 provides future emission pathways and mitigation scenarios for Bhutan. The BAU scenario outlined in the LTS was developed in alignment with the 10X National Economic Vision 2050 which charts Bhutan's aspiration for green, diversified, inclusive, and climate-resilient development. Under this scenario, Bhutan is expected to remain carbon neutral through 2035 with GHG emissions projected at 4,454 Gg CO_2e (without LULUCF) and 8,673 Gg CO_2e (with LULUCF), both within the estimated carbon sink capacity of 10,965 Gg CO_2e. With additional mitigation efforts and further international support there is potential to further reduce emissions below BAU levels and ensure a trajectory consistent with carbon neutrality through the second half of this century. These estimates update the efforts and priorities of the Second NDC and encompass the interventions identified in the Third NDC period. The cumulative mitigation potential is estimated at up to 17,532.8 Gg CO_2e for the period 2026 – 2030, and up to 36,332.8 Gg CO_2e for the period 2031-2035.

Mitigation Interventions by Sector

Bhutan's mitigation priorities and targets include all IPCC categories, addresses key emission drivers in each category, and aims to decouple emission growth from sustainable economic growth. An overview of the potential interventions identified in the LTS are listed below, and will be further prioritised and refined in updated sectoral LEDS and policies to facilitate implementation.

Energy

Reducing fossil fuel dependence, improving energy efficiency, and enhancing the renewable energy mix:

- *Renewable energy:* increasing energy generation from hydro, solar, wind, distributed energy resource systems and piloting green hydrogen.
- *Energy in industries:* use of refuse derived fuel for the cement industry, adoption of green hydrogen in transport and industries, energy efficiency in cement plant, waste heat recovery in cement and ferro-alloy plants, ultra high-power transformer in ferro-alloy industries, neural network for process control, direct hot charge in steel industry, installation of insulated gate bipolar transistor technology-based induction furnace, ladle pre-heating, conversion of fossil fuel based boiler to electric, and energy efficiency in manufacturing.
- *Energy efficiency:* energy-efficiency measures in buildings, standards and labelling for appliances, biogas cooking, solar water heating, and green kitchens in institutions.
- *Transport:* adoption of stringent fuel emission standards, promotion of electric vehicles, increase in shared mobility, introduction of light-rail transit, promotion of non-motorized transport, and cross-border freight trains.
- *Creating enablers:* development of Energy Market Platform, update of National Transmission Grid Master Plan (NTGMP), enhancement of STAR-C lab, development of National Energy Act.

Industrial Processes and Product Use (IPPU)

Substituting fossil-based reductants with biogenic charcoal and wood chips and promoting cement blending to reduce process emissions.

Agriculture and Livestock

Use of biochar and compost-based soil amendments, sustainable land management for nitrogen-efficient cropland systems, biogas plants for controlled manure management, feed quality enhancement and methane inhibition and acidified manure management for low-emission livestock systems.

Forestry

Strengthening the National REDD+ Strategy and Action Plan, invasive species management, afforestation and land restoration, climate-smart plantations, promotion of agroforestry, leveraging conservation and carbon finance instruments, reduced-impact logging, sustainable forest-management certification, strengthening scientific plantation management, livelihood diversification for forest-dependent communities, and integrated forest-fire management supported by early-warning and monitoring systems, and prescribed burning and land management.

Waste Management

Material-recovery facilities, enhanced composting, anaerobic digestion, mechanical-biological treatment, co-processing, waste-to-energy facilities, reverse-vending systems, and decentralized wastewater treatment systems (DEWATS) with biogas capture and intelligent aeration technologies to improve treatment efficiency and reduce emissions.

Estimated costs and support needs for mitigation

The total estimated cost of implementing these potential mitigation interventions is USD 9,419 million for 2026–2030 and USD 4,264 million for 2031–2035. These estimates are indicative and will be refined as sectoral LEDS are developed.

Response to the Outcome of the First Global Stocktake (GST1)

The Third NDC from Bhutan marks a steady progression from the previous NDCs by presenting projections for quantified economy-wide emissions and mitigation potentials in line with its increased obligations upon graduation from LDC status. The inclusion of economy-wide estimates marks a major improvement over the Second NDC which adopted a hybrid approach combining sectoral targets, policies and strategies.

The preparation of Bhutan's NDC 3.0 was informed by the outcomes of the First Global Stocktake (GST1), concluded through the UAE Consensus at COP28. GST1 highlighted the urgency of collective action to limit global warming to 1.5 °C, including the need to triple global renewable energy capacity, double energy efficiency improvements, transition away from fossil fuels in energy systems, reduce non-CO_2 emissions, transition to sustainable pattern of consumption and production and circular economy approaches, protect and enhance natural sinks, and scale up adaptation and support. Bhutan has responded to these outcomes through a coherent national approach that links the NDC 3.0 with the update of its LTS, ensuring that mitigation, adaptation, and sustainable development objectives are advanced in an integrated manner.

Although the country's electricity supply is almost 100 percent renewable, Bhutan has begun advancing additional ambitions consistent with the GST pathways. The National Energy Policy 2025 sets a target of 25,000 MW of installed capacity by 2040, including 15,000 MW from hydropower and 5,000 MW from solar, with additional contributions from wind, biomass, and geothermal energy — thereby aligning with the GST call to triple renewables. The policy also integrates energy-efficiency measures across all energy intensive sectors to support long term energy security and reduce sectoral emissions consistent with the call to double energy-efficiency improvements. Recent initiatives such as the commissioning of the 22.8 MW Sephu Solar Farm, piloting of electric cooking stoves, the establishment of nationwide EV charging networks, increasing solar roof top system under the De-suung Solar Project (DSP), and the piloting of electric buses — demonstrate Bhutan's ongoing transition away from fossil fuel dependence and adoption of low-emission technologies.

Coherence is also being ensured across related national processes to strengthen the integration of climate and environmental priorities. Bhutan joined the Climate and Clean Air Coalition

(CCAC) in 2025 and is preparing its National Short-Lived Climate Pollutant (SLCP) Plan and Methane Roadmap and has also embarked on development of the National Clean Air Action Plan (NCAAP) to ensure simultaneous mitigation of SLCPs, CO_2 and air pollution to realise multiple co-benefits. The First National Adaptation Plan (NAP) and the Fifth National Biodiversity Strategy and Action Plan (NBSAP 2025) have been framed to complement climate objectives and reinforce synergies among mitigation, adaptation, and nature-based solutions. These include forest conservation, watershed and springshed management, and sustainable agriculture, which provide multiple co-benefits for resilience, ecosystem integrity, and sustainable development.

Conditionality of support in achieving NDC targets.

As stated in the First and Second NDCs, the ability to remain carbon neutral and the implementation and achievement of Bhutan's NDC target will depend on the level of international support received and is therefore conditional upon such support. Bhutan continues to call on the international community to strengthen cooperation and provide adequate financial, technological, and capacity building support to sustain its mitigation efforts and address the adverse impacts of climate change.

Furthermore, Bhutan's ability to remain carbon neutral is also dependent on the global community's collective success in achieving the Paris Agreement's temperature goal, as its fragile mountain ecosystems are increasingly at risk from the impacts of climate change. The NAP cautions that rising temperatures, changing precipitation patterns, change in ecosystem structure and habitats, and the heightened risks of forest fires could undermine the ecosystem functions of Bhutan's forests, including their long-term carbon-sequestration capacity. This underscores that Bhutan's carbon neutrality pledge is not only contingent on international support for mitigation and adaptation but also on effective global action to limit temperature rise and safeguard the integrity of natural ecosystems.

3. Adaptation component

While Bhutan remains committed to its carbon neutral pledge and pursuing low emission development, adapting to the adverse impacts of climate change is an even more urgent priority. As a mountainous country situated in the fragile Eastern Himalayan ecosystem, Bhutan is already experiencing the escalating impacts of climate change that threatens to reverse hard-won gains in socio economic development and poverty alleviation.

Bhutan's First NAP was submitted in 2023 and, as stated in the Second NDC, also serves as Bhutan's First Adaptation Communication under Article 7 of the Paris Agreement. The NAP was prepared through a rigorous process of technical assessments and broad consultations involving stakeholders across all key sectors and levels from national, sub-national and local governments, and engagement of civil society, the private sector, and vulnerable groups including the elderly, persons with disabilities, and with youth and gender considerations fully integrated. The breadth of concerns, priorities, and implementation approaches included in the NAP demonstrates the thoroughness and inclusivity of the NAP process in Bhutan.

Climate Risks and Adaptation Priorities

The NAP identifies sector-specific vulnerabilities and priorities aimed at strengthening resilience and safeguarding Bhutan's sustainable development under a changing climate. Rising temperatures, erratic rainfall, and an increasing frequency of extreme events — such as floods, landslides, forest fires, and glacial lake outburst floods (GLOFs) — are already affecting livelihoods, infrastructure, and ecosystems. The NAP highlights the key risks and corresponding adaptation priorities across seven sectors. Details of the short- and medium-term adaptation priorities from the First NAP are summarised in the table below.

Sector	Climate risks and vulnerabilities	Adaptation Priorities
Water	Drying of springs, reduced winter precipitation, and intense monsoons are undermining water security and threatening communities and infrastructure.	Integrated watershed and spring-source management, nature-based approaches to recharge and conserve water, efficient irrigation systems, and strengthened governance and institutions for coordinated water management.
Agriculture and Livestock	Erratic rainfall, soil erosion, pests, and water scarcity threaten food production and rural livelihoods.	Climate-smart and sustainable land management, diversified cropping systems, resilient livestock practices, agroforestry, improved post-harvest storage, and risk management tools to strengthen food and nutrition security.
Forests and Biodiversity	Increasing temperatures and drier conditions heighten forest fire risks and alter habitats, threatening biodiversity and Bhutan's carbon sinks.	Forest fire prevention and management, ecosystem restoration, scientific forest management, biodiversity monitoring, control of invasive species, and community-based conservation aligned with the NBSAP and the National REDD+ Strategy and Action Plan.
Energy	Hydropower, the backbone of Bhutan's economy, is vulnerable to changing river flows, sedimentation, and GLOF risks.	Climate-proofing existing hydropower plants, strengthening water resource management for energy security, and diversifying renewable energy sources such as solar and wind to reduce dependency on seasonal flows.
Human Settlements	Rapid urbanisation and exposure to floods, landslides, and storms increase risks to infrastructure and housing.	Climate-resilient and energy efficient infrastructure, risk-sensitive land-use planning, green urban development, and use of ecosystem-based approaches for managing urban flooding and heat.
Human Health	Changing temperature and precipitation patterns are increasing incidences of vector- and water-borne diseases, while disasters pose direct threats to health and wellbeing.	Strengthened disease surveillance and control systems, resilient health facilities, emergency preparedness, and integration of climate risk management into health sector planning and capacity development.
Climate Services and Disaster Risk Reduction	Limited hydrometeorological data and forecasting capacity constrain effective early warning and disaster management.	Strengthening weather, climate, and hydrological services, enhancing data and forecasting systems, developing early warning mechanisms, and integrating risk reduction into sectoral and local planning.

Enabling Activities for the NAP Process

Cross-cutting enabling measures underpinning these sectoral priorities are also detailed in the NAP to facilitate adaptation planning and implementation in Bhutan over the long run in a continuous, iterative and progressive manner. The priority enabling activities for adaptation include strengthening institutional coordination, enhancing research and data generation, building technical and human capacity, promoting education and public awareness, and establishing a robust national monitoring and evaluation framework for adaptation.

Cost for adaptation in the NAP

The NAP estimates the total cost of adaptation at approximately US$ 14 billion over the 2023-2038 period. Of this, about US$ 13.94 billion is earmarked for sectoral adaptation priorities and around US$ 15 million for enabling activities such as coordination, data generation, capacity building, education and awareness, and monitoring and evaluation.

Coherence of Action and Mitigation–Adaptation Synergies

In line with the Climate Change Policy of Bhutan, the NAP emphasizes coherence in climate action to avoid duplication and strengthen synergies between adaptation and mitigation. These synergies are reflected across all sectors and priorities. For instance, diversifying renewable energy sources beyond hydropower and promoting energy efficiency are key adaptation measures that also contribute to mitigation by reducing emissions. The interlinkages among food, water, energy, and climate are evident across adaptation priorities in the agriculture, water, and health sectors. Furthermore, in light of the COVID-19 pandemic, the NAP highlights emerging risks of zoonotic diseases linked to habitat change and biodiversity loss, particularly within the forests and biodiversity, and agriculture and livestock sectors. Likewise, conservation and sustainable management of forests, watersheds, and habitats safeguard vital ecosystem services — such as water regulation and erosion control — while enhancing carbon sequestration. However, the NAP cautions that climate-induced changes in forest ecosystems could undermine Bhutan's carbon sink capacity, as shifting habitats, ecosystem degradation, and intensifying wildfires threaten to turn forests from carbon sinks into emission sources.

4. Loss and Damage

Despite Bhutan's progress in development and adaptation, the impacts of climate change are increasingly outpacing national efforts. Climate-induced loss and damage is already a lived reality, resulting in loss of lives, displacement, and damage to health, infrastructure, ecosystems, and cultural heritage. For Bhutan, Loss and Damage refers to the adverse impacts of climate change on people, culture, the environment, and the economy — arising from extreme events such as floods, GLOFs, landslides, forest fires, heatwaves, windstorms, and erratic precipitation, as well as slow-onset processes including glacier melt, droughts, monsoon breaks, and rising temperatures. It encompasses both economic and non-economic losses, including harm to lives and livelihoods, health, natural resources, cultural heritage, infrastructure, and the erosion of traditional knowledge. These losses are particularly severe due to Bhutan's mountainous and fragile ecosystems and disproportionately affect vulnerable groups and communities. They occur despite Bhutan's commitment to remain carbon neutral and pursue climate resilience, undermining its pursuit of Gross National Happiness (GNH).

Bhutan is increasingly experiencing significant loss and damage impacts across all sectors. While catastrophic events demand urgent preventive and response measures, recurrent and localised hazards impose cumulative damages that often go underreported and undervalued in national assessments. Financing needs to avert, minimise, and address loss and damage therefore span the full spectrum—from ex-ante risk reduction and preparedness to ex-post recovery and rehabilitation. Addressing these needs requires a nationally-driven framework for loss and damage, including strengthened institutional capacity, a centralised database for loss and damage accounting, and access to predictable and scaled-up finance. International solidarity and support will be essential to safeguard Bhutan's development gains, protect its people and ecosystems, and sustain its leadership in global climate action. The financial support from the Fund for Responding to Loss and Damage (FRLD) and the technical assistance from Santiago Network for Loss and Damage (SNLD) will be crucial in addressing climate-induced loss and damage in Bhutan.

5. Considerations for implementation

Integration of Climate Change in National and Sectoral Development Plans

The implementation of Bhutan's NDCs will be guided by the Climate Change Policy 2020, which outlines the institutional arrangements, implementation procedures, and processes for monitoring and evaluation. The policy recognises climate change as a cross-cutting issue that must be addressed comprehensively and in a coordinated manner across all sectors and levels of governance. It defines institutional roles and responsibilities for implementation and emphasizes mainstreaming climate priorities into national and sectoral planning. This includes the integration of climate change considerations into the FYPs, policies, and programmes to ensure coherence and synergy across development efforts. In line with this approach, climate priorities have been integrated into the ongoing 13th FYP and other national and sectoral strategies.

To facilitate implementation of the NDCs and elaborate mitigation actions identified in the revised LTS, the update of sectoral LEDS is underway for the agrifood, industry, human settlements, and surface transport sectors. The Technology Needs Assessment (TNA) and Technology Action Plan (TAP) will also be updated to identify and prioritise appropriate climate technologies and solutions that support both mitigation and adaptation objectives. In addition, the development and strengthening of the National Land Use Zoning (NLUZ) system will ensure proper land use planning, zonation and allocation and help protect fragile ecosystems, avoid maladaptation and ensure low emission climate-resilient development.

Advancing Bhutan's Economic Transformation through a Just and Climate-Resilient Transition

Bhutan has made remarkable progress in its sustainable development journey — graduating from LDC status while maintaining over 70 percent forest cover and its carbon neutral status.

The nation now stands at a crossroads amid rapid technological change, demographic transitions, geopolitical uncertainties, and intensifying climate impacts. It is within this context that Bhutan has articulated its 21st Century Economic Roadmap — the 10X National Economic Vision 2050 — a transformative blueprint to multiply real GDP tenfold by 2050 through diversification, innovation, sustainability, and inclusive growth consistent with the principles of GNH.

Building on this foundation, the 10X Vision 2050 embeds the principles of a just and climate-resilient transition, aiming to accelerate inclusive economic growth while sustaining Bhutan's carbon neutral commitment. Recognising that core sectors of Bhutan's current economy such as hydropower, agriculture, and tourism are increasingly exposed to climate risks, the Vision emphasizes diversification into green industries, renewable energy, and nature-based livelihoods to strengthen resilience and generate decent work within a low-emission economy. Environmental stewardship and inclusivity form central pillars of this strategy, ensuring that economic progress remains people-centred and ecologically sustainable.

Complementing these national ambitions, the GMC Special Administrative Region represents a strategic initiative that demonstrates how economic transformation can align with environmental sustainability. Conceived as a new economic and cultural hub in southern Bhutan, GMC embodies the philosophy of GNH by integrating mindful living, ecological balance, and innovation. Building on Bhutan's environmental leadership, GMC aims to remain carbon negative through the use of renewable energy, electric mobility, and sustainable materials such as mass engineered timber, green concrete, and locally sourced stone and bamboo. Resource and energy efficiency, circular economy practices, and waste minimisation will further reinforce Bhutan's low emission and sustainable growth pathway.

To support the nation's 2050 10X Vision, Druk Holding and Investments Limited (DHI), the commercial arm of the Royal Government of Bhutan, highlights green portfolio investments to expand and strengthen Bhutan's energy resources as a strategic focus area under its 10X Roadmap. This establishes the intent to mobilise investment and capabilities to develop innovative and sustainable sources of energy for the country. DHI's 10X Roadmap also includes priority areas to support GMC's sustainable construction goals and ensure long-term water security for Bhutan.

Together, the 10X Vision 2050 and GMC chart complementary pathways for Bhutan's long-term transformation — ensuring that economic progress is people-centred, environmentally responsible, and socially just. Achieving these ambitions will require sustained international partnership and support to mobilise finance, technology, and capacity for a fair and inclusive transition toward Bhutan's sustainable future.

Synergies and Inclusion

The Climate Change Policy of Bhutan recognises that climate change is a cross-cutting issue affecting all sectors and stakeholders. It calls for integration, synergy, and inclusiveness in implementation, requiring coordinated action by all sectors and stakeholders at every level of governance. In line with this, the implementation of the NDCs will be guided by the Climate Change Policy through the engagement and participation of the private sector, civil society organisations, and local communities. Gender considerations will be integrated into plans, projects, and activities, alongside the engagement of vulnerable groups, including women, children, youth, the elderly, and persons with disabilities. The integration of social sector[4] and vulnerable groups in climate action and implementation will be taken forward in the implementation of the NDC, NAP and other climate plans and strategies.

Furthermore, the Climate Policy underscores the need to pursue synergies and coherence between climate action and other environmental priorities and multilateral environmental agreements. In this regard, opportunities will be explored for coordinated and mutually reinforcing approaches addressing ozone-depleting substances (ODS), land degradation and desertification, biodiversity conservation, and the control of SLCPs and air pollution — while delivering associated health co-benefits. Multiple opportunities also exist to advance synergies with the Sustainable Development Goals (SDGs), the promotion of sustainable consumption and production, circular economy principles, sustainable land management, biodiversity conservation, and nature-based solutions.

The inclusion of key stakeholders and the integration of cross-cutting issues have already been embedded in the preparation of the Third NDC through the updated LTS 2025, sectoral LEDS, and other national strategies. The formulation of new and update of existing LEDS, sectoral strategies, projects, and plans will maintain this inclusive and coherent approach, consistent with the Climate Change Policy of Bhutan.

Means of implementation

Domestic resources remain limited with competing demands to deliver essential development services; therefore, access to international finance under the UNFCCC financial mechanisms, as well as multilateral and bilateral channels, will be critical to achieve Bhutan's NDC targets. To create an enabling environment for NDC implementation, domestic measures will comprise a mix of domestic fiscal incentives along with policy and regulatory measures. In parallel, innovative and alternative financing mechanisms at the national level are being explored to complement international support and mobilise additional resources. These measures include:

- Green Finance Taxonomy (GFT) of Bhutan: Recently developed as an economy-wide classification system, the GFT aims to align financial flows with Bhutan's climate and sustainable development objectives. The first version defines economic activities contributing to climate change mitigation and the second version will include adaptation and resilience in alignment with the targets under the global goal on adaptation (GGA). The GFT will guide public and private investment decisions and inform partners at both national and international levels in directing capital towards NDC implementation and other sustainable development goals.
- The Bhutan Climate Fund (BCF) was established as a national vehicle to mobilise and channel carbon finance into high-integrity, low carbon, and climate-resilient projects. The BCF aims to aggregate and monetise mitigation outcomes and reinvest the proceeds in national climate priorities. It will complement Bhutan's GFT, carbon registry, and Article 6

[4] "*Integration of Social Sectors in Bhutan's NDC 3.0",* Bhutan, United Nations Children's Fund, September 2025.

framework, serving as a bridge between domestic investments and international climate finance while ensuring environmental integrity and transparency.

- Bhutan is enhancing direct access to the financial mechanism of the UNFCCC with the Bhutan Trust Fund for Environmental Conservation (BTFEC) accredited as a Direct Access Entity (DAE) to the Green Climate Fund (GCF) and National Implementing Entity (NIE) to the Adaptation Fund. The Royal Society for Protection of Nature (RSPN) is under process for accreditation to the Adaptation Fund. In addition, the accreditation of the Bank of Bhutan, Bhutan National Bank and Bhutan Development Bank are ongoing to access the Private Sector Facility (PSF) window of the GCF.

Voluntary Cooperation under Article 6 of the Paris Agreement

Bhutan intends to participate in cooperative approaches under Article 6 and has already taken steps to prepare for Article 6 participation, including:

- Adoption of the Bhutan Carbon Market Rules (2023), establishing the legal and procedural framework for carbon markets.
- Development of a National Carbon Registry to track credit issuance, transfers, and compliance.
- Establishment of the BCF (2023) to serve as the primary financial mechanism supporting the country's participation in carbon markets under the Article 6 of the Paris Agreement.
- Development of Carbon Markets Framework (2025) for the Kingdom of Bhutan providing guidance on carbon markets processes, governance framework and market infrastructures.
- Adoption of the Positive List of activities eligible for carbon trading under Article 6 of the Paris Agreement.
- Assessment of carbon market potential and development of eligible mitigation activities for participation in the cooperative approach
- In addition to market mechanisms, Bhutan considers Article 6.8 as a tool for advancing climate action and exploring opportunities to collaborate with other parties in developing non-market approaches.

Transparency and MRV

Bhutan is strengthening national capacity for monitoring, reporting, and verification (MRV) in line with the Paris Agreement's Enhanced Transparency Framework and its Climate Change Policy. Through the Capacity Building Initiative for Transparency (CBIT) project, institutional arrangements, data sharing, data systems, and guidelines are being enhanced to improve greenhouse gas inventories and to enable systematic tracking of NDC implementation, adaptation progress, and climate finance flows. These efforts will contribute to the development of a national MRV framework to track progress and drive implementation.

7. Fair share and call for support

Bhutan's contribution goes beyond its fair share of the global effort to address climate change. As a small, landlocked, mountainous developing country with negligible historical emissions and limited capacity, Bhutan has remained carbon neutral for more than a decade — a mid-century goal for the global community and an ambition that far exceeds what could be expected of the country given its circumstances. The Third NDC builds on this achievement through enhanced targets and deeper integration with the updated LTS 2025 and the long-term 10X National Vision 2050 for sustainable, resilient and inclusive economic growth.

Sustaining this contribution requires continued and predictable international support in finance, technology, and capacity building to maintain Bhutan's carbon sinks, manage future emissions, and strengthen resilience. With such support and cooperation, Bhutan stands ready to continue leading by example — contributing to the collective ambition of the Paris Agreement and proving that sustainable prosperity and carbon neutrality can advance hand in hand, for the benefit of all.

Annex: Information to facilitate clarity, transparency and understanding (ICTU) of Bhutan's Third NDC

1. Quantifiable information on the reference point (including, as appropriate, a base year):	
(a) Reference year(s), base year(s), reference period(s) or other starting point(s);	Bhutan's commitment to remain carbon neutral applies to the period relevant for the Third NDC until 2035.
(b) Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year;	The reference indicator is total GHG emissions against total removals of GHG (i.e., net GHG emissions), and the values will be reported in subsequent BTRs and national GHG inventories in accordance with the modalities, procedures and guidelines of the ETF of the Paris Agreement.
(c) For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or policies and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information;	*Not applicable*. As Bhutan has graduated from LDC status on 13 December 2023 this section is no longer applicable.
(d) Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction;	Bhutan's target is to maintain carbon neutrality. This target is expressed in relative terms of total GHG emissions against total removals of GHG (i.e., net GHG emissions). Projections of emissions at a national level from 2026-2030 (i.e., NDC 2 period) were also assessed, updated and embedded. The target is described in 3(a) below. Bhutan's ability to maintain this target is conditional on the level of international support received towards implementation of its NDCs.
(e) Information on sources of data used in quantifying the reference point(s);	Sources of information include BTRs, national GHG inventories, updated LTS 2025, and LEDS.
(f) Information on the circumstances under which the Party may update the values of the reference indicators.	Bhutan may update information and values based on improvements in the BTRs due to enhanced methodologies and data sources, and future updates to the LEDS prepared to facilitate implementation of the NDCs.

2. Time frames and/or periods for implementation:	
(a) Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA);	The estimates of mitigation potential and actions update the efforts and priorities of the Second NDC and cover the potential actions in the Third NDC period (i.e., 2026-2035).
(b) Whether it is a single-year or multi-year target, as applicable.	Bhutan's commitment to remain carbon neutral refers to total emissions relative to total removals at a national level (i.e., net GHG emissions) over the period for the Third NDC, with target achievement to be measured in the relevant BTRs.

3. Scope and coverage:	
(a) General description of the target;	Bhutan's overall target is an economy-wide target to maintain the status as a carbon neutral country where total GHG emissions do not exceed total removals by sinks. Bhutan has continued to maintain its carbon neutral status, as confirmed in the latest estimates of national emissions and removals of GHG for 2022, reported in its BTR1. The updated LTS 2025 provides future emission pathways and mitigation scenarios for Bhutan and under the BAU scenario developed in alignment with the 21st Century Economy Roadmap (2025), Bhutan is expected to remain carbon neutral through 2035 with GHG emissions projected at 4,454 Gg CO_2e (without LULUCF) and 8,673 Gg CO_2e (with LULUCF), both within carbon sink capacity estimated at 10,965 Gg CO_2e. The 10X Vision 2050 charts Bhutan's aspiration for increasing real GDP by 10X through a green, diversified, inclusive, and climate-resilient development pathway and integrating the carbon neutral ambition. With additional mitigation efforts and further international support, there is potential to further reduce emissions below BAU levels and ensure a trajectory consistent with carbon neutrality through the second half of this century. These estimates update the efforts and priorities of the Second NDC and cover the potential actions in the Third NDC period. The cumulative mitigation potential is estimated at up to 17,532.8 Gg CO_2e for the period 2026 – 2030, and up to 36,332.8 Gg CO_2e for the period 2031-2035. Potential mitigation measures contributing to the cumulative mitigation potentials have been identified in the following sectors: *Energy* Reducing fossil fuel dependence, improving energy efficiency, and enhancing the renewable energy mix: ● *Renewable energy:* increasing energy generation from hydro, solar, wind, distributed energy resource systems and piloting green hydrogen. ● *Energy in industries:* use of refuse derived fuel for the cement industry, adoption of green hydrogen in transport and industries, energy efficiency in cement plant, waste heat recovery in cement and ferro-alloy plants, ultra high-power transformer in ferro-alloy industries, neural network for process control, direct hot charge in steel

3. Scope and coverage:	
	industry, installation of insulated gate bipolar transistor technology-based induction furnace, ladle pre-heating, conversion of fossil fuel based boiler to electric, and energy efficiency in manufacturing. ● *Energy efficiency:* energy-efficiency measures in buildings, standards and labelling for appliances, biogas cooking, solar water heating, and green kitchens in institutions. ● *Transport:* adoption of stringent fuel emission standards, promotion of electric vehicles, increase in shared mobility, introduction of light-rail transit, promotion of non-motorized transport, and cross-border freight trains. ● *Creating enablers:* development of Energy Market Platform, update of National Transmission Grid Master Plan (NTGMP), enhancement of STAR-C lab, development of National Energy Act. *Industrial Processes and Product Use (IPPU)* Substituting fossil-based reductants with biogenic charcoal and wood chips and promoting cement blending to reduce process emissions. *Agriculture and Livestock* Use of biochar and compost-based soil amendments, sustainable land management for nitrogen-efficient cropland systems, biogas plants for controlled manure management, feed quality enhancement and methane inhibition and acidified manure management for low-emission livestock systems. *Forestry* Strengthening the National REDD+ Strategy and Action Plan, invasive species management, afforestation and land restoration, climate-smart plantations, promotion of agroforestry, leveraging conservation and carbon finance instruments, reduced-impact logging, sustainable forest-management certification, strengthening scientific plantation management, livelihood diversification for forest-dependent communities, and integrated forest-fire management supported by early-warning and monitoring systems, and prescribed burning and land management. *Waste Management* Material-recovery facilities, enhanced composting, anaerobic digestion, mechanical-biological treatment, co-processing, waste-to-energy facilities, reverse-vending systems, and decentralized wastewater treatment systems (DEWATS) with biogas capture and intelligent aeration technologies to improve treatment efficiency and reduce emissions. **Estimated costs and support needs for mitigation** The total estimated cost of implementing these potential mitigation interventions is USD 9,419 million for 2026–2030 and USD 4,264 million for 2031–2035. These estimates are indicative and will be refined as sectoral LEDS are developed, along with updated mitigation potential assessments.

3. Scope and coverage:	
	Conditionality The implementation and achievement of Bhutan's NDC target will depend on the level of international support received and remains conditional upon such support. Bhutan continues to call on the international community to strengthen cooperation and provide adequate financial, technological, and capacity building support to sustain its mitigation efforts and address the adverse impacts of climate change. Furthermore, Bhutan's ability to remain carbon neutral is also dependent on the global community's collective success in achieving the Paris Agreement's temperature goal, as its fragile mountain ecosystems are increasingly at risk from the impacts of climate change. The NAP cautions that rising temperatures, changing precipitation patterns, change in ecosystem structure and habitats, and the heightened risks of forest fires could undermine the ecosystem functions of Bhutan's forests, including their long-term carbon-sequestration capacity. This underscores that Bhutan's carbon neutrality pledge is not only contingent on international support for mitigation and adaptation but also on effective global action to limit temperature rise and safeguard the integrity of natural ecosystems.
(b) Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines;	All gases and sectors are as described in the National Communications and BTRs prepared in accordance with the 2006 IPCC Guidelines.
(c) How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21;	All methodologies and tools applied for preparing the GHG inventory are in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. In line with Bhutan's national circumstances—particularly data availability and the resources required for more detailed estimation—the emission and sequestration estimates rely primarily on national statistics and default emission factors, using a Tier 1 approach. Emissions of perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF_3) are not estimated as products containing these gases are not produced in the country and data on their use is not available. Bhutan aspires to gradually improve its reporting by adopting higher tier methods as local capacity develops, and more disaggregated data becomes available. Bhutan's GHG inventory has been prepared using data from national statistics, surveys and activity data provided by different sectors.
(d) Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans, including description of specific projects, measures and initiatives of	Synergies between mitigation and adaptation are described in Bhutan's First NAP which also served as the First Adaptation Communication from Bhutan. Adaptation priorities such as diversification of energy sources, securing watersheds, conservation of forests, sustainable land and soil management, and promotion of green infrastructure in urban areas result in mitigation co-benefits. Chapter 3 of the NAP provides further details.

3. Scope and coverage:	
Parties' adaptation actions and/or economic diversification plans.	Of particular importance is that scaling up renewable energy and energy efficiency in Bhutan serves not only as a mitigation strategy but also as an adaptation necessity given the climate-related risks to hydropower, which accounts for nearly all electricity generation. The NAP further highlights that climate change impacts on Bhutan's forests could undermine their role as a carbon sink by altering habitats and ecosystem functions and increasing the risk of forest fires.

4. Planning processes:	
(a) Information on the planning processes that the Party undertook to prepare its nationally determined contribution and, if available, on the Party's implementation plans, including, as appropriate:	**Preparation** Bhutan's NDC3 was developed through an intensive and inclusive process that combined technical assessments, capacity building, and extensive stakeholder consultations across all sectors. The process was led by the Department of Environment and Climate Change (DECC) under the Ministry of Energy and Natural Resources (MoENR), with guidance from a cross-sectoral NDC Task Force. The broad participation from government agencies, the private sector, civil society organizations, and children and youth, with support from UNDP's Climate Promise, GCF, NDC Partnership, GIZ and UNICEF being instrumental in preparing the document. A stocktake of Bhutan's Second NDC informed the preparation process, and the NDC3 was developed in parallel with the revision of Bhutan's LTS 2023. The LTS was revised following the launch of major long-term initiatives aimed at transforming Bhutan's economy, including the *21st Century Economic Roadmap: 10X National Economic Vision 2050*, and the creation of the *Gelephu Mindfulness City (GMC)* — a Special Administrative Region founded on the bold vision that economic prosperity can coexist with spiritual mindfulness and environmental sustainability. In revising the LTS, the priorities and actions covered under the period of the Second NDC were also updated to align with these long-term transformative initiatives, ensuring coherence, continuity, and enhanced ambition. **Implementation plans** *Integration in national plans:* The implementation of Bhutan's NDCs will be guided by the Climate Change Policy 2020, which outlines the institutional arrangements, implementation procedures, and processes for monitoring and evaluation. The policy recognises climate change as a cross-cutting issue that must be addressed comprehensively and in a coordinated manner across all sectors and levels of governance. It defines institutional roles and responsibilities for implementation and emphasizes mainstreaming climate priorities into national and sectoral planning. This includes the integration of climate change considerations into the Five-Year Plans (FYPs), policies, and programmes such as sectoral roadmaps to implement the *21st* Century Economic Roadmap – the 10X National Economic Vision 2050

4. Planning processes:	
	Sectoral approaches: To facilitate implementation of the NDCs and elaborate mitigation actions identified in the revised LTS, the update of sectoral LEDS is underway for the agrifood, industry, human settlements, and surface transport sectors. The Technology Needs Assessment (TNA) and Technology Action Plan (TAP) will also be updated to identify and prioritise appropriate climate technologies and solutions that support both mitigation and adaptation objectives. In addition, the development and strengthening of the National Land Use Zoning (NLUZ) system will ensure proper land use planning, zonation and allocation and help protect fragile ecosystems, avoid maladaptation and ensure low emission climate-resilient development. *Synergies:* In line with the Climate Change Policy, opportunities for synergies and coherence between climate action and other environmental priorities and multilateral environmental agreements is essential and opportunities will be explored for coordinated and mutually reinforcing approaches addressing ozone-depleting substances, land degradation and desertification, biodiversity conservation, and the control of short-lived climate pollutants and air pollution — while delivering associated health co-benefits. Multiple opportunities also exist to advance synergies with the Sustainable Development Goals (SDGs) through the promotion of sustainable consumption and production, circular economy principles, sustainable land management, biodiversity conservation, and nature-based solutions. *Inclusion:* Gender considerations will be integrated into plans, projects, and activities, alongside the engagement of vulnerable groups, including women, children, youth, the elderly, and persons with disabilities. The integration of social sector and vulnerable groups in climate action and implementation will be taken forward in the implementation of the NDC, NAP and other climate plans and strategies **Means of implementation** Domestic resources remain limited with competing demands to deliver essential development services; therefore, access to international finance under the UNFCCC financial mechanisms, as well as multilateral and bilateral channels, will be critical to achieve Bhutan's NDC targets. To create an enabling environment for NDC implementation, domestic measures will comprise a mix of domestic fiscal incentives along with policy and regulatory measures. In parallel, innovative and alternative financing mechanisms at the national level are being explored to complement international support and mobilise additional resources. These measures include: development of the *Green Finance Taxonomy (GFT)* to align financial flows with Bhutan's climate and sustainable development objectives, establishment of the *Bhutan Climate Fund (BCF)* as a national vehicle to mobilise and channel carbon finance into high-integrity, low carbon, and climate-resilient projects, enhancing direct access to GCF and Adaptation Fund through accreditation of national institutions as Direct Access Entity (DAE) to the Green

4. Planning processes:	
	Climate Fund (GCF) and National Implementing Entity (NIE) to the Adaptation Fund, including the accreditation of Bhutanese banks to access the Private Sector Facility (PSF) window of the GCF.
(i) Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner;	The domestic institutional arrangements for climate change are defined in the Climate Change Policy of Bhutan and further described in the BTR1. *National Climate Change Committee (NCCC):* The National Environment Commission (NEC) is the leading cross-sectoral body for environmental policy and regulation, responsible for coordinating efforts related to the protection, conservation, and enhancement of the environment. The NEC functions as the high-level National Climate Change Committee (NCCC) and addresses all climate change-related policy and regulatory issues. The NEC is assisted by the National Environment Commission Secretariat (NECS), which has now been restructured and renamed the Department of Environment & Climate Change (DECC) under the Ministry of Energy and Natural Resources (MoENR) as of December, 2022. The DECC serves as the Secretariat for the NEC. *The Climate Change Coordination Committee (C4)* consists of high-level representatives from various stakeholder agencies and organizations serves as the technical forum for discussing and coordinating climate change issues in Bhutan, making recommendations for the NCCC/NEC'S consideration. The C4's activities are supported by the Climate Change Division of the DECC, which monitors and guides the implementation of climate change policy, ensuring coordinated action on climate change throughout Bhutan. In preparing the Third NDC, the process was conducted in an consultative and inclusive manner, ensuring participation of vulnerable groups including women, children and youth. While indigenous peoples are not relevant in Bhutan's context, the NDC 3.0 process sought to ensure that all stakeholder groups were able to provide input. The process included direct consultations convened for the NDC 3.0 preparation and in-depth technical consultations with key sectors and stakeholder conducted in parallel for the update of the LTS 2023. In addition, the NDC preparation was also facilitated and informed by a series of workshops and sensitisation programmes through various related initiatives that fed into the formulation of the Third NDC. These programs and processes include the Capacity Building Initiative for Transparency (CBIT) project, readiness activities for Article 6, the preparation of the first National Adaptation Plan (NAP), the process to develop the Assessment of Climate-Induced Loss and Damage (Economic and Non-Economic) in Bhutan, development of Bhutan's First Biennial Transparency Report (BTR), First Roundtable on Sustainable Consumption and Production and Circular Economy, and the stocktaking process for Bhutan's Second NDC. Key stakeholders in the NDC process includes representatives from government and private sector covering GHG emission sectors and other cross-sectoral stakeholders including representatives of children and youth (with

4. Planning processes:	
	support of UNICEF), the National Commission for Women and Children and local civil society organisations. Specific inputs received from the social sector included "Integration of Social Sectors in Bhutan's NDC 3.0 from UNICEF, "Youth & Climate Change in Bhutan NDC 3.0 - Presentation of the Youth Consultation Report - Their Perspectives and Recommendations", and the "National Youth Statement, Voices of the Youths in Bhutan from the first Local Conference of Youth (LCOY) 2025".
(ii) Contextual matters, including, inter alia, as appropriate:	
a. National circumstances, such as geography, climate, economy, sustainable development and poverty eradication;	Bhutan is a small, landlocked, and mountainous country situated in the Eastern Himalayas, with a land area of about 38,394 km^2 and a population of around 763,250 (NSB, population projection for 2022). Forests cover is approximately 69.71 (Second National Forest Inventory 2023) percent of the land area, providing a vital carbon sink and enabling Bhutan to remain carbon negative, as confirmed in its BTR1 (2024). The country, however, is highly vulnerable to climate change, with risks including glacial lake outburst floods, erratic monsoon rainfall, changing hydrology, and more frequent extreme weather events. Bhutan graduated from LDC status in December 2023, reflecting significant progress in human development and poverty reduction. The most recent estimates show that the poverty rate for Bhutan is about 12.4 percent (NSB, 2022). Bhutan continues to face the structural constraints of a small mountainous and landlocked developing country (LLDC), including limited connectivity, high transport costs, and a narrow economic base. The economy, with a GDP of about Nu 280 billion (National Accounts Statistics, 2024), remains highly dependent on hydropower and agriculture. Hydropower contributed about 12 percent of GDP, and is the primary revenue generator, serving as the cornerstone of Bhutan's economic growth. Agriculture (including livestock) also contributed about 12 percent of GDP in 2024, and remains the main source of livelihood for more than half of the population and is central to food security. Both sectors are highly sensitive to climate change: hydropower to changing hydrology and extreme events, and agriculture to erratic rainfall, pests, and climate extremes. This dependence leaves Bhutan particularly vulnerable to climate risks and external shocks, while constraining opportunities for broad-based and resilient development. Recognising that sustaining carbon neutrality and long-term resilience amid rapid technological change, demographic transitions, geopolitical uncertainties, and intensifying climate impacts, depends on diversifying and transforming the economy, Bhutan has embarked on ambitious reforms. The *21st Century Economic Roadmap: 10X National Economic Vision 2050*, sets a vision of ten-fold GDP growth by 2050 through diversification, resilience, and inclusiveness. The 10X Vision 2050 embeds the principles of a just and climate-resilient transition, aiming to accelerate inclusive economic growth while sustaining Bhutan's carbon neutral commitment. Recognising that core sectors of Bhutan's current economy such as hydropower, agriculture, and tourism are increasingly exposed to

4. Planning processes:	
	climate risks, the Vision emphasizes diversification into green industries, renewable energy, and nature-based livelihoods to strengthen resilience and generate decent work within a low-emission economy. Environmental stewardship and inclusivity form central pillars of this strategy, ensuring that economic progress remains people-centred and ecologically sustainable. Complementing these national ambitions, the GMC Special Administrative Region has been launched as a new economic and cultural hub in southern Bhutan, GMC that embodies the philosophy of Gross National Happiness by integrating mindful living, ecological balance, and innovation. Building on Bhutan's carbon negative status, GMC aims to remain carbon negative through the use of renewable energy, electric mobility, and sustainable materials such as mass engineered timber, green concrete, and locally sourced stone and bamboo. Resource and energy efficiency, circular economy practices, and waste minimisation will further reinforce Bhutan's low emission and sustainable growth pathway. Bhutan's NDC 3.0 is prepared in this context of transition, where recent graduation from LDC status, structural vulnerabilities as an LLDC and small economy, and ambitious national reforms converge, and underscores the importance of international support to sustain carbon neutrality and advance a climate-resilient development pathway.
b. Best practices and experience related to the preparation of the nationally determined contribution;	Bhutan's Third NDC was prepared as a nationally-led process, building on lessons from earlier contributions and ongoing national initiatives. The preparation was closely aligned with key planning instruments, including the 13th FYP and the 21st Century Economic Roadmap, to ensure consistency between climate ambition and evolving development priorities. A structured stocktake of the Second NDC was undertaken to assess progress and identify gaps, providing a direct basis for the formulation of updated contributions. The process also drew upon the update of the LTS which provided the main analytical foundation for sectoral pathways and scenario assessments. Continuous capacity building was central to the process under the CBIT. Through the CBIT Project, technical capacities of sectoral ministries and institutions were enhanced for data collection and GHG inventory management. This has improved readiness for NDC preparation and implementation, although Bhutan continues to face challenges as a small developing country with limited institutional capacity in meeting growing international obligations. In parallel, groundwork was laid for future implementation of the ETF, with efforts to strengthen measurement, reporting and verification (MRV) and monitoring and evaluation (M&E) systems. The preparation process also sought synergies with related agendas, integrating considerations of ecosystem and nature-based solutions, sustainable consumption and production and circular economy (SCP-CE), and SLCPs. Dedicated efforts were made to ensure inclusive participation, including women, youth, and other vulnerable

4. Planning processes:	
	stakeholders. These combined practices — systematic stocktaking, evidence-based analysis, strengthened capacity, and inclusive engagement— represent Bhutan's evolving approach to the preparation of successive NDCs.
c. Other contextual aspirations and priorities acknowledged when joining the Paris Agreement;	*Not Applicable*
(b) Specific information applicable to Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, paragraphs 16–18, of the Paris Agreement;	*Not Applicable*
(c) How the Party's preparation of its nationally determined contribution has been informed by the outcomes of the global stocktake, in accordance with Article 4, paragraph 9, of the Paris Agreement;	The Third NDC from Bhutan marks a steady progression from the previous NDCs by presenting projections for quantified economy-wide emissions and mitigation potentials in line with its increased obligations upon graduation from LDC status. The inclusion of economy-wide estimates marks a major improvement over the Second NDC which adopted a hybrid approach combining sectoral targets, policies and strategies. The preparation of Bhutan's NDC 3.0 was informed by the outcomes of the First Global Stocktake (GST1), concluded through the UAE Consensus at COP28. GST1 highlighted the urgency of collective action to limit global warming to 1.5°C, including the need to triple global renewable energy capacity, double energy efficiency improvements, transition away from fossil fuels in energy systems, reduce non-CO_2 emissions, transition to sustainable pattern of consumption and production and circular economy approaches, protect and enhance natural sinks, and scale up adaptation and support. Bhutan has responded to these outcomes through a coherent national approach that links the NDC 3.0 with the update of its LTS, ensuring that mitigation, adaptation, and sustainable development objectives are advanced in an integrated manner. Although the country's electricity supply is almost 100 percent renewable, Bhutan has begun advancing additional ambitions consistent with the GST pathways. The National Energy Policy 2025 sets a target of 25,000 MW of installed capacity by 2040, including 15,000 MW from hydropower and 5,000 MW from solar, with additional contributions from wind, biomass, and geothermal energy—thereby aligning with the GST call to triple renewables. The policy also integrates energy-efficiency measures across all energy intensive sectors to support long term energy security and reduce sectoral emissions consistent with the call to double energy-efficiency improvements. Recent initiatives such as the commissioning of the 22.8 MW Sephu Solar Farm, piloting of electric cooking stoves, the establishment of nationwide EV charging networks, increasing solar roof top system under the De-suung Solar Project (DSP), and the

4. Planning processes:	
	piloting of electric buses—demonstrate Bhutan's ongoing transition away from fossil fuels and adoption of low-emission technologies. Coherence is also being ensured across related national processes to strengthen the integration of climate and environmental priorities. Bhutan joined the Climate and Clean Air Coalition (CCAC) in 2025 and is preparing its National Short-Lived Climate Pollutant (SLCP) Plan and Methane Roadmap and has also embarked on development of the National Clean Air Action Plan (NCAAP) to ensure simultaneous mitigation of SLCPs, CO_2 and air pollution to realise multiple co-benefits. The First National Adaptation Plan (NAP) and the Fifth National Biodiversity Strategy and Action Plan (NBSAP 2025) have been framed to complement climate objectives and reinforce synergies among mitigation, adaptation, and nature-based solutions. These include forest conservation, watershed and springshed management, and sustainable agriculture, which provide multiple co-benefits for resilience, ecosystem integrity, and sustainable development.
(d) Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:	
(i) How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;	*Not Applicable*
(ii) Specific projects, measures and activities to be implemented to contribute to mitigation co-benefits, including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors such as manufacturing and industry, energy and	See 3(d) above.

4. Planning processes:	
mining, transport and communication, construction, tourism, real estate, agriculture and fisheries.	

5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:	
(a) Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21, paragraph 31, and accounting guidance adopted by the CMA;	Bhutan's estimates of GHG emissions and removals is prepared in line with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, as reported in the Third National Communication (TNC) and the BTR1 (2024), the updated LTS 2025, and sectoral LEDS. At this time, based on national circumstances, estimates are made using Tier 1 methodologies considering IPCC default emission factors, with activity data drawn from national statistics and sectoral reports.
(b) Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution;	Bhutan tracks the implementation of NDC policies through its national planning processes, guided by the Climate Change Policy 2020, sectoral strategies, and the FYPs. Progress is monitored mainly through sectoral indicators and official statistics.
(c) If applicable, information on how the Party will take into account existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as appropriate;	As described in 5a above.
(d) IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;	2006 IPCC Guidelines as in 5a above.
(e) Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:	

5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:	
(i) Approach to addressing emissions and subsequent removals from natural disturbances on managed lands;	Bhutan does not apply a separate treatment for natural disturbances. As reported in the TNC and BTR1 emissions and removals from managed lands are estimated using Tier 1 default methods under the 2006 IPCC Guidelines, without distinguishing events such as fires, pests, or landslides. These are included in aggregate LULUCF estimates. It has to be noted that Bhutan's NAP cautions how climate-induced changes in forest ecosystems could undermine Bhutan's carbon sink capacity, as shifting habitats, ecosystem degradation, and intensifying wildfires threaten to turn forests from carbon sinks into net emission sources.
(ii) Approach used to account for emissions and removals from harvested wood products;	Bhutan does not currently account for harvested wood products (HWP). As reported in the TNC and BTR1, all carbon removals are included within forest biomass using Tier 1 default methods, and HWP pools are assumed to be zero due to limited data on production, trade, and use. Looking ahead, Bhutan recognises that HWP will play an important role as timber utilisation and wood-based industries expand and support sustainable buildings in Bhutan. Strengthening statistical systems on harvesting, processing, and product flows is a priority to enable future application of IPCC methods for HWP accounting.
(iii) Approach used to address the effects of age-class structure in forests;	Bhutan's GHG inventory does not separately account for forest age-class structures due to lack of data, capacity and resources. As reported in the TNC and BTR1, forest carbon stock changes are estimated using Tier 1 default factors under the 2006 IPCC Guidelines.
(f) Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:	
(i) How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used;	As in 5a above.
(ii) For Parties with nationally determined contributions that contain non- greenhouse-gas components, information on assumptions and methodological	Any non-GHG metrics will be further elaborated in the updated LTS 2025 and updated sectoral LEDS.

5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:	
approaches used in relation to those components, as applicable;	
(iii) For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated;	Bhutan has initiated the preparation of a National SLCP Plan and Methane Roadmap to enhance emission inventories and assess abatement strategies that will further inform and support the implementation of the NDC.
(iv) Further technical information, as necessary;	*Not Applicable*
(g) The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable. .	Bhutan intends to participate in cooperative approaches under Article 6 and has already taken steps to prepare for Article 6 participation, including: Adoption of the Bhutan Carbon Market Rules (2023), establishing the legal and procedural framework for carbon markets. Development of a National Carbon Registry to track credit issuance, transfers, and compliance. Establishment of the BCF (2023) to serve as the primary financial mechanism supporting the country's participation in carbon markets under the Article 6 of the Paris Agreement. Development of a Carbon Markets Framework (2025) for the Kingdom of Bhutan providing guidance on carbon markets processes, governance framework and market infrastructures. Adoption of the Positive List of activities eligible for carbon trading under Article 6 of the Paris Agreement. Assessment of carbon market potential and development of eligible mitigation activities for participation in the cooperative approach In addition to market mechanisms, Bhutan considers Article 6.8 as a tool for advancing climate action and exploring opportunities to collaborate with other parties in developing non-market approaches.

6. How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:	
(a) How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances;	Bhutan's Third NDC is considered fair and ambitious in light of its circumstances as a small, landlocked, mountainous, developing country that is highly vulnerable to the adverse impacts of climate change. Bhutan remains carbon neutral, with sinks consistently absorbing more greenhouse gas emissions than are generated. This status, achieved well ahead of 2050, demonstrates ambition that is more than fair, going beyond what would be expected of a country with Bhutan's size, population, level of development, and negligible historical responsibility. The Third NDC from Bhutan marks a steady progression from the previous NDCs by presenting projections for quantified economy-wide emissions and mitigation potentials in line with its increased obligations upon graduation

6. How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:	
	from LDC status. The inclusion of economy-wide estimates marks a major improvement over the Second NDC which adopted a hybrid approach combining sectoral targets, policies and strategies.
(b) Fairness considerations, including reflecting on equity;	Bhutan's Third NDC reflects fairness and equity by balancing the right to pursue sustainable development with the pledge to remain carbon neutral. Bhutan has recently graduated from Least Developed Country (LDC) status and continues to face the structural constraints of a mountainous landlocked developing country with a small economy. Despite limited resources and high climate risks, Bhutan has maintained carbon neutrality well ahead of global timelines, thereby providing a mitigation contribution that is more than fair and significantly exceeds its expected share of effort. Bhutan also faces constraints in accessing results-based financing, despite maintaining sinks that provide climate, biodiversity, and riverine benefits beyond its borders. Mobilising support for implementing LEDS and sectoral strategies remains difficult due to Bhutan's low historical emissions, even though sustaining carbon neutrality requires continued investment and capacity. In this context, Bhutan's contribution is assessed against principles of responsibility, capability, and the right to development, under which its carbon neutral pledge is more than fair. Equity considerations imply that Bhutan's continued role as a carbon neutral country depends on adequate international support in finance, technology, and capacity building. Such support is essential to enable Bhutan to sustain its carbon sink, control emissions in line with development needs, and advance poverty reduction and resilience objectives.
(c) How the Party has addressed Article 4, paragraph 3, of the Paris Agreement;	Bhutan's NDC 3.0 demonstrates progression beyond NDC 2 and reflects its highest possible ambition under national circumstances. Bhutan is already carbon neutral, a goal set globally for 2050 and beyond, and its ambition is to remain carbon neutral while creating space for sustainable development, poverty reduction, and improved well-being for its people. Bhutan's Second NDC combined sectoral targets with policy commitments, reflecting Bhutan's LDC status. Projections of emissions from Bhutan at a national level until 2030 were not available at the time of the 2nd NDC submission, however, it has now been assessed. The Third NDC from Bhutan advances ambition by setting quantified 2035 targets, guided by the updated LTS, and supported by the updated sectoral LEDS. It is anchored in Bhutan's 21st Century Economic Roadmap, integrating energy, industry, mobility, agriculture, land use, settlements, forests, and nature-based solutions into a whole-of-economy low emission, climate-resilient pathway.
(d) How the Party has addressed Article 4, paragraph 4, of the Paris Agreement;	Bhutan has already committed to remaining carbon neutral, which is an economy-wide target covering energy, industry, transport, agriculture, waste, land use and forests.

6. How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:	
	This commitment is undertaken in parallel with Bhutan's development priorities and requires sustained international support in finance, technology, and capacity building to ensure that carbon neutrality can be maintained while advancing poverty reduction and sustainable economic growth.
(e) How the Party has addressed Article 4, paragraph 6, of the Paris Agreement.	*Not applicable* See 1(c) above.

7. How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2:	
(a) How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2;	The objective of the Convention is to stabilise greenhouse gas concentrations at a level that prevents dangerous anthropogenic interference with the climate system. Bhutan's NDC 3.0 contributes to this objective by committing to remain carbon neutral, ensuring that national emissions do not exceed the sequestration capacity of its sinks and sustaining Bhutan's role as a net carbon sink. In line with Article 2, Bhutan's measures help ecosystems adapt naturally through extensive forest cover and nature-based solutions; safeguard food production through climate-resilient agriculture and watershed management; advance sustainable economic development by expanding renewable energy and efficiency, promoting sustainable forestry; and aligning low emission pathways with the 21st Century Economic Roadmap. These actions ensure that Bhutan's climate efforts contribute directly to the Convention's objective while supporting resilience, livelihoods, and sustainable growth.
(b) How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.	Bhutan's NDC 3.0 contributes to the achievement of the Paris Agreement's long-term temperature goal under Article 2.1(a) by remaining carbon neutral and net negative, with national greenhouse gas emissions far outweighed by removals by sinks. The BTR1 (2024) confirmed that in 2022, sequestration from sinks exceeded national emissions by a substantial margin. This contribution directly supports the global effort to hold the increase in temperature well below 2 °C and pursue efforts to limit it to 1.5 °C. In line with Article 4.1, Bhutan has already achieved a balance between emissions and removals, well in advance of achieving the global objective by the second half of this century. The Third NDC reaffirms this commitment and strengthens sectoral measures to sustain the net negative balance while advancing sustainable development and poverty reduction. Bhutan's NDC 3.0 therefore contributes to the global peaking of emissions and the pursuit of net zero, in the context of equity and national circumstances.