

BTR Fact Sheet

Brunei Darussalam

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Chapter 1. National Context and Governance

1.1 Country Overview and Key Characteristics

1.1.1 Population Overview

Brunei Darussalam's population increased from 386,800 in 2010 to 450,500 in 2023, reflecting an average annual growth rate of approximately 1%. This estimate includes all people residing in Brunei Darussalam. Malay, which also included Brunei Indigenous communities of Malay, Kedayan, Tutong, Belait, Bisaya, Dusun and Murut, constitutes the major population group numbering at 332,100, Chinese at 43,400 persons and other races not specified at 75,000.

The official language is Malay, but English is widely understood and used in business. Other languages spoken are several Chinese dialects, Iban, and a number of native dialects. Islam is the official religion, but religious freedom is guaranteed under the Constitution.

1.1.2 Economic Structure

Brunei's economy has traditionally relied heavily on its natural resources, especially in the oil and gas sector. However, in recent years, in line with the country's diversification efforts, the non-oil and gas sector contributed 53% to GDP in 2023, surpassing the oil and gas sector, which contributed 47%.

From 2011 to 2020, real GDP growth was modest, averaging only 0.3%. In 2023, the economy experienced positive growth by 1.4%, primarily driven by a sustained increase in the Non- Oil and Gas Sector, supported by positive growth recorded in several subsectors such as Finance, Transport and Logistics, Construction and Communication. On the contrary, the Oil and Gas Sector experienced a contraction by 2.0% owing to a decline in the production of crude oil, natural gas and liquified natural gas (LNG) production.

The trend in real GDP growth is also indicative of the consequence of production of oil and gas. The positive economic growth of the economy is heavily dependent on the level of oil and gas production, except when other sectors, such as the downstream sector, experience significant expansion. The effects of the dependence on oil and gas are not only limited to the structure of the economy, but also government finance. The Government relies primarily on revenue from taxes, incomes, and royalties from oil and gas companies. Over the recent years, the country has experienced budget deficit except in 2018/2019 and 2022/2023, which were driven by high oil and gas prices during these periods.

Despite importing most consumer goods and food, Brunei maintains a positive trade balance due to its large oil and LNG exports, substantial foreign reserves, and minimal external debt, which help mitigate overall economic risks. Additionally, Brunei's political stability, low inflation rates, high standard of living, and affluent population create a conducive environment for sustained long-term economic growth.

In its efforts to diversify away from oil and gas and promote sustainable economic growth, Brunei has implemented several long-term strategies. The Vision 2035 Strategy focuses on diversifying the economy, enhancing private sector growth, and fostering investments in non-oil sectors. The Ministry of Finance and Economy (MOFE), in its 2021 Economic Blueprint for Brunei, outlined five key areas for economic diversification: downstream oil and gas, food, tourism, information and communications technology (ICT), and services, indicating a strategic shift towards reducing economic dependency on hydrocarbons.

Nevertheless, diversification poses significant challenges, largely due to Brunei's small size. Foreign direct investment (FDI) continues to be heavily influenced by the petrochemical sector which remains closely tied to global oil price fluctuations. Additionally, in 2023, Brunei's non-oil and gas sector which makes up 53% of GDP, is predominantly concentrated in the private services sector at 24%, followed by government services at 15%, other industries (including downstream) at 13%, with the agricultural sector being negligible with the 1%.

1.1.3 Natural Environment and Resources

Forests play an invaluable role to mitigating climate change and supporting society as they act as both a carbon sink and a home for biodiversity. At present, the total forest area in Brunei is recorded at 380,000 hectares (ha). Of these, 263,000 hectares are primary forests, 112,000 ha are other naturally regenerated forests and around 5,000 ha are planted forests. The national forest reserves constitute 41% of the country's total land area and are protected by law. Brunei's forest reserves are classified into five categories: Protection Forest, Production Forest, Recreational Forest, Conservation Forest, and National Park.

In 2017, the Government issued a no-logging policy in pristine peatland areas. Additionally, a reduced-cut policy was introduced, limiting annual timber extraction to 100,000 cubic meters (m³) in production forests. Harvesting of domestic timber supply is only allowed in production forests. The Forestry Department strictly supervises timber harvesting in designated logging

compartments to ensure that activities adhere to the Brunei Selective Felling System (BSFS), which follows a Sustainable Forest Management approach. These policies have increased forest conservation areas, and Brunei has set a target to increase its forest reserves to 55% of the total land area. The country has seven distinguishable forest types: Mangrove Forests, Beach Forests, Freshwater Swamp Forests, Peat Swamp Forests, Heath 'Kerangas' Forests, Mixed Dipterocarp Forests and Montane Forests. The landscapes of these forests are very evident based on their floral composition, forest formations, soil conditions and micro-environment.

Figure 1. Forest Classification by Share (%)

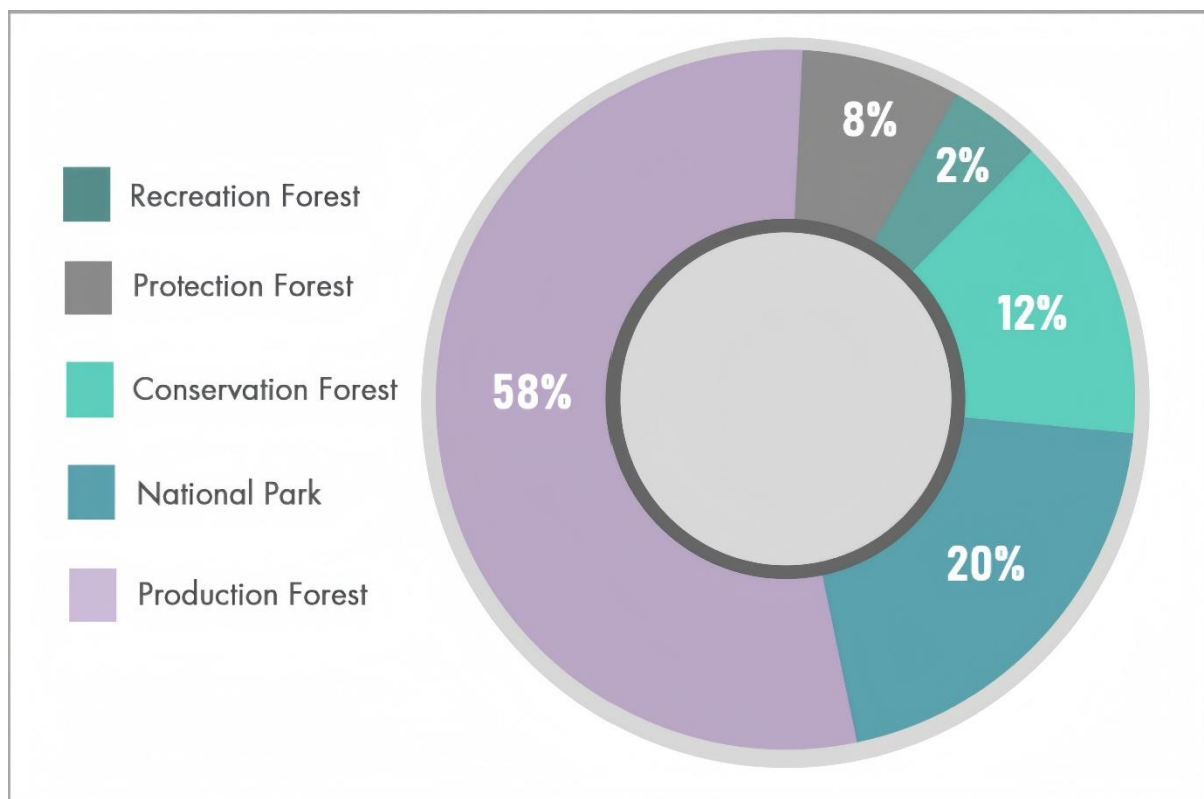
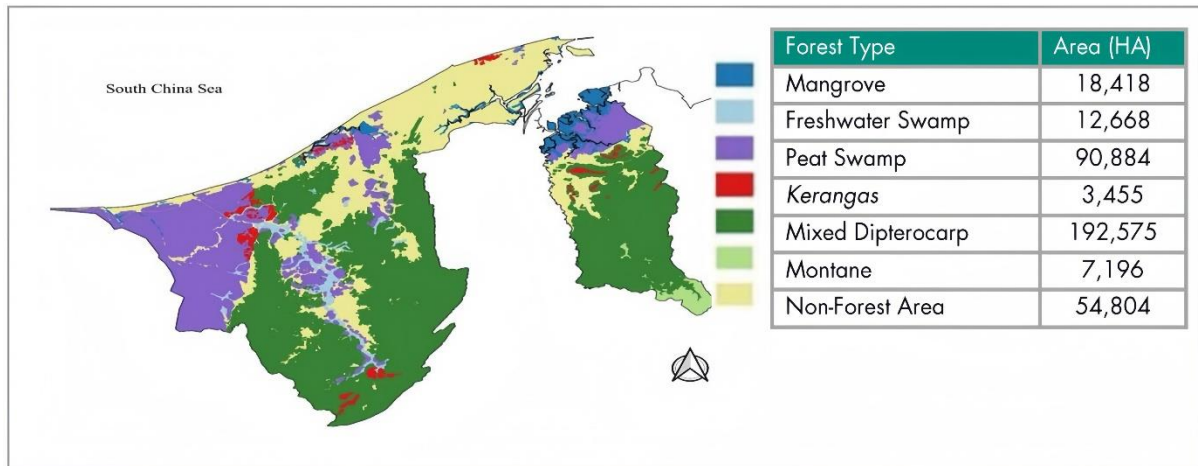


Figure 2. Brunei's Main Forest Types by Area (ha)



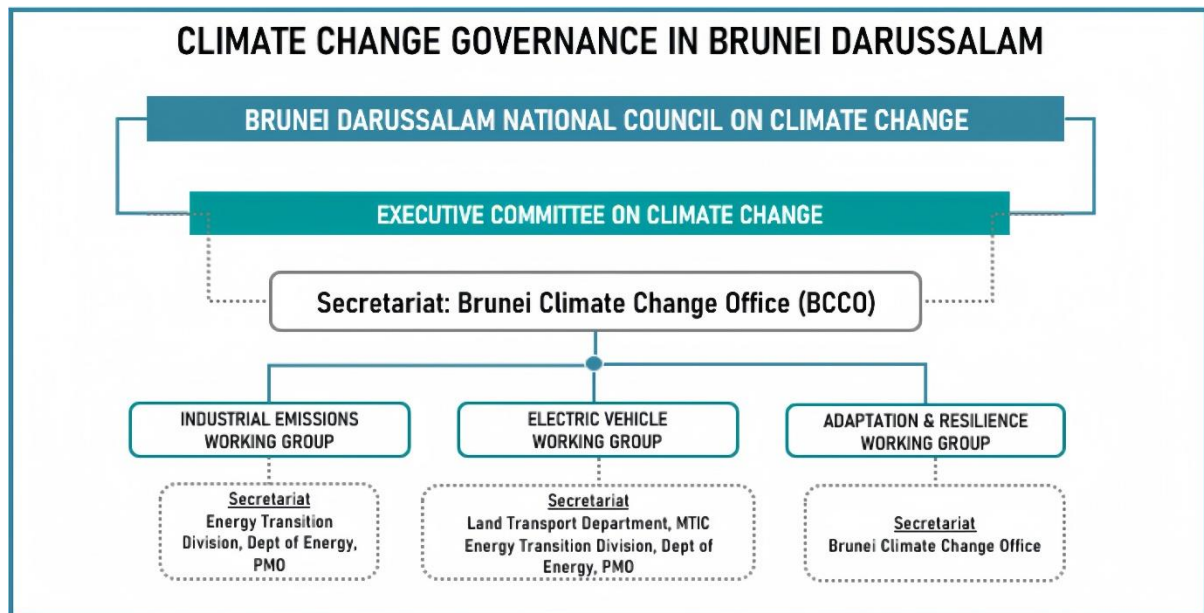
1.2 National Governance for Climate Change

1.2.1 National Lead Institutions

The governance structure includes the Brunei Darussalam National Council on Climate Change (BNCCC), which provides the highest level of strategic direction in addressing climate change. Co-chaired by the Minister of Finance and Economy II and the Minister of Development, the BNCCC's members include representatives from various ministries.

Supporting the BNCCC is the Executive Committee on Climate Change (ExComm), chaired by the Deputy Minister (Energy), Prime Minister's Office and consist of Permanent Secretaries, Chief Executive Officers (CEOs), and Managing Directors (MDs) from relevant public, private, and non- governmental organizations (NGOs). BCCO serves as secretariat for both BNCCC and the ExComm. The ExComm oversees the Industrial Emissions Working Group (IEWG), Electric Vehicle Working Group (EVWG), and Adaptation and Resilience Working Group (ARWG). Membership in these committees spans across government, non-government, and academic bodies, ensuring a multi-sectoral approach to climate change mitigation and adaptation. Any decisions taken at ExComm and other bodies require endorsement by the BNCCC.

Figure 3. Institutional Arrangement and Thematic Working Groups for Climate Change



1.2.2 Governance Structure

Climate change planning and implementation are led by climate change Lead Agencies, which consist of ministries designated to take primary responsibility for coordinating and implementing climate change policies, strategies, and actions within a country.

Figure 4. Coordinating Ministries and Agencies Responsible for Climate Actions

AREA	SECTOR	MINISTRIES/GOVERNMENT AGENCIES
Greenhouse Inventory	All IPCC Sectors	• Brunei Climate Change Office, Prime Minister's Office • Department of Agriculture and Agrifood, Ministry of Primary Resources and Tourism • Department of Electrical Services, Prime Minister's Office • Department of Energy, Prime Minister's Office • Department of Environment, Park and Recreation, Ministry of Development • Forestry Department, Ministry of Primary Resources and Tourism • Ministry of Transport and Infocommunications
Mitigation	Energy	• Department of Energy, Prime Minister's Office
	Industrial Processes	• Department of Energy, Prime Minister's Office
	Transport	• Department of Energy, Prime Minister's Office • Land Transport Department, Ministry of Transport and Infocommunications
	Forestry	• Forestry Department, Ministry of Primary Resources and Tourism
	Land-Use Change	• Department of Town and Country Planning, Ministry of Development
	Agriculture	• Department of Agriculture and Agrifood, Ministry of Primary Resources and Tourism
	Waste	• Department of Environment, Parks and Recreation, Ministry of Development
Adaptation	Infrastructure & Urban Resilience	• Authority on Building Control and Construction Industry, Ministry of Development • Department of Town and Country Planning, Ministry of Development
	Health & Livelihood	• Ministry of Health • National Disaster Management Centre, Ministry of Home Affairs
	Biodiversity & Environment	• Department of Environment, Parks and Recreation, Ministry of Development • Forestry Department, Ministry of Primary Resources and Tourism
	Agriculture & Food Security	• Department of Agriculture and Agrifood, Ministry of Primary Resources and Tourism • Fisheries Department, Ministry of Primary Resources and Tourism
	Marine Protection & Coastal Resilience	• Department of Drainage and Sewerage, Ministry of Development • Survey Department, Ministry of Development
	Water Resources	• Department of Drainage and Sewerage, Ministry of Development • Department of Water Services, Ministry of Development

Chapter 2. National GHG Inventory and Emissions Trends

2.1 Overview of the National GHG Inventory

As a signatory Party to the UNFCCC, Brunei is obligated to produce and regularly update its national greenhouse gas (GHG) according to the requirements in Decision 2/CP.17. This chapter provides an overview of Brunei's GHG emission levels, encompassing anthropogenic sources and removals by sinks, and the approaches used to estimate them. The reporting follows the accounting principles of Transparency, Accuracy, Consistency, Completeness, and Comparability (TACCC) as stated in Article 4.13 of the Paris Agreement.

The estimation of GHG emissions is categorized into four sectors: energy, industrial processes and product use (IPPU), agriculture, forestry and other land use (AFOLU), and waste. The geographic coverage of the GHG inventory is complete. It covers Brunei's entire territorial boundary.

The greenhouse gases covered in the inventory included the following:

- a) Carbon dioxide (CO₂)
- b) Methane (CH₄)
- c) Nitrous oxide (N₂O)

The preparation of Brunei's national GHG inventory is a coordinated effort led by the BCCO as the National Inventory Coordinator (NIC). The NIC oversees the entire process of developing the national GHG inventories, from data collection to reporting, ensuring timely and high-quality delivery that meets international standards. This involves applying appropriate methodologies, emission factors, and activity data using IPCC software. Outputs from the IPCC software, such as sectoral tables, key category analysis, uncertainty analysis, and reference vs sectoral approach, are documented and archived in the database.

From the ad hoc nature of GHG inventory reporting and undefined institutional and procedural arrangement prior to 2023, the national GHG inventory reporting system in Brunei has greatly improved with the launch of a Mandatory Reporting Directive on Greenhouse Gas in April 2023, requiring all facilities that emit and/or remove GHG—including government departments and private companies—to report their GHG emissions quarterly and annually starting in 2023. This directive aligns with Article 4, Paragraphs 13-14 of the Paris Agreement,

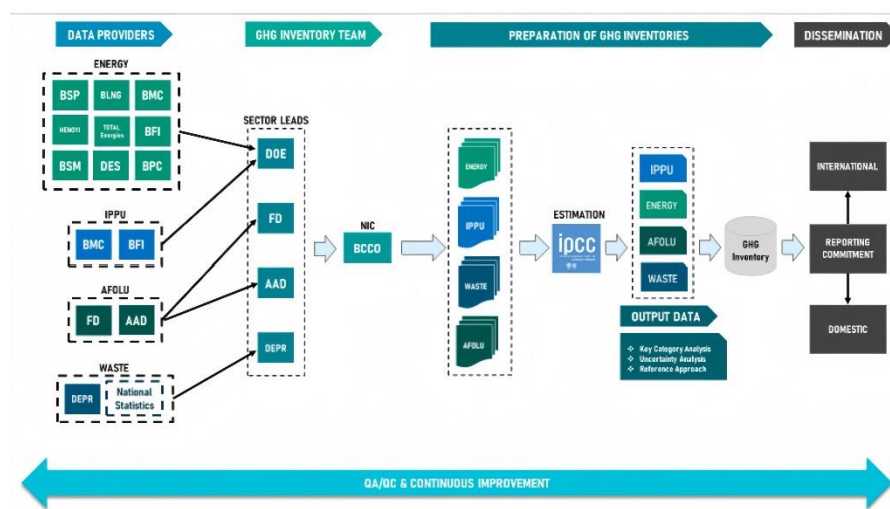
which emphasizes the need for transparency, accuracy, and consistency in accounting and tracking progress toward Nationally Determined Contributions (NDCs). By mandating comprehensive GHG reporting, Brunei takes an important step in fulfilling its commitment to provide reliable and transparent data for monitoring emissions and removals.

Requiring companies to submit emissions reports is key to maintaining a transparent and reliable carbon inventory, which depends on a robust measuring, reporting, and verification (MRV) system, as outlined in the Modalities, Procedures, and Guidelines (MPGs) of the Paris Agreement. To support this effort, a centralized online reporting platform is being developed to standardize data reporting and provide a user-friendly overview of greenhouse gas data.

Under the Directive, Brunei adopted a Whole-of-Nation approach towards national GHG inventory preparation, which leverage on sectoral pool of expertise. The respective Sector Leads for Energy, Industrial Processes and Product Use (IPPU), Agriculture, Land-Use, Land-Use Change and Forestry (LULUCF) and Waste sectors are responsible to consolidate GHG reports from all data providers and perform quality control and quality assurance activities, among others.

Data is primarily sourced from Government and private sectors and is submitted through reporting templates based on the 2006 IPCC Guidelines, tailored to specific needs. Sector Leads collect, compile, and consolidate this data, which undergoes initial quality checks by the NIC. Further validation, processing, and refinement are carried out as needed to ensure accuracy and reliability.

Figure 5. Brunei Darussalam's Data Row and Inventory Preparation Process



2.1.1 National GHG Reporting Methodology

Brunei's GHG Inventory was prepared in accordance with the requirements of the UNFCCC using IPCC guidelines, supplemented by 2019 IPCC Refinement and utilises the associated IPCC software. The methodology and dataset used for BTR improve on the previous inventories. Some new datasets were used and period recalculations were performed, mostly for the new inventory years.

Generally, Tier 1 IPCC methodology was applied to most sectors, except in cases where available national data allowed us to adopt a higher tier. The Tier 2 method was used for calculating waste disposal combines default parameters alongside reliable country-specific activity data for both current and historical waste disposal at Solid Waste Disposal Sites (SWDS) and Tier 3 approaches are implemented for fuel combustion in Petroleum Refining and Other Energy Industries, as well as for fugitive emissions from oil and natural gas. In the IPPU sector, a hybrid approach combining Tier 1 and Tier 3 methods is applied.

Brunei conducts Key Category Analysis (KCA) for 2022 through a level assessment using Approach 1 with the IPCC software, for all inventory categories, including and excluding the LULUCF sector.

2.1.2 Sectoral Emissions and Removals Trends

Brunei's total gross GHG emissions stood at 13.57 MtCO₂e (million tonnes CO₂ equivalent) in 2022. As illustrated in Figure 2.4, emissions have steadily rose over a decade, from 9.88 MT CO₂e in 2010 at an annual growth rate of 2.68%. The Energy sector has consistently been the most significant emission source since 2010, driven by activities in the oil and gas, transport, and electricity generation. In 2022, 97.2% of total national emissions came from the Energy sector, followed by Waste (1.54%), IPPU (0.96%), and AFOLU (0.26%). The emission spikes for Energy sector 2020 was due to the commissioning of Brunei's first coal-fired powerplant for industrial purposes. The trends for other sectors, remained largely consistent.

When the net emissions from LULUCF are excluded from the national totals, the overall emissions amounted to 9.11 MtCO₂e in 2022.

Figure 5. Trends of GHG Emissions and Removals, 2010-2022



2.2 LULUCF Emissions and Removals

The AFOLU Sector integrates agriculture, forestry and other land use emission and removal categories. This integration identifies that the underlying processes responsible for GHG emissions and removals, as well as the different forms of terrestrial carbon stocks, can occur across all types of land. This integration approach ensures consistency and completeness in the estimation and reporting of GHG emissions and removals (IPCC, 2006)

Land-use changes, such as deforestation, reforestation, and the conversion of land for agriculture or urban development, can significantly impact GHG emissions. However, Brunei is currently unable to estimate these emissions due to a lack of sufficient and reliable data on the different types of land use in the country, the specific activities taking place on the land, and the extent of land-use changes over time. There is currently no data available to track land-use conversion, making it challenging to accurately record changes for emission estimation. Areas under each land-use without conversion are reported for 2022 in the Figure 6.

Figure 6. Brunei Darussalam's Land-Use Management

IPCC		National Context		
Type of Land	IPCC Definition	Responsible Agency	Responsibility	Area (ha)
Forest land	Land that is primarily covered by forests and is used for forestry activities, including timber production, conservation, and habitat preservation. Forestland plays a crucial role in carbon sequestration, biodiversity conservation, and regulating the water cycle.	Forestry Department	Responsible for forest land management and monitoring changes such as deforestation or reforestation as per Brunei's Forest Act.	380,000
Cropland	Land used for growing crops, including cereals, vegetables, fruits, and other agricultural products. Cropland management practices can vary widely, from traditional farming to intensive agriculture.	DoAA	Responsible for all agricultural land and oversees its use for farming and related activities.	4,751.45
Grassland	Land that is primarily used for grazing livestock or left in its natural state as grasslands. Grassland management includes activities like grazing, hay production, and conservation.	N/A	Dependent upon land gazette.	157,392
Wetland	Brunei Darussalam's Wetland falls under the definition of Forest land category	Forestry Department	Responsible for forest land management and monitoring changes such as deforestation or reforestation as per Brunei's Forest Act.	-
Settlement	Land areas that are developed for residential and industrial infrastructure, including villages, towns and cities, road and transport networks.	Department of Town and Country Planning (TCP)	Regulates land development, including the conversion of forest land to non-forest uses such as agriculture or urban areas.	34,356.01
Total land area				576,500

Chapter 3. NDC Implementation Status and Tracking Information

3.1 NDC Overview and Mitigation Targets

3.1.1 National GHG Mitigation Target

In 2020, Brunei Darussalam submitted the Nationally Determined Contributions (NDC), under the Paris Agreement with a commitment to reduce emissions by 20 per cent by 2030, relative to 2015 Business-as-Usual (BAU) levels.

Brunei's contribution is considered in the context of other countries' mitigation actions, especially those of the Annex-I Parties of the UNFCCC. This aligns with Article 3.1 of the Convention/ which calls for climate action based on equity and common but differentiated responsibilities and capabilities. As a developing country, meeting its needs will require scaling up infrastructure and energy use. Brunei's commitments under the Convention and the Paris Agreement aim to ensure efficient growth that allows for development while contributing to mitigating GHG emissions.

Emissions are tracked in terms of absolute GHG. These emissions are compared against a Business as Usual (BAU) scenario, which represents the projected emissions trajectory in the absence of any additional mitigation measures or policy interventions, and integrated into the overall NDC target. This approach helps to quantify the impact of implemented actions, assess progress toward emission reduction targets, and highlight the deviation from the baseline trajectory.

Base year (2015) emission level: 11.6 Mt CO₂e

Business-As-Usual (2030) emission level: approximately 29.5 Mt CO₂e

Figure 7. Quantitive Information on Brunei's NDC

Target	GHG emissions by 20% relative to Business-As-Usual (BAU) levels by 2030 (Single Year Target)
Reference Points.	Reference indicator quantified based on national total GHG emissions in 2015. Emission level: 11.6 MtCO ₂ e Business as Usual: 2030, Emission level: 29.5 MtCO ₂ e
Implementation Timeline	1 January 2021 – 31 December 2030 (10-year period).
Gases Covered	Carbon dioxide (CO ₂), Methane (CH ₄) and Nitrous oxide (N ₂ O).
Sectors Covered	Industry, transport, power management, AFOLU and waste
Alignment with Paris Agreement paragraphs 31 (c) ¹⁵ and (d) ¹⁶ of decision 1/CP.21	Assessment considered for all categories of anthropogenic emissions and removals included.

3.1.2 AFOLU Targets

Not specified.

3.2 Summary of NDC Progress and Achievement

3.2.1 AFOLU Unconditional Target

Not specified.

3.2.2 AFOLU Conditional Target

Not specified.

3.3 AFOLU Mitigation Policies, Measures, and Plans

Brunei Darussalam intends to achieve its emissions targets through the implementation of 10 strategic approaches outlined in the Brunei Darussalam National Climate Change Policy (BNCCP). The 10 strategies are comprised of 6 mitigation strategies, 3 enabling strategies, and 1 adaptation strategy. The 6 strategies listed in Figure 8 form the core of BNCCP mitigation measures. The figure below classifies the policies and measures in terms of the four IPCC reporting categories: Energy, AFOLU, IPPU and Waste.

Figure 8. BNCCP Mitigation Strategies, 2020-2035

Increase Forest Carbon Sink	This strategy seeks to increase Brunei Darussalam's forest carbon sink through afforestation and reforestation programmes.	Plant 500,000 trees by 2035. Increase forest cover not less than 55% of total land area.	Forestry Department, MPRT	AFOLU
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PROJECT	National Forest Resources Inventory (NFRl) Project				
SECTORS AFFECTED	GASES AFFECTED	STATUS	IMPLEMENTATION TIMELINE	IMPLEMENTATION AGENCIES	TYPE OF INSTRUMENTS
AFOLU/ LULUCF	CO ₂	On-going	2023-2025	Forestry Department, MPRT	Regulatory
DESCRIPTION & OBJECTIVES	The project involves preparing a national forest inventory for the entire national estate forests, with a primary focus on the carbon inventory of the Belait Peat Swamp Forest. The inventory from 1984, conducted by Anderson Marsden, along with the Forest Management Plan, will be updated, validated, and enhanced for multi-purpose use by the Forestry Department. The objectives are to determine forest carbon stocks and changes in carbon storage, establishing baseline data for forest carbon projects and reporting to the National GHG Inventory.				
ACTION PLAN	The project will ensure progress according to schedule, verify the obtained data through a third party, and conduct further studies and analyses of the data to assess the feasibility of the forest carbon project.				
EST. OUTCOME	Update Forest Resources Inventory to improve the estimation of carbon sink calculations using IPCC measurements, upgrading from Tier 1 to Tier 2/3, for all forest types in Brunei.				
GHG REDUCTION	Depending on the data obtained from the project, which is expected to be completed by April 2025.				
PROGRESS INDICATORS	Quality of data.				
CURRENT PROGRESS	The study of Peat Swamp Forests is complete, while studies on other forest types are ongoing. Results for all seven forest types are expected to be completed by April 2025.				
CHALLENGES	Data integration issues, including the challenge of combining data from various sources (e.g., remote sensing and ground surveys), can affect consistency. Given the considerable time gap since 1984, conducting an inventory project requires extensive effort, utilizing both manual methods and remote sensing technologies. Accessibility challenges arise because some Continuous Forest Inventory (CFI) plots and peat mapping areas are located in remote areas.				
MITIGATING ACTIONS	Hire a third-party verifier. Conduct a workshop to disseminate knowledge on updating the forest resources inventory and calculating carbon.				

PROJECT	Planting 500,000 Trees by 2035.				
SECTORS AFFECTED	GASES AFFECTED	STATUS	IMPLEMENTATION TIMELINE	IMPLEMENTATION AGENCIES	TYPE OF INSTRUMENTS
AFOLU/ LULUCF	CO ₂	On-going	2020-2035	Forestry Department, MPRT	Regulatory
DESCRIPTION & OBJECTIVES	Increase Brunei's carbon sink through afforestation and reforestation programmes with a target of planting 500,000 new trees by 2035.				
ACTION PLAN	The target is to plant 35,700 trees annually, which will be achieved through the following actions: • The Forestry Department will plant at least 2,000 trees each year. • Each ministry will plant at least 2,000 trees annually (totaling 26,000) under the <i>Protokol Hi/au</i> initiative. • Additional greening projects under the NDP.				
EST. OUTCOME	Increase carbon sequestration to mitigate climate change. Enhance biodiversity to support local ecosystems.				
GHG REDUCTION	N/A				
PROGRESS INDICATORS	Number of trees planted				
CURRENT PROGRESS	1 83,876 trees planted under this initiative as of October 2024.				
CHALLENGES	The project faces challenges such as changing weather patterns through increased temperatures, prolonged dry seasons, and excessive rainfall can impact plant survival and disrupt planting schedules; resource constraints, such as those for maintenance and seedling supply, further limit the project's effectiveness.				
MITIGATING ACTIONS	The project will collaborate with relevant government agencies to address land allocation issues for reforestation and afforestation initiatives, allocate an annual government budget specifically for these initiatives, and involve local communities in planting activities to enhance engagement and support. To optimize planting success, schedules will be adjusted based on real-time weather data and forecasts. This adaptive approach will help prevent planting during extreme weather. Additionally, the project will bring together government agencies, the private sector, local communities, and volunteers to participate in planting, maintenance, and monitoring activities, reducing labor costs and building long-term community support for the project.				

3.4 Sectoral Summary of NDC Implementation (Emissions/Removals)

Not specified.

3.5 Paris Agreement Article 6 and Use of ITMOs

3.5.1 Background and Developments

Not specified.

3.5.2 Illustrative Cases

Not specified.

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Chapter 4. Means of Implementation: Finance, Technology, Capacity

4.1 Needs for Implementation(4.1.1 Financial Support Needs, 4.1.2 Technology Development and Transfer Needs, 4.1.3 Capacity-building Needs)

Figure 9. Key Constraints and Gaps, and Support Required

Sector	Key Constraints and Gaps	Status Proposed Solutions	International Support Required		
			Finance	Technical/ Technology Support	Capacity Building
AFOLU (Agriculture)	Regenerative Agriculture: Willingness of farmers to participate in this project. Price of compost varies depending on the waste products used.	- Do trial in small plots. - Provide subsidies for compost. - Develop a standard for ideal compost fit for use.	Yes	Yes	Yes
AFOLU (Agriculture)	Rice: Limited sustainable methods of rice farming.	Rainwater harvesting, implementation of AWD, improving soil pH to improve nutrient uptake.	Yes	Yes	Yes
Adaptation and Resilience					
Adaptation	Fragmented and unreliable data required led to uncertainties in cohesively inform effective nation-wide climate adaptation and resilient strategies.	- Financial support to receive technological equipment and expertise for data collection and monitoring. - Capacity building programs and trainings for data analysis and improved coordination of activities.	1. Provide and/or improve data collection and monitoring systems e.g., satellite imagery, drones, early warning systems and Internet of Things (IoT) sensors, especially for remote and data-scarce areas. 2. Technical support to establish a centralised data repository to obtain the best available and accurate climate science data. 3. Training and knowledge-sharing on analysing different data sources, as well as aid in formulating integrated and multi-sectoral solutions.		
	Absence of knowledge and expertise in monitoring, reviewing, verifying and evaluating progress and/or outcomes of adaptation strategies.	Access to capacity building programs and technical expertise.		Workshops and trainings in evaluating both short- and long-term impacts of adaptation strategies, including the social, environmental and economic aspects.	

Sector	Key Constraints and Gaps	Status Proposed Solutions	International Support Required		
			Finance	Technical/ Technology Support	Capacity Building
GHG Inventory Preparation					
GHG Inventory	The lack of country-specific GHG emission factors (Tier 2 and 3) results in poor estimation of GHG emissions across all relevant sectors due to the absence of credible data and time series data.	- Increase Capacity Building programs specifically designed for GHG Inventory preparations - Enhance efforts to provide accessibility to technical tools/facilities for preparing GHG inventories		1. More training on inventory preparation, quality assurance and control procedures. 2. Technical expertise for hands on training to local staff. 3. Demonstration programs on certification of facilities and individuals 4. Technical equipment to prepare GHG inventory	
Emission Projections (All Sectors)	Improving the capacity to use models and tools for emission and mitigation scenarios. Training on Simulation and Modelling: Best available models and tools particularly on Long-range Energy Alternatives Planning (LEAP), Cropwat and SimClim, LoClim, Water Evaluation and Planning (WEAP) etc. (Capacity building and financial support).	-		1. Training on specific software and tools commonly used in emissions projections, including their application and limitations. 2. Hands-on training with the tools and software commonly used for emissions projections, including data input, scenario analysis, and result interpretation. 3. Techniques for managing uncertainties in projections and understanding their impact on long-term climate strategies.	
Agriculture					
AFOLU (Agriculture)	Livestock: Challenges associated with manure as landfills in terms of tracking and categorization.	Develop and implement standardized reporting frameworks for manure management practices.		System to improve monitoring.	Creation of guidelines.
AFOLU (Agriculture)	Crop: Land degradation and soil health	High-efficiency irrigation equipment, introducing precision farming tools, and knowledge on sustainable farming techniques.	Yes	Yes	Yes
AFOLU (Agriculture)	BGAP: Farmers acceptance and implementation	Increase awareness on importance of BGAP to farmers and the general public and increase collaborations with other agencies.	Yes	Yes	Yes

4.2 Support Received

4.2.1 Financial Support Received

'To date, Brunei has not received any financial or technology support.'

4.2.2 Technology Development and Transfer Received

'To date, Brunei has not received any financial or technology support.'

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4.2.3 Capacity-building Received

Figure 10. Capacity Building Support Received

Capacity Building Support	Year received	Source of Support
Pilot Project in Brunei Darussalam under the PASTI-JAIF Phase 3	2024	PASTI-JAIF, Overseas Environmental Cooperation Center, Japan (OECC)
6 th Greenhouse Gas Inventory System Training workshop	2024	United Nations Office for Sustainable Development (UNOSD), United Nation Economic and Social Commission for Asia and the Pacific (UNESCAP), UNFCCC, IPCC and Thailand's Department of Climate Change and Environment.
Hands-on training workshop on transitioning to the ETF, including the preparation of the Biennial Transparency Report for Asia Region	2024	National Climate Change Singapore (NCCS), United States Environmental Protection Agency (US EPA), NDC Partnership, UNFCCC
Singapore-U.S. Third Country Training Program (TCTP) Workshop on Environmental Drivers of Health Security	2024	US and ASEAN
Regional Training Workshop on NAP Development Process: Strengthening Capacity for Multi-Sectoral Involvement in the NAP Process in the Asia Pacific Region	2024	The Asian Institute of Technology, Regional Resource Centre for Asia and the Pacific, in collaboration with the United Nations Framework Convention on Climate Change, the Asia Pacific Adaptation Network (APAN), the United Nations Human Settlements Programme (UN-HABITAT), the Asian Disaster Preparedness Centre (ADPC) and the Ministry of Environment, Japan
The 21 st Workshop on Greenhouse Gas Inventories in Asia (WGIA21)	2024	National Institute for Environmental Studies (NIES) and Ministry of the Environment of Japan
Meeting on Developing Guideline for Reduction of Crop Burning in ASEAN	2024	ASEAN Secretariat
Regional Technical Meeting on Climate-Resilient Crop Insurance	2024	ASEAN Secretariat
2 nd Project Steering Committee (2 nd PSC) Meeting of Agri-Climate Risk Financing Project	2024	ASEAN Secretariat
Knowledge Exchange Meeting on Sustainable Agricultural Practices and Initiatives for Managing Crop Burning in ASEAN	2024	ASEAN Secretariat
Capacity Building Seminar on GHG emission M&R in Agriculture and Agrifood Sectors	2024	Brunei Climate Change Office
13 th UNFCCC-GIR-CASTT Training Programme on Greenhouse Gases	2023	UNFCCC, Partnership on Transparency in the Paris Agreement (PATPA) and Greenhouse Gas Inventory and Research Center (GIR)

Capacity Building Support	Year received	Source of Support
Singapore Cooperation Programme Training Award (SCPTA): Climate Change Adaptation and Mitigation Strategies	2023	Singapore Cooperation Programme
Regional Kick-Off Meeting for the Innovative Climate Risk Financing for the Agricultural Sector in the ASEAN Region" Project (Agri-Climate Risk Financing), and the 1st Project Steering Committee Meeting of Agri-Climate Risk Financing Project	2023	ASEAN Secretariat
Hardware Barrier and Bowtie Analyses Workshop 2.0	2023	Brunei Climate Change Office
Workshop on The Development of Action Plan For The Implementation Of The ASEAN Guidelines On Sustainable Agriculture	2023	ASEAN Secretariat
ASEAN Sub-Regional Training on ICT for Climate Resilient Development	2023	Asian and Pacific Training Centre for Information and Communication Technology for Development and United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
Consultation Workshop for Prioritizing Commodities of Interest for ASEAN-India Digitalization towards Climate-Smart Agriculture (CSA)	2023	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and ASEAN Secretariat
Opportunity Framing Workshop for National Adaptation Plan	2023	N/A
The Workshop Of The Project For Strengthening ASEAN Food Security Information System (AFSIS) Function For Emergency (SAFER)	2023	AFSIS Secretariat
GHG Management Institute Certification Of Proficiency In 501 IPCC: Introduction To Cross-Cutting Issues	2023	Greenhouse Gas Management Institute (GHGMI)
GHG Management Institute Certification Of Proficiency In 531 IPCC: Agriculture	2023	GHGMI
Hardware Barrier and Bowtie Analyses Workshop	2023	Brunei Climate Change Office
ASEAN Climate Resilience Network (ASEAN-CRN) - Transformation to Low Emissions and Resilient Agrifood System: A Knowledge Exchange Event and Climate Policy Negotiations Training	2022	National Research and Innovation Agency (BRIN), Republic of Indonesia and ASEAN Secretariat
ASEAN-Croplife Asia - PMH PHASE VI: Good Laboratory Practice (GLP), Data Acceptance and Protection of Regulatory Data	2022	Croplife Asia
BCG Symposium: APEC Best Practices for Green and Innovate MSMEs by Using the BCG Economy Model	2022	The Department of International Trade Promotion (DITP), Ministry of Commerce, Thailand
Training on Solar Farming as Mitigation Options for Climate Change Risks in Agriculture	2022	National Institute of Agriculture Extension Management (MANAGE) and Ministry of Agriculture and Farmers Welfare, Government of India
SCE POLICY DIALOGUE: Understanding the Bio-Circular-Green Economy Model for Strong, Balanced, Secure, Sustainable and Inclusive Growth in the Asia-Pacific	2022	N/A
Quality Assurance of the National Greenhouse Gas Inventory Management System and National Greenhouse Gas Inventories of Brunei Darussalam	2022	Ministry of Development, UNFCCC, FAO
ASEAN Climate Change and Energy Project (ACCEPT) Support for Brunei Darussalam on the National GHG Inventory	2022	ASEAN Centre for Energy (ACE)

Peer Review of Brunei Darussalam's 3 rd National Communication	2022	UNFCCC Reviewer
UNFCCC Online IPCC Guidelines Training Programme	2021	GHGMI
ASEAN workshop on Climate Smart Agricultural Practices (Virtual)	2021	Center for International Affairs, Walailak University
SEAMEO Climate Smart Agriculture Workshop, Adapting to a Changing World, Walailak University, The Kingdom of Thailand (Virtual)	2021	Center for International Affairs, Walailak University

Capacity Building Support	Year received	Source of Support
SEAMEO Climate Smart Agriculture Workshop, Adapting to A Changing World, Walailak University, The Kingdom of Thailand (Virtual)	2021	Walailak University, Thailand, Southeast Asian Ministers of Education Organization Regional Centre for STEM Education (SEAMEO STEM-ED), United Nations Educational, Scientific, and Cultural Organization (UNESCO)
PASTI-JAIF Phase 1 Project on Development of Facility/Company level Measurement, Reporting and Verification (MRV) to support carbon pricing in ASEAN Member States (AMS)	2020	PASTI-JAIF, OECC
ASEAN Climate Leadership Programme	2020	N/A

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