

## CONCEPT NOTE

## Bhutan Climate Fund

## 1. Strategic Context

**Bhutan is vulnerable to climate change.** Bhutan is a landlocked country with a rugged terrain, and is exposed to significant climate risks from the melting of glacial lakes, floods, and landslides. Erratic rainfall threatens the economy, since hydropower accounts for 40 percent of exports, and rain-fed agriculture provides employment to nearly 60 percent of the population.

**Bhutan's Nationally Determined Contribution (NDC)<sup>1</sup> to the Paris Agreement on climate change indicates its intent to remain carbon neutral.** This implies that its carbon emissions, estimated at 2.2 million tons of CO<sub>2</sub>, will not exceed total carbon sequestration by their forests. Furthermore, the Constitution of Bhutan mandates that the country maintain a minimum of 60 percent of the total land under forest cover. Bhutan's NDC indicates the possibility of offsetting 22.4 million tCO<sub>2</sub>e through the export of hydroelectricity by 2025.

**The land use change and forestry (LUCF) sectors form greenhouse gas (GHG) sinks for Bhutan.** 72.3 percent of Bhutan's total land area consists of forests, providing carbon sequestration of an estimated 6.3 million tons of carbon dioxide (tCO<sub>2</sub>e).<sup>2</sup> In its Second National Communication to UNFCCC in 2000, the National Environment Commission (NEC) of the Royal Government of Bhutan (RGOB), total GHG emissions excluding LUCF were 1.56 million tCO<sub>2</sub>e. LUCF formed a GHG sink of nearly 6.3 million tCO<sub>2</sub>e.<sup>3</sup> Therefore, the forestry sector is key to Bhutan's achievement of its NDC goals.

**Bhutan has several existing initiatives that cover various developmental priorities and ecological challenges.** RGOB has partnered with several international organizations<sup>4</sup> to receive technical assistance, execute specific projects, and establish trust funds, including:

- **Bhutan Trust Fund for Environmental Conservation (BT FEC):** BT FEC was established in 1992 as a collaborative venture between RGOB, the United Nations Development Programme (UNDP), and World Wildlife Fund (WWF). The World Bank also supports BT FEC through the Global Environment Facility (GEF). It functions as an autonomous, conservation grantmaking organization focusing on three thematic areas – biodiversity conservation, ecosystem management, and social well-being.
- **Bhutan for Life:** In 2017, RGOB and WWF established Bhutan for Life, with funding from the Green Climate Fund (GCF) and the GEF, among others, to maintain and manage the country's

<sup>1</sup> "Bhutan's Nationally Determined Contributions (NDCs)" (2015). United Nations Framework Convention on Climate Change (UNFCCC). <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Bhutan/1/Bhutan-INDC-20150930.pdf>

<sup>2</sup> "State of Climate Change Report for the RNR Sector." Ministry of Agriculture and Forests, Royal Government of Bhutan, 2016. [http://www.moaf.gov.bt/download/Publications/State-of-the-Climate-Change-Report-2016\\_FINAL.pdf](http://www.moaf.gov.bt/download/Publications/State-of-the-Climate-Change-Report-2016_FINAL.pdf).

<sup>3</sup> Bhutan Statistical Yearbook (2017). National Statistics Bureau, Royal Government of Bhutan. pp.144. <http://www.nsb.gov.bt/publication/files/pub10ss7733bo.pdf>

<sup>4</sup> These include Danish International Development Agency (DANIDA), the Food and Agriculture Organization (FAO), the Green Climate Fund (GCF), the Global Environment Facility (GEF), the International Fund for Agriculture Development (IFAD), the United Nations Development Program (UNDP), United Nations Industrial Development Organization (UNIDO), the World Bank Group, World Wildlife Fund (WWF), as well as the Governments of Australia, Austria, Denmark, Finland, India, Japan, Netherlands, Norway, and Switzerland.

biodiversity, foster healthy ecosystems, maintain Bhutan's forest cover, support communities living in protected areas, and strengthen enforcement and management of protected areas. While these funds cover Bhutan's conservation goals, they do not fully cover its NDC goals.

**There is a need to bridge the financial gap for conservation.** Given Bhutan's ambitious NDC goals to remain carbon neutral, and its growing development needs, the country needs to plan for other sources of funding that can reduce dependence on traditional donor finance. Bhutan needs additional financing for its development and conservation efforts, and to diversify its economy through the development of new low carbon infrastructure sectors that can contribute to ecologically balanced growth for the country. Through the Strategic Program for Climate Resilience (SPCR) with the World Bank, Bhutan has identified immediate investment need for over US\$55 million. The establishment of a climate fund to monetize emission offsets generated by Bhutan, and deploy the revenues as investments in low carbon infrastructure, could address this challenge.

## 2. Bhutan's Hydropower Sector

**Bhutan's economy benefits from hydropower.** Bhutan's GDP growth over the last seven years has averaged at over 6 percent, primarily driven by the hydropower sector.<sup>5</sup> According to Bhutan's Power System Master Plan, the country's hydropower potential is estimated at about 30,000 MW, of which 23,760 MW has been identified as techno-economically feasible.<sup>6,7</sup> Hydropower exports contribute 40 percent to government revenues, and 25 percent of the country's GDP.

**The Department of Hydropower and Power Systems (DHPS) is the key agency for the development of hydropower in Bhutan.** The Ministry of Economic Affairs (MEA) is the focal point for the energy sector. DHPS, under MEA, is responsible for policy, planning, and large hydropower projects, while the Department for Renewables and Small Hydro focuses on projects below 25 MW. The Bhutan Electricity Authority is the regulator, and the Bhutan Power Corporation is responsible for all transmission and distribution in the country. Upon commissioning, projects are handed over by DHPS to Druk Green Power Company (DGPC), the state-owned power generation company. DGPC is responsible for directly signing concession agreements with private sector parties. RGOB also established a Hydropower Committee in May 2017 to develop a strategic paper on the way forward. Hydropower projects in Bhutan pay a royalty of 12 percent for the first 12 years, and 18 percent thereafter.

**Bhutan generated nearly 8,000 GWh of electricity in 2016.** Bhutan has six operational large hydro plants with a total installed capacity of 1,106 MW. Of the total generation, approximately 2,000 GWh is used domestically.<sup>8</sup> Over 5,700 GWh, or 72 percent of total electricity generation, was exported.<sup>9,10</sup> Nine new

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<sup>5</sup> Eleventh Five Year Plan (2013-2018). Gross National Happiness Commission, Royal Government of Bhutan.

<http://www.gnhc.gov.bt/en/wp-content/uploads/2017/05/Eleventh-Five-Year-Plan-samdrupjongkhar-Thromde.pdf>

<sup>6</sup> International Hydropower Association (2015). Bhutan Country Profile. <https://www.hydropower.org/country-profiles/bhutan>

<sup>7</sup> The project on Power System Master Plan 2040 was initiated in 2017 by JICA to revise the plan by 2019.

<sup>8</sup> Over 70 percent of domestic power consumption is by industries. Bhutan's per capita power consumption is 2600 kWh, which is lower than the average for developed countries. Data from National Statistics Program – Bhutan (2014).

[http://www.unosd.org/content/documents/14816\\_Final%20Bhutan%20PPTx.pdf](http://www.unosd.org/content/documents/14816_Final%20Bhutan%20PPTx.pdf)

<sup>9</sup> Bhutan Statistical Yearbook (2017). *National Statistics Bureau, Royal Government of Bhutan*. pp.144.

<http://www.nsb.gov.bt/publication/files/pub10ss7733bo.pdf>

<sup>10</sup> Over 70 percent of domestic power consumption is by industries. Bhutan's per capita power consumption is 2600 kWh, which is lower than the average for developed countries. Data from National Statistics Program – Bhutan (2014).

[http://www.unosd.org/content/documents/14816\\_Final%20Bhutan%20PPTx.pdf](http://www.unosd.org/content/documents/14816_Final%20Bhutan%20PPTx.pdf)

Detailed Project Reports (DPRs) for hydropower projects with a combined capacity of 7,000 MW are under consideration by DHPS. It is expected that Bhutan will achieve 15,000 MW of installed capacity, or 50 percent of its total hydropower potential, by 2030.<sup>11</sup>

**Commercial viability is an important consideration for the establishment of hydropower projects.** Bhutan's hydropower projects have been developed as run-of-the-river (ROR) projects, although peaking storage for 3-4 hours is available. This leads to seasonal variations in power generation, reducing its economic value. Projects typically receive long-term tariffs negotiated between RGOB and the Government of India (GOI). At present, tariffs are about INR 2.55/kWh, without distinction between baseload and peak demand. In contrast, spot power market prices vary significantly at various times of day. Revenue from the sale of emission reductions through the Clean Development Mechanism (CDM) is an important commercial aspect for project developers, and is factored into the financial models.

**CDM registration can be costly and time consuming.** Dagachhu (CDM reference number 2746)<sup>12</sup> and Punatshangchhu-I (CDM reference number 9210)<sup>13</sup> are registered under CDM. According to DHPS and DGPC, the other hydro projects under implementation are in the process of registration. However, the relatively lengthy process, the involvement of multiple stakeholders, and the need for in-house capacity to carry out CDM registration leads to high transaction costs. Furthermore, the reduction in demand for Certified Emission Reductions (CERs) under the CDM has reduced the benefits to the projects from undertaking the registration process.

## 2.1 Inter-Governmental Agreement with India

**Bhutan and India agreed on cooperation in hydropower in 2006.** An umbrella Inter-Governmental Agreement (IGA) was signed between RGOB and GOI for the development of 10,000 MW of hydropower. Thus far, 4,000 MW has been implemented. Several potential projects were assessed, and corresponding DPRs were completed. The IGA allows for projects to be established on joint venture (JV) mode or concession mode.

**The IGA provides for the two countries to cooperate for the generation of emission reductions.** Article 8 of the IGA states that "The two countries shall cooperate in the development of renewable energy and both countries shall support each other to develop projects under the Clean Development Mechanism of the Kyoto Protocol, using India's carbon emission baseline, and any other international mechanisms that may come into force to encourage renewable energy."

**Projects covered under the IGA have similar clauses on the development and sharing of revenues from the sale of emission reductions.** Article 18 of the Punatshangchhu I and II projects, Mengdechhu, and Kholongchhu refer to developing the project under the Clean Development Mechanism or any other international mechanisms that may come into force in order to mitigate the institutional, technological, geological, and financial risks associated with the projects. The ownership and proceeds of the CERs or any other credits would be shared by the two governments.

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<sup>11</sup> Information based on conversations with DHPS

<sup>12</sup> See <https://cdm.unfccc.int/Projects/DB/DNV-CUK1247228633.76/view>. Crediting period would need to be renewed prior to March 2021.

<sup>13</sup> See <https://cdm.unfccc.int/Projects/DB/BVQI1356508539.12/view>. Unlike Dagachhu, the Punatshangchhu-I does not have a letter of approval from the Government of India. The implication of the delay with the commissioning date and the start of the original crediting period in 2015 with a fixed crediting period of 10 year will also need to be reviewed.

## 2.2 Carbon offset revenues from [eligible hydro projects](#)

**Bhutan is expected to generate over 5,300 GWh of saleable hydroelectricity each year from projects covered under the IGA.**<sup>14</sup> Based on data on hydro projects from the Department of Hydropower and Power Systems (DHPS), Ministry of Economic Affairs, RGOB, Bhutan’s annual hydroelectricity exports from projects under the Bhutan-India Inter-Governmental Agreement for Hydropower Development are estimated to be 5,335 GWh by 2022 (see Table 1 below). New hydropower projects in addition to those listed below are expected to be developed under the IGA.

*Table 1: Estimated Emission Offsets from Hydropower Exports to India*

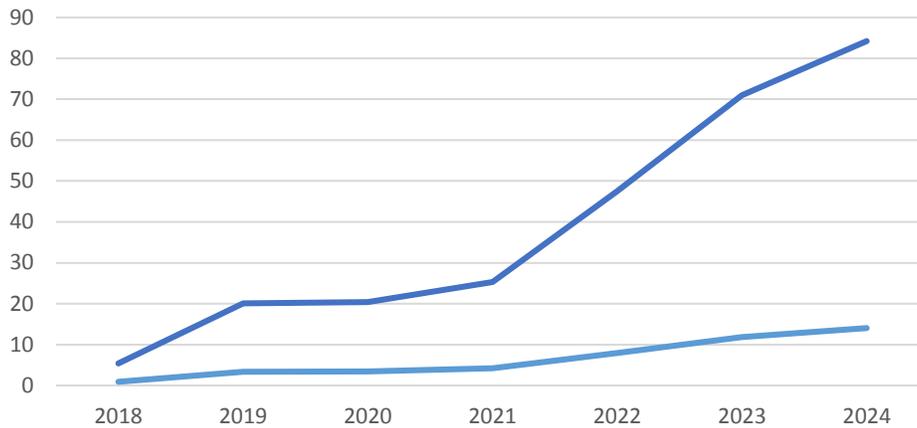
Project/Year	2018	2019	2020	2021	2022	2023	2024
Dagachhu	450000	450000	450000	450000	450000	450000	450000
Mangdechhu HEP	449442	2519410	2519410	2519410	2519410	2519410	2519410
Nikachhu HEP		378033	423328	423328	423328	423328	423328
Punatsangchhu-II HEP				822209	3655804	3655804	3655804
Punatsangchhu-I HEP					880575	4774843	4774843
Kholongchhu HEP							2212482
Total Emission Offsets (in mtCO <sub>2e</sub> )	1	3	3	4	8	12	14
Potential Revenues (at \$5/tCO <sub>2e</sub> ) in \$m	4	17	17	21	40	59	70
Cumulative Revenues	4	21	38	59	99	158	228

Source: Department of Hydropower & Power Systems, Ministry of Economic Affairs, Royal Government of Bhutan; grid emission factor from the Central Electricity Authority of India

**The existing pipeline of projects are expected to generate a total of 42 million tCO<sub>2e</sub> by 2024.** Depending on the price of carbon and sharing arrangements for these emission reductions between Bhutan and India, the projects could potentially generate several hundred million dollars of carbon revenues through the sale of the carbon offsets to countries and private sector entities with obligations to reduce emissions to address climate change. For example, assuming a conservative price of US\$5/tCO<sub>2e</sub>, the total emission reductions from the identified hydropower projects in Table 1 could generate US\$228 million in cumulative carbon revenues between 2018-24.

<sup>14</sup> Calculations have been made on the basis of hydropower projects covered under the Bhutan-India Inter-Governmental Agreement for Hydropower Development, viz. Kholongchhu Hydroelectric Project, Nikachhu Hydropower Project, Mangdechhu Hydropower Project, and Punatshangchhu Hydroelectric (I and II). The calculations use the methodology applied for the 114MW Dagachhu Hydropower Project in Bhutan (see [link](#)), which is the first cross-border clean development project under the Kyoto Protocol.

Figure 1: Hydro Power Emission Offsets and cumulative revenues for Bhutan (in millions of tCO<sub>2</sub>e and million US\$)



Source: Information on proposed hydro capacity additions from the Ministry of Economic Affairs, Royal Government of Bhutan; grid emission factor of 0.889 per MW from the Central Electricity Authority of India (2016)

**The Paris Agreement introduced a bottom-up approach to addressing climate change.** In a shift from the Kyoto protocol, the Paris Agreement introduced a new approach to tackling climate change through individual country commitments made under their Nationally Determined Contributions (NDCs). Article 6 of the Paris Agreement provides for voluntary cooperation among countries for the implementation of NDCs to allow for higher climate ambition, promote sustainable development, and promote environmental integrity. Such cooperation is expected to include the development and use of carbon markets and carbon pricing. Article 6.2 is expected to offer flexibility for bilateral or plurilateral arrangements between countries, which could offer Bhutan an opportunity to sell emission reductions from its hydropower projects.

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Annex I provides more details on the Paris Agreement and the World Bank's work.

### 3. Bhutan Climate Fund

#### 3.1 World Bank's Engagement with RGOB

Since January 2018, the Ministry of Finance (MOF), the NEC Secretariat, the MEA, and the Gross National Happiness Commission (GNHC) of RGOB have been discussing the possibility of developing and piloting a Bhutan Climate Fund (BCF) with the World Bank, to help monetize mitigation outcomes from hydropower exports. The proposed activities include:

- **Design of a BCF:** Design and capitalization of a US\$50 million<sup>15</sup> BCF to develop and pilot a framework for monetizing emission reductions generated by hydropower projects.
- **Engagement on implementation framework:** The World Bank will engage with RGOB to (a) support the creation of a policy and regulatory framework to support generation, monitoring, reporting, and verification of the emission reductions from mitigation projects included in the BCF; (b) define objectives and procedures for the use of BCF funds for the benefit of the hydropower projects and for adaptation, resilience, conservation activities, and other investments that contribute to Bhutan's green growth; and (c) facilitate the achievement of Bhutan's NDC goals.

The focus of BCF is expected to be hydropower due to the scale of projects and volume of emission reductions and methodological clarity for calculation of emission reductions. If successful, RGOB may consider replicating the model for other sources of renewable energy or other sectors in the future.

In May 2018, a follow-up mission to Bhutan was held. A joint meeting with MOF, NEC, DHPS, and GNHC was convened to secure buy-in for the proposed BCF and to agree on next steps. The World Bank team also held meetings individually with the four agencies and with DGPC. During the mission wrap-up, it was agreed that the World Bank would submit a detailed concept note addressing the concerns raised, and that NEC would lead the process of obtaining internal approval within RGOB to proceed with the design of the BCF. In this context, this note outlines the concept for the BCF.

#### 3.2 Concept and Objectives

The BCF is expected to be a US\$50 million fund, capitalized by international climate finance buyers (referred in this note as "BCF Participants"). The BCF would support the preparation of project design documents for emission reductions from hydropower projects under the IGA. These emission reductions may be held in the World Bank's Warehouse Facility, a common depository in which emission reductions from the World Bank's projects in its client countries would be held on behalf of the owner, until they can be transferred to a buyer.

The objectives of the BCF are to:

- Facilitate the monetization of Bhutan's net negative greenhouse gas emissions and carbon offsets;
- Increase the viability of hydropower projects in Bhutan by providing an additional revenue stream; and
- Support Government of Bhutan in meeting its NDC commitments while meeting its overall development goals.

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<sup>15</sup> Since the BCF is expected to be established on a pilot basis, the initial capitalization is estimated at US\$50 million. If successful, the facility could potentially be scaled up.

### 3.3 Proposed Functions of the BCF

This section outlines indicative functions that the BCF is expected to perform. However, these functions and procedures are expected to be finalized during the detailed design of the BCF.

- **Project identification:** The pipeline of hydropower projects covered under the IGA between Bhutan and India will be reviewed periodically to identify projects that can be supported by the BCF.
- **Due diligence:** The operating manual for the BCF will specify any additional due diligence procedures for projects for risk assessment based on consultation and agreement with the BCF Participants.
- **Engage with relevant stakeholders:** The BCF will engage with the project developer (and, as relevant, DGPC and DHPS) and relevant RGOB authorities to initiate preparation of emission reductions.
- **Preparation of Project Design Document (PDD):** The BCF will coordinate with DGPC and its in-house capacity, or identify a panel of consultants to apply the CDM ACM0002 methodology<sup>16</sup> with appropriate baseline development and data to create project design documents for each of the projects. The BCF, in coordination with DGPC and will also ensure the establishment monitoring, reporting, and verification (MRV) systems for emission reductions generated by the project.
- **Review PDD:** The project design documents developed will be reviewed by a panel of experts. This review will be necessary if the agreement between the BCF and the project companies (and/or DGPC) is to proceed with creation of carbon offsets without completing CDM Registration based on agreements with the BCF Participants.
- **Warehousing:** The emission reductions will be deposited in the Warehouse Facility to be developed by the World Bank. The Warehouse Facility will hold the emission reductions on behalf of the project company or any other such entity that RGOB may assign the title of the carbon offset asset.
- **Agreements:** BCF will consult with relevant RGOB authorities for the necessary legal agreements (such as a [letter of intent](#) to sell emissions reduction credits) to authorize the sale of emission reductions.
- **Facilitate sale of emission reductions:** The BCF will liaise with the buyers for the signing of an [Emissions Reduction Purchase Agreement](#), or ERPA for the sale of the warehoused emission reductions to BCF participants. The BCF will also ensure execution of the ERPA as per the terms agreed.
- **NDC (Nationally Determined Contribution) accounting:** Support the country government to ensure that the international transfer of mitigation outcomes under the ERPAs meets Paris Agreement requirements in terms of transparency, double counting avoidance, environmental integrity, and corresponding adjustment (see [link](#)).
- **Implementation support:** Provide support to project sponsor for project implementation, as appropriate.
- **Supervision:** Monitoring, reporting and verification (MRV) requirements of project in order to generate the mitigation outcome consistent with the emerging national and international regulatory requirements.

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<sup>16</sup> The ACM0002 methodology was developed under the CDM to quantify the emission reductions from grid-connected electricity generation from renewable sources. The full methodology can be accessed at: <https://cdm.unfccc.int/methodologies/view?ref=ACM0002>

### 3.4 Design and Capitalization of the BCF

Upon receiving clearance from RGOB to proceed with the design and capitalization of the BCF, the World Bank will work jointly with relevant RGOB stakeholders to establish the BCF and raise funding for it. This would involve:

- **Conceptual design of the fund:** This would include developing detailed functions to be performed by the BCF, organizational framework, duration, and type of fund (open-ended or closed).
- **Legal structure of the fund:** Detailed legal analysis for the identification of a suitable legal structure for the establishment of the BCF. Based on discussions with stakeholders in Bhutan, two structures are under consideration – a World Bank Multi-Donor Trust Fund, or a Fund established under Royal Charter. Descriptions of the two legal structures are provided in Annex II.
- **Internal consultations:** The Bank will facilitate RGOB-led consultations on the sale of emission reductions and sharing of revenues. The terms of sharing of emission reductions under the IGA between Bhutan and India as well as project documents for the hydropower projects would need to be reviewed. In addition, RGOB would be responsible for holding internal consultations on the ownership of emission reductions and the allocation of carbon revenues.
- **Use of funds:** The stakeholder consultations are expected to result in a decision on the use of funds through the BCF. Bhutan may use these funds to enhance returns on hydropower investments, channelize the funds towards conservation activities, invest the carbon revenues in green infrastructure, or a combination of these.<sup>17</sup>
- **Development of operations manual:** Detailed standard operating procedures will be developed to specify the functions, procedures, and operations of the BCF.
- **Governance arrangements:** Governance arrangements for implementing, managing, and supervising the BCF will be developed. This will include the development of detailed terms of reference (TORs) for any committees or advisory or supervisory Boards established for the BCF.
- **Risk analysis:** A detailed risk assessment will be conducted to identify potential risks and mitigation strategies, including screening criteria for projects to be considered.
- **Fundraising:** The World Bank and RGOB will jointly develop a fundraising strategy and carry out efforts to capitalize the BCF.
- **Terms of engagement:** Detailed terms of engagement with contributors to the BCF will be developed through a consultative process. This is expected to include clarification on issues such as allocation of regulatory risk associated with climate markets (e.g. whether the buyer would assume the risk of compliance grade of the asset).

### 3.5 Role of the World Bank

The Bank stands ready to support RGOB as appropriate to meet technical and capacity gaps for the establishment of the Bhutan Climate Fund. This section proposes indicative roles and responsibilities that the Bank could potentially provide. However, the final decision on the Bank's role will be decided through further discussion with RGOB during the design of the Fund.

#### Preparation

In the preparation phase, the World Bank proposes to provide support for the design and capitalization of the Fund. This would include working jointly with RGOB on:

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<sup>17</sup> Investment in adaptation or green infrastructure would allow Bhutan to “brand” its emission reductions as being “double green” in the fundraising stage.

- Conceptual design of the Fund, including strategic objectives and alignment with RGOB’s overall activities, as well as policy and analytical inputs based on the World Bank’s climate change engagements in the region;
- Identification of a suitable legal structure for the Fund through detailed analysis of the available options;
- Development of an operations manual for the Fund laying out rules and procedures;
- Development of capitalization strategy and identification of potential contributors to the Fund;
- Joint fundraising with RGOB to capitalize the Fund;
- Periodic assessment of the project pipeline for the sale of emission reductions during the preparation phase; and
- Institutional capacity building on methodologies and operationalization of the Fund.

## Implementation

The services provided by the Bank in the implementation phase will depend on the legal structure chosen for the establishment of the Bhutan Climate Fund. In the case of a Bank-Executed Trust Fund, the role of the World Bank is agreed with the contributors and implementing entity before it is established. The Bank always performs a banking role, including receiving, holding, investing, disbursing, and reporting on funds. Beyond that, the Bank may play varying administrative, financial, or operational roles such as activity identification, preparation, execution, appraisal, and supervision. It may also provide administrative services including program management.

In the case of a Royal Charter Fund, the Bank will provide handholding support during implementation for the operationalization of the Fund. In addition, the Bank will provide advice and supervise the functioning of the Fund to ensure that it meets the contributors’ objectives.

### 3.6 Potential Contributors/ Buyers in the Fund

#### Avoiding diversion of Overseas Development Aid (ODA)

Fundraising efforts will be carried out under the principle of raising new funding for Bhutan, without diverting other ODA resources for Bhutan. The DAC defines ODA as those flows to countries and territories on the DAC list of ODA Recipients and to multilateral development institutions which are:

1. provided by official agencies, including state and local governments, or by their executive agencies; and
2. each transaction of which:
  - a. is administered with the promotion of the economic development and welfare of developing countries as its main objective; and
  - b. is concessional in character and conveys a grant element of at least 25 percent (calculated at a rate of discount of 10 percent).

Key boundaries of the definition include military aid, peacekeeping, nuclear energy, cultural programs, and greenhouse gas emissions. Purchase of carbon credits is excluded, and the value of any Certified Emission Reductions obtained by a donor from an ODA-funded project would have to be deducted from ODA.<sup>18</sup>

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<sup>18</sup> “Measuring Aid: 50 years of DAC Statistics – 1961-2011” (2011). *OECD*. pp.11. Retrieved from <https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/MeasuringAid50yearsDACStats.pdf>

Therefore, funding contributed to the Bhutan Climate Fund for the purchase of emission reductions would be separate from development assistance provided to Bhutan. Specifically, the proposed fund will not be capitalized using ODA from OECD governments. Furthermore, the proposed Fund will not take contributions from multilateral sources such as the Global Environment Facility (GEF) or the Green Climate Fund (GCF).

### Potential sources of funding

Demand for mitigation outcomes generated by Bhutan through the export of hydropower to India may arise from multiple sources such as institutions that expect to have a compliance requirement for emission reductions in the future, including governments seeking to meet their NDC targets through the purchase of emission reductions. In the past, buyers of emission reductions from, and contributors to, the World Bank carbon funds have included:

- **Governments and public-sector institutions** such as Denmark, European Commission, Finland, Germany, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, Luxemburg, Agence France de Developpement (AFD), Japanese International Cooperation Agency (JICA), Regional Governments of Brussels-Capital, Flemish and Walloon Regions;
- **Financial Institutions** such as CDC Climat, Daiwa Capital Markets, Deutsche Bank, Fortum, Mitsui & Co. Ltd., Nordjysk Elhandel, Swiss Re;
- **Electric utilities** such as Chubu Electric Power, Dong energy, Endesa Italia, Enel, e.on, Goteborg Energi, hc energia, Iberdrola, Norsk Hydro, Statkraft, Sumitomo Joint Electric Power Co., Tokyo Electric Power Company (Tepco);
- **Industries:** Aalborg Portland, Azuliber, Barbetti, BASF, Cementos Portland Valderrivas, Fujifilm, Iride Mercato, Italcementi Group, Japan Iron and Steel Federation, Maersk, Mitsubishi Corporation, Rautaruukki, Sumitomo Chemical;
- **Oil & Gas Companies** such as BP, CEPSA, Gas Natural, GDF Suez, Idemitsu, Japex, Nippon Oil, Repsol, StatOil; and
- **Others private sector entities** such as Eco-Carbone, ERG, Syngenta Foundation for Sustainable Agriculture, Suntory, The Nature Conservancy, Zero Emissions Platform.

### Coordination of fundraising efforts

Fundraising efforts be carried out in consultation with the GNHC and Ministry of Foreign Affairs, as relevant. The World Bank team recognizes that outreach to governments with which Bhutan has no existing bilateral relationship (such as the P5 countries) may require clearance from the Ministry of Foreign Affairs.

#### 4. Next Steps

- **June – August 2018:** During the mission held in May 2018, RGOB agreed to obtain internal approval for relevant authorities to proceed with the design and capitalization of the BCF. Upon receiving such approval, the World Bank would require a request letter from the Ministry of Finance to formally engage in providing advisory and analytical services to support Bhutan in the design and capitalization of the BCF.
- **August – December 2018:** During this period the World Bank will jointly develop the conceptual and legal design of the BCF with RGOB.
- **January – April 2019:** With necessary clearances from RGOB, the World Bank will initiate fundraising efforts for BCF in January 2019. In parallel, legal procedures for establishment of the BCF will be initiated.

- **June 2019:** Agreements with contributors are expected to be signed, and the fund is expected to become operational in June 2019.

## 5. Contact

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## Annex I

### Paris Agreement and the World Bank's global programmatic approach

**The Paris Agreement introduced a bottom-up approach to addressing climate change.** Unlike the Kyoto Protocol, the Paris Agreement focuses on addressing climate change through individual commitments made by countries under their NDCs. However, according to the UNEP Emission Gap 2017, the NDCs cover only one-third of the emission reductions needed to be on a least-cost pathway to stay below 2°C.

**Climate markets can help meet financing needs.** NDCs are focused on countries' growth and transition to low-carbon economies, and achieving these goals will require massive international and national sources of climate finance. With limited public and concessional finance available, there is a need to leverage private capital intelligently. Climate markets and carbon pricing offer the opportunity to increase the resources mobilized from the private sector and reduce the burden of NDC implementation.

**The rules and modalities for climate markets under the Paris Agreement are under negotiation.** Article 6 of the Paris Agreement provides for voluntary cooperation among countries for the implementation of NDCs to allow for higher climate ambition, promote sustainable development, and promote environmental integrity. Such cooperation is expected to include the development and use of carbon markets and carbon pricing. The modalities and procedures for Article 6 and other provisions of the Paris Agreement are still under negotiation by the Parties to the Paris Agreement, and it is expected that they will be agreed by COP24. However, countries need not wait for the development of a fully regulated international market to act on their NDCs.

**UNFCCC negotiations have begun to articulate the definition of a mitigation outcome (MO).**<sup>19</sup> MOs may be generated through different actions and activities relating to mitigation and adaptation. Mitigation outcomes may also result from policy actions such as subsidy reform or from carbon taxes. A non-exhaustive list of principles suggests that an MO represents a real, permanent, and verifiable result, and should be defined and used consistently between transferring and acquiring parties.

**Article 6.2 is expected to offer flexibility for bilateral or plurilateral arrangements between countries.** Article 6.2 is likely to rely on MOs that could be generated and transferred under a variety of mechanisms, procedures, and protocols. Such flexibility would allow for the innovation of first transactions and markets. Article 6.4, in contrast, is expected to be governed by Parties under a UNFCCC process, similar to the clean development mechanism under the Kyoto Protocol. Mitigation activities under this Article are therefore expected to have greater level of multilateral, regulatory supervision.

**The World Bank has initiated analytical work to kickstart the operationalization of Article 6.** As was the case for driving market mechanisms for the Kyoto Protocol, the World Bank can once again play a catalytic role in defining regulation, stimulating demand and supply, and supporting the establishment of core infrastructure that will be necessary for markets under the Paris Agreement. The objective is to produce analytical and technical outputs that enable new operations that apply Article 6 transactions in the WBG's client countries and shape the next generation of climate markets.

**Under the work program, the World Bank proposes to establish three complementary facilities.** First, the World Bank will establish an *Asset Development Facility* to quantify the emission reductions and

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<sup>19</sup> The Paris Agreement refers to a quantified GHG emission reduction as a "mitigation outcomes".

undertake monitoring, reporting, and verification for projects in its own lending portfolio. Second, the World Bank will establish a *Warehouse Facility*, to provide registry infrastructure that can hold emission reductions or MOs on behalf of the World Bank's client countries until a decision to use for national targets or sale is made. Third, the World Bank will establish a *Transaction Facility*, which would liaise with potential buyers of emission reductions and provide financial products to manage the risk of early participation in climate markets. Together, the three facilities can provide a range of services for operating in the next generation of climate markets, particularly creating the supply and demand for MOs. Through these activities, the World Bank intends to inform the development of a regulatory framework for Article 6 through learning-by-doing, and facilitate the development of common and efficient market infrastructure.

## Annex II

### Options for the Legal Structure of the Fund

There are two structures under which the Bhutan Climate Fund could be established:

1. World Bank managed Multi-Donor Trust Fund; or
2. Establishment of the Fund in Bhutan through Royal Charter.

While some of the aspects of the two options are described below, it is expected that the contributors to the Fund will be involved in the design and implementation aspects through the World Bank (as Trustee of the Fund) or through the governance structure defined in the Royal Charter.

#### WBG Managed Multi-Donor Trust Fund

Bank-Executed Trust Funds (BETFs) have been the means for setting up several World Bank carbon funds to date, including trust funds related to the Kyoto Protocol (see below).

*Figure 2: The World Bank's First Generation of Carbon Funds*



\*\* Unpublished

Typically, activities financed by the BETF are administered in accordance with the World Bank's policies and procedures. BETFs offer clarity on the roles and responsibilities of different stakeholders. The World Bank's experience in managing carbon funds, high credit standing of BETF, experience with financial management and procurement, and perception of the World Bank as a neutral trustee, could benefit the capitalization and operation of the Fund. Such a fund structure would also minimize reputational risks for potential donors since the World Bank's policies are followed in fund administration.

#### Legal Arrangements

A governance framework is usually established, outlining the ways in which Fund contributors' resources are pooled together and managed under the program, clearly defining the World Bank's role as Trustee,

roles and responsibilities of other stakeholders, and mechanisms through which funds are channeled. Standard legal agreements are drawn up with all Fund contributors, which specify governance procedures covering BETF management, operational and financial reporting, and the allocation and uses of funds. An Administration Agreement is signed between the World Bank and the Fund contributors, setting out the objectives expected to be achieved by the trust fund, and specifying the program of activities to be covered by the fund. Legal agreements are signed between the World Bank and the recipient(s) of funds from the BETF. Arbitration of disputes are to be carried out under International Law.

### **Operation and Administration**

All activities undertaken by the fund are governed and administered in accordance with the World Bank's Planning, Budgeting and Performance Management Manual, and its Administrative Manual. In other words, the World Bank's due diligence processes are undertaken for each project supported by the trust fund.

### **Financing**

BETFs have a minimum size threshold of US\$2 million. Funds received from Fund contributors may be held in cash or promissory notes. Funds are typically held in USD or in one of the World Bank's administrative currencies, i.e. EUR, GBP, or JPY. The World Bank provides regular financial reports to Contributors in the form of statements of receipts, disbursements, and fund balance for individual trust fund accounts through its Client Connection website. It also provides an annual Management Assertion Regarding Effectiveness of Internal Control Over Financial Reporting for Trust Fund Activities, together with an attestation from the external auditors.

### **Role of the World Bank**

The services provided by the World Bank for a trust fund are agreed with the Fund contributors and implementing entity before it is established. The World Bank always performs a banking role, including receiving, holding, investing, disbursing, and reporting on funds. Beyond that, it may play varying administrative, financial, or operational roles such as activity identification, preparation, execution, appraisal, and supervision. It may also provide administrative services including program management. BETFs operate on a principle of cost recovery for management and administration costs.

### **Procedure for Establishment**

The World Bank has established several carbon funds under the BETF mode, and procedures for establishment are streamlined. Activities for establishment of the trust fund would be initiated through a letter of request from the Ministry of Finance, RGOB. A concept note would be developed and approved internally by the World Bank, and fundraising activities would commence. In parallel, the World Bank will carry out due diligence processes and work with RGOB for the development of an Operations Manual. The Trust Fund Proposal would then be internally approved by the World Bank, legal agreements will be finalized, and supervision and reporting arrangements will be established.

When trust fund activities are completed, closure of the trust fund is initiated by the World Bank team, which prepares a completion report and evaluation of activities financed by the fund, including reporting on outputs and outcomes within 6 months of closure.

## Trust Fund established under Royal Charter

The Trust Fund may be established through Royal Charter, similar to BT FEC.<sup>20</sup> This structure offers flexibility in terms of in the fund structure, program of investments, and holding currency. However, there may be significant effort involved in defining suitable legal terms for a fund that involves the transfer of emission reductions to parties that contribute to the trust fund. The role of the World Bank may be discussed and agreed with RGOB in this case.

### Legal Arrangements

The Royal Charter serves as the equivalent of a trust deed that legally creates the fund and defines the fund's purposes; the Management Board's powers, duties, and decision-making rules; rules and procedures for investment; audit and reporting requirements; and dissolving of the fund. Detailed procedures are provided in the Operations Manual for the fund, which forms part of the trust fund agreement.

### Operation and Administration

Executive Orders are issued to define institutional arrangements. The Fund is typically governed by an Independent Board of Directors, potentially with independent oversight by an Investment Management Committee constituted of key stakeholders to advise the fund.

Disbursement conditions are specified in the Royal Charter. The Board of Trustees would periodically review the technical and financial performance of the executing entity, and upon confirmation of satisfactory performance and compliance, the Board will approve disbursement of funds.

### Procedure for Establishment

Upon Agreement on fund design, fundraising activities may be initiated. An Operations Manual will be developed, and the fund would be created through Royal Charter. Implementation of activities under the trust fund would be carried out as defined in the Charter.

## Summary

Parameter	BETF: Bank-Executed Trust Fund established to support the Bank's program	New legal entity under the laws of Bhutan by Royal Ordinance issued by His Majesty the King of Bhutan
Institutional arrangements	Follows the Bank's own procedures	Executive Orders to be issued for institutional arrangements
Fees	BETFs include a 17% fee on disbursements. Operates on principle of cost recovery.	Would be treated as a tax-exempt US charitable organization. May make gains from investment of funds.
Disbursement	For clearly defined projects that support the Bank's program. A specific investment program may be agreed with the donors/buyers. Each activity must be administered in accordance with the Bank's own policies and procedures	Disbursement conditions specified in Royal Charter. The Board of Trustees will periodically review the technical and financial performance of the executing entity, and upon confirmation of satisfactory performance and compliance, the Board will approve disbursement of funds.

<sup>20</sup> Royal Charter (1996) for BT FEC accessible at <http://ve.vhidvbyz.vesrv.com/sites/default/files/documents/legal-and-governance/royal-charter-btfec-1996-bhutan.pdf>

Agreements	Administration Agreement signed between Bank and donors/buyers. Grant Agreement signed between Bank and recipient of funds.	The Royal Charter serves as the equivalent of a trust deed that legally creates the fund and defines the fund's purposes; Management Board's powers, duties, and decision-making rules; rules and procedures for investment; tax exemption for income gains from investing assets; audit and reporting requirements; specifying what happens if the trust fund is dissolved. Detailed procedures provided in the Operations Manual for the fund (which forms part of the trust fund agreement).
Governance and supervision	Bank's review process	Independent Board of Directors, potentially with independent oversight by an Investment Management Committee constituted of key stakeholders to advise the fund.
Continuity of commitments in the form of government investment	Raises funding from donors/buyers based on agreements signed by trust funds. Funds may be held in cash or promissory notes	May be able to secure budgetary contribution from RGOB through mode of establishment
Area of Investment	Has to be specifically defined and agreed upfront. Would likely be restricted to Bhutan.	Can be flexible; as specified in Royal Charter
Currency	Typically held in USD	May be held in local currency or foreign currency depending on how the fund is structured
Arbitration	Under International Law	In designated location (can be within or outside Bhutan)
Procedure	Letter of request from MOF, Approval of concept note in Bank system, fundraising, due diligence including Operations Manual, submission of Trust Fund proposal, finalizing legal agreements, supervision and reporting	Agreement on fund design, fundraising, Operations Manual, creation of fund through Royal Charter, implementation as defined in Charter

### Scope of Legal Analysis during the Design Phase

The primary purpose of the exercise will be to consider the pros and cons of the two alternative approaches (i.e. the Royal Charter Fund approach and the BETF approach) to enable RGOB to determine the optimal choice for the design of the BCF. The following section outlines the aspects to be considered for the legal analysis. We welcome inputs from RGOB on other parameters to be taken into consideration.

- **Legal:** The nature of both the fund structures being considered here are atypical from the perspective of a private sector investor. However, to a certain category of investor they may be less unusual.

Therefore, the type of investor base being targeted for the purposes of raising funding may influence the choice of approach.

- The Royal Charter Fund approach is not well known outside a small circle of investors (e.g. WWF, GCF) who have already invested in conservation in Bhutan. It will be necessary to provide sufficient legal comfort and certainty to a completely new investor audience regarding this approach, including tax, governance, credit and sovereign risk under the laws of Bhutan. However, ultimately the Royal Charter Fund approach will enable investors to consider their investment in the BCF under the realms of private (as opposed to public) international law. This means that, subject to the provisions of Bhutanese law and the terms of the Royal Charter Fund legal instrument, legal recourse against the BCF may be possible, which will give significant comfort to an investor. It is important to understand not only the potential rights of legal recourse for investors, but also the dispute resolution procedures provided by Bhutanese law and the Royal Charter Fund legal instrument, and the legal status of any judgment/decision given.
- The WBG Trust Fund approach is more well-known than the Royal Charter Fund approach but involves a number of legal, policy and operational constraints tied to the World Bank's ability to play the role of a trustee to the BCF. Some of these legal constraints are associated with the existence of the World Bank as a multilateral development bank involving privileges and immunities that allow it to exist in the realms of public international law. The legal rights of private sector investors and their ability enforce those rights only exist under private international law. This means for private sector investors, their ability to enforce any rights against the World Bank are likely to be very limited. Although the success of the previous WBG Trust Funds suggest that investors are less concerned about the ability to bring legal actions, the structure adopted by the BCF for the monetization of emission reductions from hydropower projects may have an impact on that question.
- **Administrative (or Risk management factors):** This would involve examining and monitoring specific aspects to minimize unanticipated losses in an investment portfolio. This would include factors that affect investor choices such as:
  - **The role of the RGOB:** How will commercial risk be allocated between investors, including the RGOB? Will the RGOB have unilateral ability to reduce its level of funding or to terminate its participation commitment? If so, will there be an exit structure for investors ensuring a minimum reimbursement? Similarly, with the perception of risk generally high among investors, in the structure for the BCF, will RGOB offer short-term government interventions that would help mitigate risk?
  - **Expectations of the investors:** An investor's decision to invest in the BCF may be driven by key risk factors such as: the level of risk, the promised financial return, the reputation of the service provider, and government involvement. Different classes of investors may prioritize some risk factors over others.
- **Indirect investment challenges:** The ease with which investors can have oversight, transparency or influence associated with the activities of the BCF will be a material consideration to the commercial attractiveness of the fund to investors as they try to ascertain how to manage their investment risk. This will have to be weighed against the commensurate willingness of the RGOB to allow the investors to have such access. The potential nature of the governance arrangements of the BCF, how decisions regarding investments are made by the BCF, and the ability for investors to track the success of the investment decisions, etc., under each of the approaches, will need to be compared. Where multiple

layers of investors and agents are involved in the BCF, potential opportunities for misalignment of interests arise. The role of governance of the BCF whether via the Board of Directors for the BCF, any project steering committee, and the existence of oversight bodies in each of the two approaches would be a factor that would influence the choices by investors.

- **Practical factors:** The structure of the BCF, and whether it has the requisite skills to monetize the emission reductions in a timely manner to allow the greatest value to investors would be an important consideration. Past experience of private sector investors in carbon as an asset class has highlighted poor return on investment caused by (i) changes to market demand and prices triggered by policy change, and (ii) the lack of access to risk management tools (e.g. price risk hedging) by the fund, which were often caused by structural flaws in the fund itself (for example, because the capital raised was earmarked for investment only and not for use as collateral to support risk management positions).
- **Additional Considerations:** The legal team will seek to better understand whether RGOB can freely assign its share of the rights to the emission reductions from hydropower projects to the BCF under the Inter-Governmental Agreement or whether there are any restrictions that could influence the structure of the BCF. It will also assess whether disputes or events related to the Inter-Governmental Agreement can impede or impact the performance of the BCF; for example, if there is a disagreement under the Inter-Governmental Agreement over ownership rights of the emission reductions, how investor rights in the BCF would be impacted, and which of the two approaches would facilitate a solution.