

# TECHNICAL ASSESSMENT OF CLIMATE FINANCE IN THE LEAST DEVELOPED COUNTRIES IN ASIA

ANNEX TO THE LEAST DEVELOPED COUNTRIES IN ASIA  
CLIMATE FINANCE ACCESS AND MOBILIZATION STRATEGY







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# Abbreviations and acronyms

ADB	Asian Development Bank
AF	Adaptation Fund
AFOLU	agriculture, forestry, and other land use
ASEAN	Association of Southeast Asian Nations
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BDT	Taka
BTFC	Bhutan Trust Fund for Environmental Conservation
BUR	biennial update report
CBIT	Capacity-building Initiative for Transparency
CCCA	Cambodia Climate Change Alliance
CIF	Climate Investment Funds
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
COVID-19	coronavirus disease 2019
CPEIR	Climate Public Expenditure and Institutional Review
DAC	Development Assistance Committee of the Organisation for Economic Co-operation and Development
ECP	environment, climate change and poverty
EIB	European Investment Bank
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
GDP	gross domestic product
GEF	Global Environment Facility
GGGI	Global Green Growth Institute
GHG	greenhouse gas
GIZ	German Agency for International Cooperation
IBRD	International Bank for Reconstruction and Development

IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
LDCF	Least Developed Countries Fund
LDCs-Asia	least developed countries in Asia
LUCF	land-use change and forestry
MDB	multilateral development bank
NAP	national adaptation plan
NAPA	national adaptation programme of action
NBF	Needs-based Climate Finance
NC	national communication
NDA	national designated authority
NDC	nationally determined contribution
OECD	Organisation for Economic Co-operation and Development
PKSF	Palli Karma-Sahayak Foundation
PPCR	Pilot Program for Climate Resilience
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
SCCF	Special Climate Change Fund
SME	small and medium-sized enterprises
STAR	System for Transparent Allocation of Resources
TAP	technology action plan
TNA	technology needs assessment
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

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# Executive summary

**In 2017, COP 23, in its decision pertaining to long-term climate finance,<sup>1</sup> requested the UNFCCC secretariat to explore ways and means to assist developing country Parties in assessing their climate finance needs and priorities, in a country-driven manner, including technological and capacity-building needs, and in translating these climate finance needs into action.**



In response to this mandate, the NBF project was launched to facilitate access to, and the mobilization of, climate finance for the implementation of priority projects and programmes identified by developing country Parties in their key national policies, including NDCs and NAPs.

Bangladesh, Bhutan, Cambodia, the Lao People's Democratic Republic, Myanmar, Nepal and Timor-Leste, although geographically diverse all belong to the group of LDC and face similar financial, technological and capacity-related barriers to accessing and mobilizing climate finance.

The LDCs in Asia NBF project is being conducted under the leadership of the National Environment Commission of Bhutan and aims to facilitate access to, and mobilization of, climate finance and investments, in support of the needs to implement nationally determined contributions. The project builds on and complements existing climate finance work and helps to establish collaborations and harness networks.

The purpose of the technical assessment is to inform and thereby facilitate the development of a climate finance mobilization and access strategy for the LDCs in Asia, facilitate climate finance flows into the region for priority mitigation and adaptation activities. As an annex to the strategy, this document comprises Section II which contains information on the regional socioeconomic context, Section III covers emission profile, climate vulnerability and policy and regulatory environment, Section IV covers a detailed analysis of climate finance flows, and Section V presents climate finance needs and priorities.

International climate finance flows to the region totalled USD 13.9 billion between 2013 and 2018, of which USD 7.8 billion was for mitigation, USD 5.6 billion for adaptation and USD 0.55 billion for cross-cutting activities. Bangladesh received the most finance (USD 8.9 billion), followed by Nepal (USD 2.2 billion), Myanmar (USD 1.1 billion), Cambodia (USD 835 million), the Lao People's Democratic Republic (USD 498 million), Bhutan (USD 268 million) and Timor-Leste (USD 142 million).

The total volume of climate finance currently declared as needed by LDCs in Asia amounts to approximately USD 105 billion of which USD 45 billion is for adaptation.

Across the group of countries needs include (i) accessing international climate funds, (ii) building the capacity to conduct adaptation needs assessments, (iii) developing bankable projects and programmes and meeting donor requirements, (iv) involving the private sector through innovative financing mechanisms and (v) undertaking robust domestic climate finance planning and developing accounting procedures.

Considerable effort has been made to include the most up-to-date information available as at mid-2021. Owing to a lack of comprehensive data, means to report, measure and a standard approach for tracking and reporting, needs and climate finance, estimates contained herein are to be treated as initial and are subject to change.

<sup>1</sup> Decision 6/CP.23, para. 10.







# I. Introduction

## A. Mandate

1. The Conference of the Parties at its twenty-third session requested the secretariat, in collaboration with the operating entities of the Financial Mechanism, United Nations agencies and bilateral, regional and other multilateral channels, to explore ways and means to assist developing country Parties in assessing their needs and priorities, in a country-driven manner, including technological and capacity-building needs, and in translating climate finance needs into action.<sup>1</sup>

The secretariat was also requested, in previous decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, to support the Executive Board of the clean development mechanism in facilitating financing of projects.<sup>2</sup> In responding to these mandates collectively, a secretariat-wide initiative called the NBF project was launched in late 2017.

2. The project aims to facilitate access to, and mobilization of, climate finance and investments in supporting the needs identified by developing countries for the implementation of priority projects and programmes as outlined in their NDCs, NAPs and other relevant national policies and strategies. The project builds on, and complements, existing climate finance work under way and helps to establish collaborations, harness networks and avoid duplication.

3. The LDCs-Asia is a group of countries, comprising Bangladesh, Bhutan, Cambodia, Lao People's Democratic Republic, Myanmar, Nepal and Timor-Leste, selected for the purposes of the NBF project on the basis of their LDC status,<sup>3</sup> similar socioeconomic circumstances and demographics, and, importantly, similar climate change challenges and a shared purpose to access and mobilize scaled-up climate finance. The project is conducted under the leadership of the secretariat of the National Environment Commission, Bhutan.



## B. Aim

4. The objective of this technical assessment is to inform and thereby facilitate the development of a climate finance mobilization and access strategy for the LDCs-Asia group of countries.

5. The proposed of the strategy is to enhance access to, and the mobilization of, finance and to catalyse climate investment for the implementation of priority mitigation and adaptation actions. It shall be based on needs identified by the seven LDC-Asia countries, in accordance with goals outlined in their NAPs, NDCs, road maps for implementation of the 2030 Agenda for Sustainable Development and other relevant policies and strategies.

## C. Methodology

6. This document is a technical assessment of the climate finance, technology and capacity-building needs and priorities of LDCs-Asia countries including an overview of climate finance flows – domestic, regional and international into the region. The assessment is desk-based but has been complemented with inputs from stakeholders.

<sup>1</sup> Decision 6/CP.23, para. 10.

<sup>2</sup> Decisions 3/CMP.1, annex, paras 4(d) and 5(i), and 6/CMP.11, para 8.

<sup>3</sup> Least developed countries are low-income countries confronting severe structural impediments to sustainable development. They are highly vulnerable to economic and environmental shocks and have low levels of human assets. Source: <https://www.un.org/development/desa/dpad/least-developed-country-category.html>.



7. Data was sourced from the countries' declaration of their needs and priorities and the desk-based assessment was complemented with information provided by authorities, national, regional and international experts and other relevant stakeholders in workshops and direct communication.<sup>4</sup> The quantified data are expected to be lower-bound estimates. The main data sources included country submissions to the UNFCCC, such as BURs, GCF country programmes, NAPs, NAPAs, NCs, NDCs, and TNAs (see [table 1](#)).

8. Other sources included those of the WB, as well as regional, subregional and national country strategies by theme or by sector. Virtual consultations and two workshops (an inception and a pre-validation workshop)<sup>5</sup> were held to elucidate, validate and enhance the findings. The process was guided by the UNFCCC secretariat.

9. Bangladesh, Cambodia and Nepal have completed a UNDP Climate Public Expenditure and Institutional Review, which provides data on the amount of government climate-relevant expenditure. Bhutan has conducted a Public Environmental Expenditure Review, which draws data from its Public Expenditure Management System.

Domestic climate finance information was not available in the Lao People's Democratic Republic, Myanmar and Timor-Leste.

10. Information for tracking international public climate finance flows from bilateral and multilateral contributions to developing countries was publicly available in the OECD Creditor Reporting System database, which is considered as the most comprehensive source of this information. Sector classifications are based on the sectoral definitions set out in the OECD DAC database, with slight adjustments to ensure that the priority sectors of the countries are reflected. These adjustments include:

- (a) Combining energy policy, energy generation (renewable sources) and energy generation (non-renewable sources) into one collective 'energy' sector;
- (b) Extracting waste management and disposal from the water supply and sanitation sectoral classification and making 'waste' a stand-alone sector;
- (c) Extracting flood prevention and control and biodiversity from general environment protection and making each a stand-alone sector.

**Table 1**  
Overview of official country communications to UNFCCC by year of submission

	NDC	NAP	NAPA	NC1	NC2	NC3	TNA	TAP	BUR
Bangladesh	2020	—	2009	2002	2012—	2018	2012	2012	—
Bhutan	2021	—	2006	2000	2011	2021	2013	—	—
Cambodia	2020	—	2007	2002	2016	—	2013	2013	2020
Lao People's Democratic Republic	2015	—	2009	2000	2013	—	2017	2018	
Myanmar	2015	—	2012	2012	—	—	—	—	—
Nepal	2020	—	2010	2004	2015	—	—	—	—
Timor-Leste	2016	2021	2011	2014	2020	—	—	—	—

Source: UNFCCC.

<sup>4</sup> Up to March 2021.

<sup>5</sup> On 29 October 2020 an inception workshop provided the opportunity for countries to discuss and identify elements of the regional climate finance strategy. A pre-validation workshop presenting the draft technical assessment was held on 11 February 2021.

11. There is no internationally agreed definition of “climate finance”. In determining the amounts to be reported as climate finance, reporting entities rely on their own operational definitions, and differences can affect estimates of overall finance flows. Efforts to harmonize these definitions are ongoing. The core definition adopted by the International Development Finance Club, MDBs and OECD is generally in accordance with that suggested in the 2014 Biennial Assessment and Overview of Climate Finance Flows technical report:<sup>6</sup> “Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts”. This assessment aims to gather information on needs and flows under this working definition. It should be noted that Article 2, paragraph 1(c), of the Paris Agreement refers to finance flows that are “consistent with”, rather than aimed at, a pathway towards low-emission and climate-resilient development.<sup>7</sup>

12. Data with which to track private finance flows to climate-related investments were not available in countries’ reporting under the Convention. Some insight was gained from the GCF database, which provides information on project co-financiers where some of the co-financiers are private entities. No comprehensive data were available on the breakdown of investments by financial instrument for the region.



<sup>6</sup> <https://unfccc.int/topics/climate-finance/workstreams/transparency-of-support-ex-post/biennial-assessment-and-overview-of-climate-finance-flows/the-second-biennial-assessment-and-overview-of-climate-finance-flows-2014>.

<sup>7</sup> As noted in the 2018 Biennial Assessment and Overview of Climate Finance Flows technical report, available at <https://unfccc.int/BA-2018>.







## II. Regional context

### A. Socioeconomic context

#### 1. Economic sectors

13. The total GDP for LDCs-Asia was approximately USD 483 billion in 2020. Bangladesh had the highest GDP, with 67% of the region's GDP as well as a much stronger GDP growth over the last decade. The total per capita GDP for LDCs-Asia was USD 13,170 where Bhutan showed the highest USD 3,122 and Nepal the lowest USD 1,155 (see [table 2](#)).

Agriculture is the principal economic sector in LDCs-Asia and all the countries have high dependence on rain-fed, subsistence farming activities.

	GDP (USD million)	GDP growth (% change between 2010-2020)	GDP per capita (USD)
Bangladesh	324 239	2.4	1 969
Bhutan	2 409	−6.8	3 122
Cambodia	25 291	−3.1	1 513
Lao People's Democratic Republic	19 136	0.4	2 630
Myanmar	76 185	−10.0	1 400
Nepal	33 657	−2.1	1 155
Timor-Leste	1 821	−8.7	1 381
<b>LDCs-Asia total</b>	<b>482 738</b>		<b>13 170</b>

Source: WB Group. 2020.

14. Agriculture is the principal economic sector in LDCs-Asia and all the countries have high dependence on rain-fed, subsistence farming activities. Agriculture alone employs between 40 and 60% of the population and, together with forestry and fishing, contributes between 12 and 22% of GDP in the group (see [table 3](#) below). Increasing GDP will require stimulating development of industry and raising productivity in agriculture. In many LDCs, however, less use is made of fertilizers than

in developed countries because of lack of funds, and productivity languishes owing to low rates of irrigation.<sup>8</sup>

15. Tourism and related services are equally prominent sources of earnings for the majority of the countries. In Timor-Leste, tourism revenues were as high as 64% in 2018, and in Nepal and Cambodia tourism contributed nearly 30 and 25%, respectively, in 2019 (see [table 3](#)).

<sup>8</sup> Report of International Commission on Irrigation and Drainage Task Force for LDCs in Asia. 2008.

16. A range of other industries, including micro-, small- and medium-sized enterprises, also contribute to the economies in LDCs-Asia. These industries involve garments in Bangladesh, Cambodia, Myanmar, Nepal and Timor-Leste; hydropower in Bhutan and the Lao People's Democratic Republic; iron, steel and cement in Bangladesh, Bhutan and Cambodia; timber and wood products in Bhutan, Cambodia and the Lao People's Democratic Republic; mining in Cambodia and the Lao People's Democratic Republic; and other products, such as oil and gas, in Timor-Leste.

17. As part of the group of LDCs, these countries have been undergoing a process of industrialization, with a rising share of manufacturing in output and employment, and specialization in manufacturing exports, and have

experienced strong performance in terms of labour productivity growth, reduction of poverty levels and progress in social outcomes.<sup>9</sup>

18. The need for official development assistance has fallen in many LDCs as they gradually strengthen their fiscal space, however official development assistance remains a vital source of finance for the countries in the LDCs-Asia group as an additional resources.<sup>10</sup>

19. Over 109 million people live in LDCs-Asia countries. Of this, a small proportion of the population of LDCs-Asia live in urban areas, with the smallest proportion being 20%, for Nepal, and the highest 42%, for Bhutan. Between 2019 and 2020, the unemployment rate increased in all LDCs-Asia (see table 4).

**Table 3**  
**Agriculture and tourism**

	Agriculture, forestry, and fishing, value added % of GDP	Employment in agriculture % of total employment	International tourism, receipts % of total exports
Bangladesh	12.7	38	0.9
Bhutan	15.8	56	15.4
Cambodia	20.7	35	25.2
Lao People's Democratic Republic	15.2	61	13.9
Myanmar	22.2	49	14.3
Nepal	21.6	64	29.4
Timor-Leste	14.2	39	64.0

Source: WB Group. 2019.

<sup>9</sup> United Nations Conference on Trade and Development. 2020. *The Least Developed Countries Report 2020: Productive Capacities for the New Decade*. Available at <https://unctad.org/webflyer/least-developed-countries-report-2020>.

<sup>10</sup> ESCAP. 2014. *Financing Strategies for LDCs graduation in Asia and the Pacific: key sources, trends and prospects*.

**Table 4**  
**Population urban and unemployed**

	Population	Urban population % of total population 2020	Unemployment % of total labour force 2020
Bangladesh	771 612	38	5.3
Bhutan	16 718 971	42	3.7
Cambodia	7 275 556	24	0.3
Lao People's Democratic Republic	54 409 794	36	0.9
Myanmar	29 136 808	31	1.8
Nepal	1 318 442	21	4.4
Timor-Leste		31	5.1
<b>LDCs-Asia total</b>	<b>109 631 183</b>		

Source: WB Group. 2020.

## 2. Poverty and food security

20. The WB defines the extreme poverty rate as the percentage of a population living at or below USD 1.9 per day. For LDCs-Asia, the average percentage of population living at or below this threshold is around 10%, where Timor-Leste has the highest poverty indicator with 22% and Bhutan the lowest at 1.5% (see [table 5](#)).

21. The average LDCs-Asia infant mortality rate is approximately 30% and of these deaths, 25% are caused by communicable diseases and maternal, prenatal or nutritional conditions. In Cambodia, 44% of the population are exposed to moderate or severe food shortages likewise 32% of the population in Bangladesh and Nepal.

**Table 5**  
**Poverty and mortality rates and unemployment**

	Poverty headcount ratio at USD 1.9 a day % population	Infant mortality rate per 1 000 live births 2019
Bangladesh	14.3	26
Bhutan	1.5	24
Cambodia	—	23
Lao People's Democratic Republic	10	36
Myanmar	1.4	36
Nepal	15	26
Timor-Leste	22	38

Source: WB 2010–2020.



### 3. Banking and access to credit

22. Although commercial banks provide financial services such as domestic credit to the private sector in LDC-Asia it is low in comparison to other LDC countries. There have been signs of improvement in Timor-Leste where lending increased 10 times from 1.5% of GDP in 2002 to 15.8% in 2020 and in Cambodia domestic credit stood at 114 % percent of GDP cent by 2020 (see [table 6](#)).

23. Similarly the large small-scale farming sector in LDCs-Asia has poor access to seasonal credit or microfinance instead rely on informal sources such as relatives and acquaintances, usually free of charge, and individual moneylenders at high rates of interest. Most banks require collateral as a security for default and other official formalities, financial inclusion poses a barrier to access to finance for this large sector .

### 4. Ease of Doing Business

24. The WB ranking of 'Ease of Doing Business' measures the processes for business incorporation, obtaining a building permit, securing an electricity connection, transferring property, gaining access to credit, protecting minority investors, paying taxes, engaging in international trade, enforcing contracts and resolving insolvency. Countries are ranked against these indicators to estimate how easy it is to do business in their economies. All seven countries perform below average on this ranking index (see [table 7](#) below), with Bangladesh, Cambodia, the Lao People's Democratic Republic, Myanmar and Timor-Leste in the bottom 30% of ranked countries.

**Table 6**  
Domestic credit to private sector

	Domestic credit to private sector by banks % of GDP 2020
Bangladesh	45
Bhutan	69
Cambodia	114
Lao People's Democratic Republic	21 <sup>a</sup>
Myanmar	29
Nepal	88
Timor-Leste	16
<b>LDCs (UN classification)</b>	<b>32</b>
<b>World</b>	<b>98</b>

Source: WB Group. 2019.

<sup>a</sup> 2010.

**Table 7**  
The World Bank Ease of Doing Business ranking of the least developed countries in Asia

	Ranking in ease doing business (out of 190 countries)
Bangladesh	168
Bhutan	89
Cambodia	144
Lao People's Democratic Republic	154
Myanmar	165
Nepal	94
Timor-Leste	181

Source: WB Group. 2019.

## 5. Coronavirus disease 2019 crisis in the least developed countries

25. The Economic and Social Council of the United Nations in its periodic triennial review in 2018 of the LDC category recommended Bhutan for graduation from its LDC status in 2023. Bangladesh, the Lao People's Democratic Republic and Myanmar were found to be pre-eligible for graduation from their status through heightened performance under certain criteria such as per capita income and the human assets index. At the same time, Nepal and Timor-Leste, which were found to have met the graduation criteria, were not recommended for graduation owing to concerns about the sustainability of their development progress, and the Council deferred its decision to the 2021 review.<sup>11</sup>

26. The COVID-19 crisis has brought about adverse economic impacts and severely affected the process of growth and development of LDCs at large, representing a significant reversal of the economic and social progress achieved in recent years, including in terms of poverty and social outcomes.

27. According to the United Nations Conference on Trade and Development, between October 2019 and October 2020, the economic growth forecast for LDCs overall was revised sharply downward from 5 to -0.4%. This revision is expected to lead to a 2.6% reduction in per capita income in LDCs in 2020, with 43 out of 47 LDCs experiencing a fall in their average income levels.

28. The LDCs-Asia most dependent on the export of a limited range of products are the most vulnerable to foreign trade shocks and were strongly affected by the sharp fall in the volume and price of exported products. This pertains especially to exporters of fuels (e.g. Timor-Leste), garments (e.g. Bangladesh and Cambodia); and tourism services (e.g. Cambodia).



<sup>11</sup> <https://www.un.org/ldcportal/the-2018-triennial-review-of-the-ldc-category/>.







### III. Climate and environment context

#### A. Emissions profile

##### 1. Total greenhouse gas emissions

29. Countries belonging to the group LDCs-Asia contribute little to overall global GHG emissions. Based on emission data submitted between 2010 and 2016, they accounted for roughly 250,000 Gg of CO<sub>2</sub> emissions (see table 8 below).

30. Bangladesh has the highest GHG emissions among the LDCs-Asia. Bhutan and Myanmar, are climate neutral when LUCF is included, however Cambodia emissions from deforestation account for 80% of total GHG emissions. Similarly in Lao People's Democratic Republic, LUCF together with agriculture contributes to nearly 80% of total GHG emissions.

Countries belonging to the group LDCs-Asia contribute little to overall global GHG emissions.



**Table 8**  
Total greenhouse gas emissions for least developed countries in Asia, 2010–2016

	GHG emissions excluding LUCF (Gg CO <sub>2</sub> eq)	GHG emissions including LUCF (Gg CO <sub>2</sub> eq)
Bangladesh	144 093	152 269
Bhutan	2 183	–5 660
Cambodia	32 581	163 592
Lao People's Democratic Republic	15 007	24 100
Myanmar	38 369	–57 406
Nepal	16 016 <sup>a</sup>	31 998 <sup>b</sup>
Timor-Leste	1 276	14 823

Source: UNFCCC.

<sup>a</sup> Excludes emissions from Agriculture

<sup>b</sup> Includes emissions from Agriculture



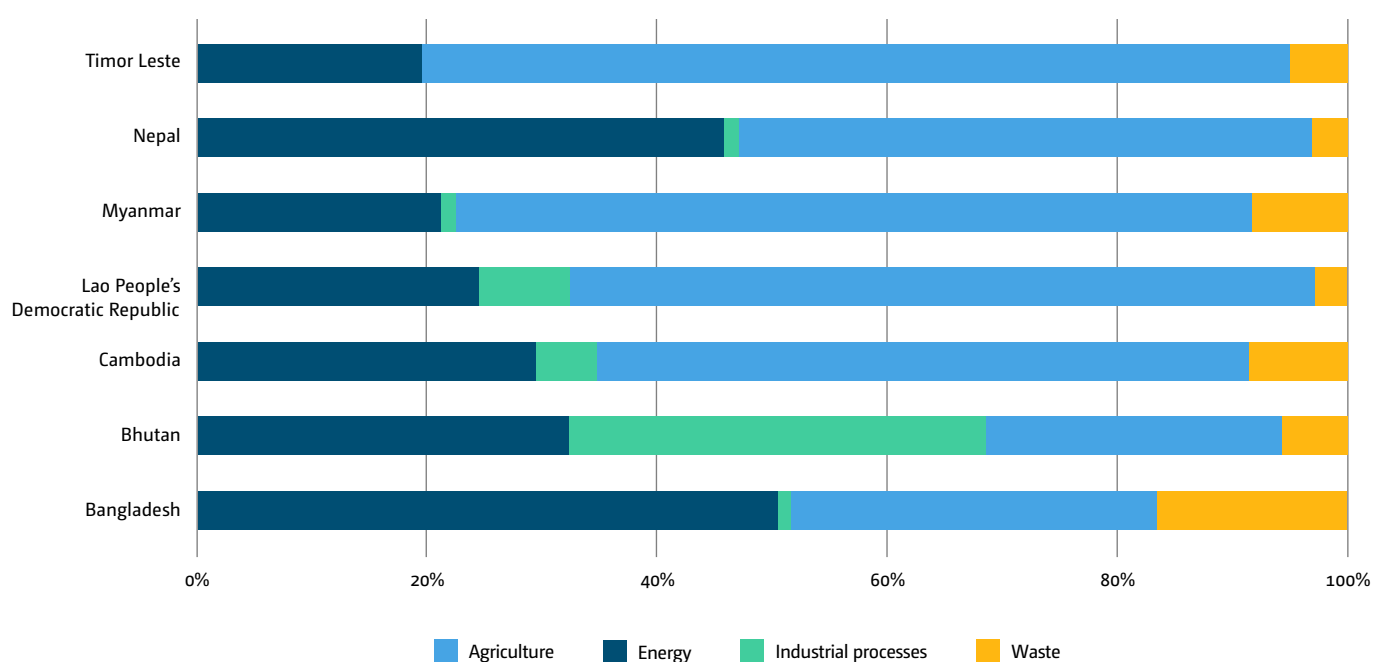
## 2. Sectoral emissions

31. The agricultural sector accounts for half the emissions in LDCs-Asia. Energy industries, manufacturing, transport and other energy-intensive sectors account for, on average, another 40% in the region (see [figure 1](#)).

## 3. Emissions by fuel source

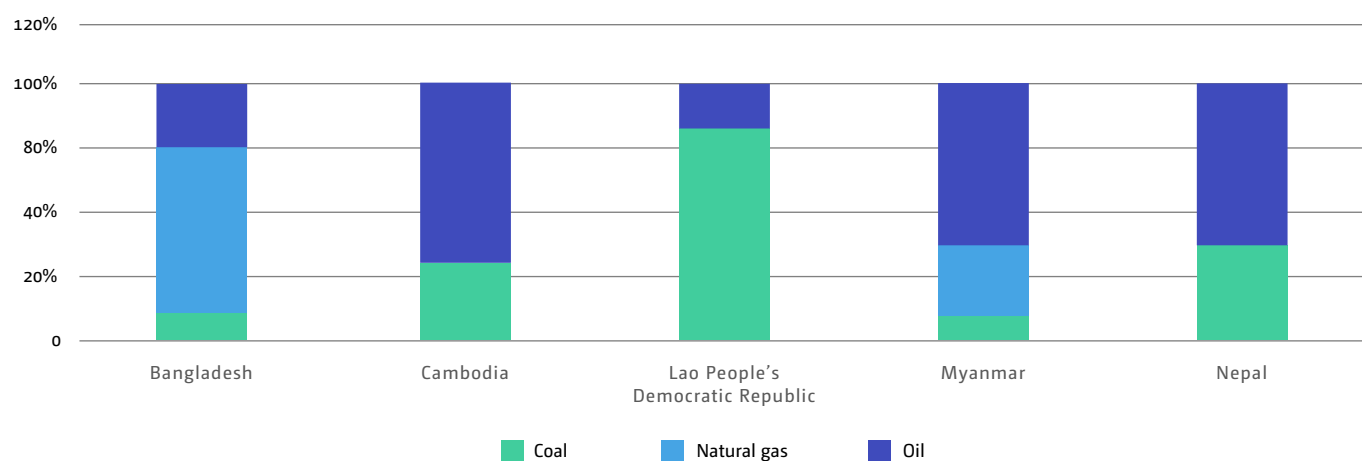
32. Coal, natural gas and oil are the major sources of fuel and corresponding emissions in the region, although their usage varies from country to country. In Cambodia and Nepal, oil consumption is responsible for 70% of emissions, followed by coal. In Bangladesh, natural gas is responsible for 70% of emissions. Bhutan and Timor-Leste use diesel as a fuel source (see [figure 2](#)).

**Figure 1**  
Sectoral emissions as a percentage of total emissions for the least developed countries in Asia



Source: UNFCCC.

**Figure 2**  
Carbon dioxide emissions by fuel source

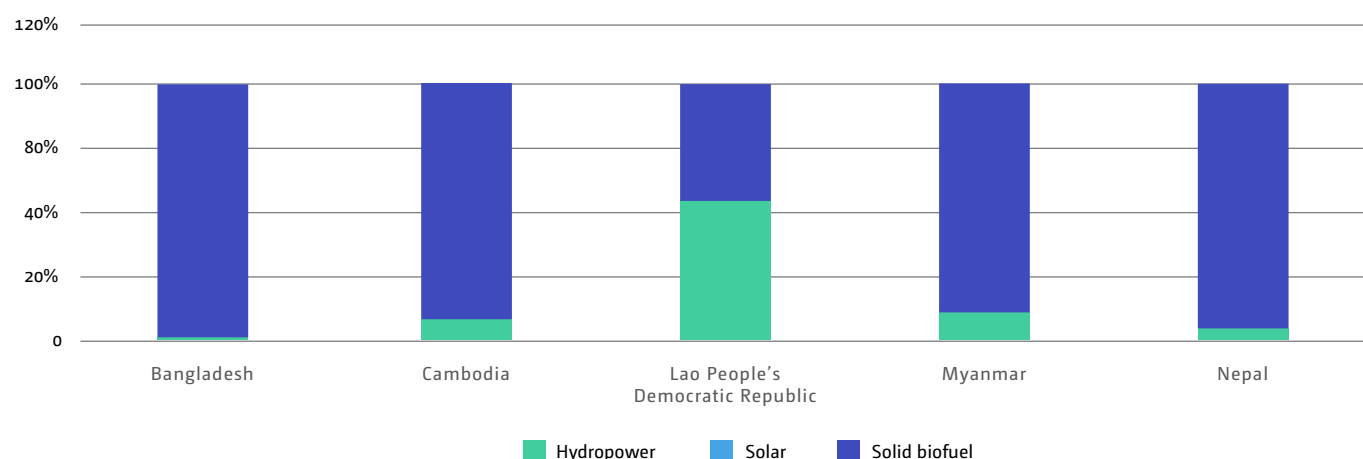


Source: ESCAP and the International Energy Agency.

#### 4. Renewable energy mix

33. With the exception of Bhutan where energy production is dominated by hydropower,<sup>12</sup> biofuels are the primary source of renewable energy in LDCs-Asia. The contribution of hydropower can vary from barely 1% in Bangladesh to over 50% in the Lao People's Democratic Republic. Timor-Leste has been developing solar photovoltaic technology (see figure 3).

**Figure 3**  
Renewable energy production mix in 2018



Source: ESCAP and the International Energy Agency.

With the exception of Bhutan where energy production is dominated by hydropower, biofuels are the primary source of renewable energy in LDCs-Asia.



<sup>12</sup> International Renewable Energy Agency. 2019. *Renewables Readiness Assessment: Kingdom of Bhutan*.

## B. Vulnerability and disaster risks

34. The Intergovernmental Panel on Climate Change, in its Fifth Assessment Report (2014), predicted that risk associated with extreme events will continue to increase as the global mean temperature rises.<sup>13</sup> Asia is prone to extreme weather events, including floods,

cyclones, tsunamis, heavy monsoon rains, storm surges and drought. For LDCs-Asia, countries climate change will increase the frequency and severity of extreme weather events. Table 9 below provides an overview of climate disasters and impacts for LDCs-Asia.

**Table 9**  
**Overview of climate disasters and impacts for the least developed countries in Asia**

	Key hazards	Most significant impacts
Bangladesh	Tropical cyclones, storm surges, floods, riverbank erosion and droughts	<ul style="list-style-type: none"> <li>• Floods affect around 80% of land in Bangladesh</li> <li>• Loss of tiger habitat</li> <li>• Threatened rice production in coastal and deltaic areas</li> <li>• Cholera epidemics</li> </ul>
Bhutan	Glacial lake outburst floods from glacial melting, flash floods, landslides, windstorms, forest fires and droughts	<ul style="list-style-type: none"> <li>• Formation of supra-glacial lakes</li> <li>• Accelerated glacial retreat</li> <li>• Flooding of settled areas</li> </ul>
Cambodia	Typhoons and floods	<ul style="list-style-type: none"> <li>• Agricultural productivity, rice grain yield, hampered coffee and rubber production</li> <li>• Coastline vulnerable to sea level rise</li> <li>• Tourism negatively affected</li> </ul>
Lao People's Democratic Republic	Droughts, storms and floods	<ul style="list-style-type: none"> <li>• Agricultural productivity hampered</li> <li>• Productivity in the mining, hydropower and wood processing sectors hampered</li> </ul>
Myanmar	Coastal typhoons and sea level rise	<ul style="list-style-type: none"> <li>• Agricultural productivity hampered (main industry in Myanmar)</li> <li>• Extensive coastline vulnerable to sea level rise</li> <li>• Low-lying Ayeyarwaddy Delta likely most affected</li> </ul>
Nepal	Droughts, storms, floods, inundation, landslides, debris flow, soil erosion, hailstones, glacier lake outburst flood, landslide dammed outburst floods and avalanches.	<ul style="list-style-type: none"> <li>• Water resources are depleting</li> <li>• Hills and mountains are impacted by landslides and mud flow</li> <li>• Low-lying Terai region impacted by floods</li> </ul>
Timor-Leste	El-Niño, extreme rainfall, ocean acidification and tropical cyclones	<ul style="list-style-type: none"> <li>• Agricultural productivity is hampered</li> <li>• Salinization of water sources</li> <li>• Lack of fresh water</li> <li>• Coastal erosion</li> </ul>

<sup>13</sup> Intergovernmental Panel on Climate Change (IPCC). 2014. *Fifth Assessment Report*.

35. The Global Climate Risk Index 2021<sup>14</sup> analysed quantified impacts of extreme weather events in terms of both fatalities and economic losses of 181 countries. Myanmar, Bangladesh and Nepal were among the 10 countries most affected by extreme weather events in the period 2000–2019, with a ranking of second, seventh and tenth respectively (see [table 10](#)). With the exception of Timor-Leste, the LDCs-Asia fall in the top 90 countries with highest recorded GDP losses.

**Table 10**  
Climate risk index for least developed countries in Asia, 2000–2019

	Climate risk index	Average fatalities per 100 000 inhabitants	Average losses per unit GDP as a percentage
Bangladesh	7	37	37
Bhutan	105	53	90
Cambodia	14	35	28
Lao People's Democratic Republic	52	66	38
Myanmar	2	1	19
Nepal	10	18	40
Timor-Leste	174	166	163

## C. Climate change policies

36. LDCs-Asia have put in place country-level policies related to climate change and in some cases policies on climate finance (see [table 11](#)).

<sup>14</sup> See [https://reliefweb.int/sites/reliefweb.int/files/resources/Global Climate Risk Index 2021\\_1\\_0.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/Global%20Climate%20Risk%20Index%202021_1_0.pdf).



**Table 11**  
**Summary of climate-related policies, plans, reviews and legislature of the least developed countries in Asia**

	Overarching policies and plans addressing climate change	Specific policies and plans			Disaster risk reduction and management	Biodiversity
		Climate finance	Mitigation	Adaptation		
Bangladesh	Updated NDC (2020) BCCSAP (2009) National Sustainable Development Strategy 2010–2021 (2013) Seventh Five-Year Plan 2016–2020 (2015) Vision 2021 (2012)	Bangladesh Country Investment Plan for Environment, Forestry and Climate Change (2016) Climate Fiscal Framework (2014) Climate Change Trust Fund Act (2010)	Draft Energy Efficiency Roadmap, Department of Renewable Energy (2018) Renewable Energy Policy (2008) Sustainable and Renewable Energy Development Authority Act (2012) Action Plan for Energy Efficiency and Conservation (2013)	Bangladesh Delta Plan 2100 (2018) NAPA (2009)	Disaster Management Act (2012)	
Bhutan	First and second NDCs (2017 and 2021) Climate Change Policy of the Kingdom of Bhutan (2020) National Environment Strategy 2020 National Strategy and Action Plan for Low Carbon Development (2012) Economic Development Policy (2021)	Green Finance Roadmap (under way)	Renewable Energy Master Plan 2017–2032 Sustainable Hydropower Development Policy (2021) Electric Vehicle Roadmap 2020–2025 Renewable Natural Resources Strategy 2040 Bhutan Transport 2040: Integrated Strategic Vision (2013)	Strategic Program for Climate Resilience Forest and Nature Conservation Act of Bhutan (1995) National Environmental Protection Act (2007) National Forestry Policy (2009) NAPAs		
Cambodia	Updated NDC (2020) Royal Government of Cambodia Climate Change Strategic Plan 2014–2023 (2013) Royal Government of Cambodia Climate Change Action Plan 2016–2018 (2016) Cambodia Environmental and Climate Change Policy Brief (2009) Cambodia National Strategic Plan 2014–2023 (2013)	Climate Change Financing Framework (2015)		NAPA (2006)		
Lao People's Democratic Republic	NDC (2016) National Strategy on Climate Change (2010) Seventh Five-Year National Socio-Economic Development Plan 2011–2015		Renewable Energy Development Strategy in Lao People's Democratic Republic (2010)	NAPA (2009)		

**Table 11 (continued)**  
**Summary of climate-related policies, plans, reviews and legislature of the least developed countries in Asia**

	Overarching policies and plans addressing climate change	Specific policies and plans			Disaster risk reduction and management	Biodiversity
		Climate finance	Mitigation	Adaptation		
Myanmar	NDC (2017) Climate Change Strategy and Action Plan 2016–2030 (2017) National Sustainable Development Strategy (2009)			National Climate-Smart Agriculture Strategy (2015) NAPA (2013)	Natural Disaster Management Law 21/2013 Myanmar Action Plan for Disaster Risk Reduction (2012)	
Nepal	Second NDC (2020) Environment Protection Act (2019) Forest Act (2019) National Climate Change Policy (2019) National Water Resources Policy (2020) Gender and Social Inclusion and Climate Change Strategy and Action Plan (2020)	Climate Change Budget Code (2012) Climate Change Financing Framework (2017) International Development Cooperation Policy (2019) Agriculture sector climate change budget code guideline, 2018 Development Finance Assessment for Nepal (2017) Needs Assessment, Costing and Financing Strategy for Nepal's Sustainable Development Goals (2017)	Hydropower Development Policy (2001) National Environmentally Sustainable Transport Strategy (2014) National Action Plan for Electric Mobility (2018) National Urban Development Strategy (2017) National Forest Policy (2018) National Environment Policy (2019)	NAPA (2010) Framework for Local Adaptation Plans for Action (2019) Climate-Resilient Planning and Budgeting Guidelines (2020) Agriculture Development Strategy 2015–2035 (2015) National Water Plan (2005) Forestry Sector Strategy 2016–2025 (2016)	National Policy for Disaster Risk Reduction 2018 Disaster Risk and Management Act (2017) Disaster Risk and Management Regulations (2019)	Nepal National Biodiversity Strategy and Action Plan 2014–2020 (2014)
Timor-Leste	NDC (2017) Timor-Leste Strategic Development Plan 2011–2030 (2011)		Regulation 9/2007 approving the National Policy for the Forestry Sector (2007)	NAPA (2011)		National Biodiversity Strategy and Action Plan of Timor-Leste 2011–2020 (2011)

37. Some of the LDC-Asia countries also collaborate on a regional level, below a non-exhaustive list:

- (a) ASEAN: Cambodia, Lao People's Democratic Republic and Myanmar are members, and also members of the ASEAN Capital Markets Forum;
- (b) South Asian Association for Regional Cooperation: Bangladesh, Bhutan and Nepal are members;
- (c) ESCAP: Bangladesh, Bhutan, Cambodia, Lao People's Democratic Republic, Myanmar, Nepal and Timor-Leste are members; and

(d) Vulnerable 20 Group of Ministers of Finance of the Climate Vulnerable Forum, which is a dedicated cooperation initiative of economies systemically vulnerable to climate change: Bangladesh, Bhutan, Cambodia, Nepal and Timor-Leste are participants.

38. LDCs-Asia all work with the Regional Platform for Asia-Pacific on Disaster Risk Reduction.<sup>15</sup> The Platform provides a forum for all those engaged in disaster risk reduction to showcase practical applications for disaster risk reduction, exchange experience and develop joint statements, strategies and action plans, which guide decision makers and practitioners.

<sup>15</sup> See <https://www.undrr.org/about-undrr-where-we-work/asiapacific#Countries>.







## IV. Climate finance priorities and needs

39. LDCs-Asia have high financial requirements for the achievement of the Sustainable Development Goals. According to ESCAP they would need to invest as much as an additional 16% of their GDP per year, relative to the current investment levels, compared to a regional Asia-Pacific average of 5% of GDP per year.<sup>16</sup> To fill this gap, both public and private financial resources are needed.

40. Domestic public resources are important for public investments and services to sustain economic transformation and eradicate poverty and hunger. The link between external finance and various categories of public sector expenditure is critical, particularly in the way external finance (foreign direct investments, debt, remittances and official development assistance) impacts the quality of public financial management institutions and their ability to generate domestic resources. For example, as per the Costing and Financing Strategy, Nepal USD 20 billion per year is required to achieve 2030 targets.<sup>17</sup>

41. LDCs-Asia have expressed the need to have a common definition of climate finance for the region. This was discussed during both the inception and pre-validation workshops. The main concerns were based on the lack of clarity of the OECD Rio markers, potential double counting of climate finance flows, the need to differentiate between various finance instruments as a means to deploy climate finance, particularly between loans and grants, and the requirement to be more specific on transparently showing climate finance flows to adaptation components. The climate finance flows in section IV above are indicative.

42. Countries have also highlighted that the OECD DAC methodology leaves the definition of climate finance open to interpretation and this does not necessarily reflect the actual situation. For example, agriculture is not the primary focus for mitigation in Bangladesh, contrary to reflect in the OECD DAC data. An example of incorrect tagging relates to MDBs providing finance for food security which should not be counted as climate finance. International climate finance is very limited and cannot be solely depended on to implement ambitious

NDC mitigation and adaptation actions. Most international climate finance is channelled towards mitigation actions, while adaptation actions are mostly funded by domestic public budgets (e.g. in Bangladesh, which saw some of the worst flooding in its history in 2020).

43. The summary below of climate finance needs and priorities for LDC-Asia were derived from an assessment of all known public communications submitted to the UNFCCC,<sup>18</sup> workshops and where available, the GCF country programmes. Not all countries have provided quantitative estimates of their financial needs.

### A. Priority sectors and targets in nationally determined contributions

44. As a carbon neutral country, Bhutan has the target to balance the country's GHG emissions by an equivalent sequestration by the country's forest cover. Bangladesh intends to meet its GHG emission reduction target primarily by actions in the power, transport and industry sectors whereas Cambodia has included several more sectors, such as waste, buildings, land use and land-use change, and forestry.

45. Most countries have detailed mitigation priorities with clear targets for increasing the renewable energy share in electricity generation. Much of this ambition stems from national policies to increase energy security by decreasing dependence on fossil fuels, and to increase electrification through renewable energy sources in rural areas. Priority actions for adaptation across the seven countries are in the agriculture, water resources (including flood control), resilient infrastructure (including transport) and health sectors. A summary of the NDC targets and priority sectors for LDCs-Asia are provided in [table 12](#).

<sup>16</sup> ESCAP. November 2019. Regional workshop on fostering financial inclusion.

<sup>17</sup> NPC. 2017. Page 24. Available at [www.npc.gov.np/images/category/SDGs\\_Costing\\_Final\\_Version.pdf](http://www.npc.gov.np/images/category/SDGs_Costing_Final_Version.pdf).

<sup>18</sup> National climate change plans and strategies, national development plans, BURs, NAPs, NAPAs, NCs, NDCs, TAPs and TNAs.

**Table 12**  
**Overview of nationally determined contributions targets and, priority mitigation and adaptation sectors for the least developed countries in Asia**

Mitigation	Bangladesh	Bhutan	Cambodia	Lao People's Democratic Republic	Myanmar	Nepal	Timor-Leste
GHG target	Baseline scenario target: 5% (unconditional) to 15% (conditional) reduction in GHG emissions in the power, transport, and industry sectors by 2030 compared to 'business as usual' levels.	Fixed level target: Remain carbon neutral where GHG emissions will not exceed sequestration by forests, which is estimated at 6.3 million t CO <sub>2</sub> .	Baseline scenario target: 41.7% reduction in GHG emissions by 2030 compared to the 'business as usual' scenario, including AFOLU. The estimated emissions reduction including FOLU by 2030 under the NDC scenario (2020 updated NDC) will be approximately 64.6 million t CO <sub>2</sub> eq/year (41.7% reduction, of which 59.1% is from FOLU).	—	—	Nepal aims to achieve net zero GHG emissions by 2050.	Timor-Leste has made a conscious decision not to set a target for emission reduction but to outline the commitments to reducing emissions through various activities in sectors such as transport, agriculture, forestry and energy.
Non-GHG target	The mitigation strategy is set out in BCCSAP. This sets out seven programmes on mitigation. One of these programmes is renewable energy development with the objective of "maximizing the use of renewable energy sources to lower GHG emission and ensuring energy security". Bangladesh also sets out "additional mitigation actions" in its intended NDC in order to meet its conditional contribution. Some of these actions include the development of "400 MW of wind-generating capacity by 2030" and "1 000 MW of utility-scale solar power by 2030."	To maintain a minimum of 60% of total land under forest cover for all time in accordance with the Constitution of the Kingdom of Bhutan. Efforts will also be made to maintain current levels of forest cover, which currently stand at 70.46%, through sustainable forest management and conservation of environmental services.	Mitigation 2030 objectives: Increased forest cover to 70% of land area; Solar and wind: 1 GW installed capacity; Biomass: 300 MW installed capacity; 30% electric vehicle penetration for two-wheelers and passenger cars; Biofuels to meet 10% of transport fuels; 10% reduction of final stationary energy consumption against 'business as usual'; 50,000 ha adjusted water management practices in rice cultivation; Implementation of 500 t/day sustainable municipal solid waste treatment.	To increase forest cover to 70% of land area (i.e. to 16.58 million ha) by 2020, to increase the share of renewable energy to 30% of energy consumption by 2025, and to make electricity available to 90% of households in rural area by 2020.	To increase the share of hydroelectric generation within limits of technical hydroelectric potential. Indicative goal: 9.4 GW by 2030; To increase access to clean sources of electricity among communities and households currently without access to an electric power grid system. Indicative goal: rural electrification through the use of at least 30% renewable sources to generate electricity supplies.	To expand clean energy generation to 15,000 MW, of which 5–10% will be generated from mini, micro, hydro, solar, wind, and bioenergy by 2030. By 2025, the increase in sales of electric vehicles will be 25%. By 2030, the increase in sales of electric vehicles will cover 90% of all private passenger vehicle sales. By 2030, a 200-km electric rail network will be developed. By 2030, 25% of households will be using electric stoves. By 2025, 500,000 improved cookstoves, 200,000 biogas plants and 500 large-scale biogas plants will be installed. By 2030, 45% of total areas under forest will be maintained. By 2025, 380 million l/day of wastewater treated before discharge.	—



Table 12 (continued)

## Overview of nationally determined contributions targets and, priority mitigation and adaptation sectors for the least developed countries in Asia

Mitigation	Bangladesh	Bhutan	Cambodia	Lao People's Democratic Republic	Myanmar	Nepal	Timor-Leste
Conditionality of the NDCs	Conditional	Conditional and unconditional	Conditional and unconditional	Conditional and unconditional	Conditional	Conditional and unconditional	Unconditional
Sectors covered	Power sector and energy use in the transport and industry sectors. Other sectors are not included in the quantified contribution, but are included as action-based conditional contributions. This is due to a lack of robust data sets for these other sectors.	Not specified; various sectors mentioned for mitigation plans and actions, such as forest, energy, transport, waste, and agriculture.	Energy, waste, industry, transport, agriculture, building, and the AFOLU.	Proposed measures and actions in the energy, transport, and forestry sectors.	Forestry, energy, transport, waste, and agriculture.	Various sectors mentioned for mitigation and adaptation actions, such as energy, transportation and forestry.	Agriculture, energy, LUCF and waste.
Adaptation sectors covered	The primary goal for adaptation is to protect the population, enhance their adaptive capacity and livelihood options, and to protect the overall development of the country in its stride for economic progress and the well-being of the people. Specific priority sectors and actions have been outlined but specific targets are not indicated. The NAP is being drafted and it will provide further direction on adaptation sectors to be covered.	On the basis of the information available through the NAPA, the vulnerability and adaptation assessment in NC2 and other plans and programmes in sectors, priority adaptation actions for key sectors have been outlined but specific targets are not indicated.	Adaptation is a priority for Cambodia, for which it promotes an integrated, multisectoral approach that also supports national development objectives. A number of priority actions have been outlined, with preference given to those with climate change impact mitigation co-benefits. Focus sectors are agriculture, coastal zones, energy and human health. Long-term strategies include promoting resilience in farming systems, nature-based and circular-economy-based solutions, resilience in forest and protected ecosystems, surface and groundwater management and early warning systems.	Adaptation goals are to increase resilience of key economic sectors and natural resources to climate change and its impacts; enhance cooperation, strong alliances and partnerships with national stakeholders and international partners to achieve national development goals; and improve public awareness and the understanding of various stakeholders about climate change, vulnerabilities and impacts to increase willingness to take action.	Short-, medium- and long-term priority actions were identified in the following sectors: agriculture, early warning systems, forestry, public health, water resources, coastal zone, energy and industry and biodiversity adopting the NAPA.	Adaptation actions were prioritized in the NAP to outline Nepal's contribution towards meeting the adaptation goals. The local adaptation plan of action framework ensures that the process of integrating climate change adaptation and resilience from local to national level planning processes is bottom-up, inclusive, responsive and flexible.	Priority adaptation areas are identified in relation to food security, water resources, health, natural disasters, forestry, biodiversity and coastal ecosystem resilience, livestock production and physical infrastructure. For medium- to long-term adaptation priorities, Timor-Leste has carried out various efforts to increase its climate resilience.

## B. Mitigation priorities

46. For the purposes of this assessment, sectors determined as a priority for mitigation action by at least five of seven study countries are considered as priority sectors for the subregion, and are sourced from country NDCs and validated during workshops. A summary is provided in [table 13](#) below.

**Table 13**  
Priority sectors in mitigation for the least developed countries in Asia

	Agriculture	Energy	Forestry, land use	Industry	Transport	Waste
Bangladesh	✓	✓	✓	✓	✓	✓
Bhutan	✓	✓	✓		✓	✓
Cambodia		✓	✓	✓	✓	✓
Lao People's Democratic Republic		✓	✓		✓	
Myanmar		✓	✓	✓		
Nepal	✓	✓	✓		✓	✓
Timor-Leste	✓	✓	✓		✓	✓

47. For LDCs-Asia, priority mitigation sectors and subsectors are:

(a) Energy

- (i) Renewable energy: hydropower renewable energy systems and rural electrification; and
- (ii) Energy efficiency: industries and house-level fuel-efficient cooking stoves.

(b) Transport

- (i) Low carbon transportation systems: hybrid cars, electric vehicles, modal shift from road to rail, improved road and rail networks, promotion of public transportation systems; and
- (ii) Improved operation and maintenance of vehicles: increased energy efficiency measures in operating vehicles.

(c) Forestry and land use

- (i) Afforestation and reforestation;
- (ii) Mangrove plantations; and
- (iii) REDD+.

(d) Waste

- (i) Solid waste management systems, such as landfill gas capture; and
- (ii) Zero waste concepts: sustainable waste management practices, including circular economy.

## C. Adaptation priorities

48. For the purpose of this technical assessment, sectors determined as a priority for adaptation action by at least five of seven countries in LDCs-Asia are considered as priority sectors for LDCs-Asia as validated in a workshop. A summary is provided in [table 14](#) below.

**Table 14**  
Priority sectors in adaptation for the least developed countries in Asia

	Biodiversity	Coastal zone protection and marine resources	Disaster prevention and preparedness	Food security (agriculture, livestock, fisheries)	Health	Infrastructure	Water supply and sanitation
Bangladesh	✓	✓	✓	✓	✓	✓	
Bhutan	✓	✓	✓	✓		✓	✓
Cambodia		✓	✓	✓			✓
Lao People's Democratic Republic				✓	✓	✓	✓
Myanmar		✓	✓	✓	✓	✓	✓
Nepal	✓	✓	✓	✓	✓	✓	✓
Timor-Leste		✓	✓	✓	✓	✓	✓

49. For LDCs-Asia priority adaptation sectors and subsectors are given as:

(a) Infrastructure

Mainstreaming of climate change risk management in development plans and climate-resilient infrastructure.

(b) Water supply and sanitation

- (i) Water resource management, including protection of groundwater reserves and natural aquifers;
- (ii) Urban drainage systems; and
- (iii) Saltwater intrusion, water system infrastructure and water resource information systems.

(c) Food security

- (i) Climate-resilient and smart agricultural practices including drought-resilient crops; and
- (ii) Flood defences.

(d) Coastal zone protection and marine resources.

- (i) Sea dykes; and
- (ii) Sustainable use of marine resources.

(e) Disaster prevention and preparedness

- (i) Early warning systems; and
- (ii) Tropical cyclones and storm surge protection.



## D. Technology priorities

50. TAPs and TNAs were assessed to derive the priority technology needs for LDCs-Asia. Four of the seven countries have conducted the TNA process. Bangladesh, Cambodia and the Lao People's Democratic Republic have prepared their TAPs and TNAs and Bhutan has prepared its TNA. The TAP includes details on the estimated costs for the priority technology-related actions determined in the TNAs.

51. The sectors that countries have prioritized for technology needs, the associated action as stated in their TNAs, and the estimated costs as stated in the TAPs are compiled in tables 15 and 16 below. Estimated costs include those for investment, capacity development, organizational change, and policy and law.<sup>19</sup> Since adaptation and mitigation sectors vary considerably across the countries, the amounts have not been aggregated.

**Table 15**  
Least developed countries in Asia: prioritized sectors for mitigation technology, associated actions and estimated costs for each action  
(USD thousand)

	Mitigation technology and timescale	Mitigation action	Mitigation technology costing
Bangladesh	Power generation	Natural gas combined cycle	740
		Photovoltaic	760
		Advanced combustion turbine technology	950
		Advanced natural gas combined cycle	905
		Integrated gasification combined cycle, single unit	880
	Power use	Compact fluorescent lamp and linear fluorescent lamp	835
Bhutan	Solid waste disposal on land	Composting	Not stated
	Transport	Intelligent transport system	
	Manufacturing industries and construction	Waste heat recovery	
Cambodia	Transport	Energy-efficient urban mass transport, vehicle emission standards, electric motorbikes and bicycles, biofuels, rail, eco-driving, traffic management, transport demand management, modal shift (to walking or cycling), road improvement, urban transport master plan, education campaign on transport and climate change, electric and hybrid vehicles, and inland water transport	980
	Energy efficiency	Energy-efficient cookstoves, lighting, appliances, brick kilns, standards, air conditioning, water heating; awareness-raising and education on energy efficiency, building codes for energy efficiency, passive solar building design, building energy management systems and district cooling	970

<sup>19</sup> <https://tech-action.unepdtu.org>.

**Table 15 (continued)**  
**Least developed countries in Asia: prioritized sectors for mitigation technology, associated actions and estimated costs for each action**  
*(USD thousand)*

Mitigation technology and timescale		Mitigation action	Mitigation technology costing
Lao People's Democratic Republic	Forestry	Optimal agroforestry	17 012
		Sustainable community forestry management	15 965
		Effective protected area management	34 536
		Optimal plantation forest	8 784
	Agriculture	Animal feed improvement	7 229
		Organic farming	7 898
		Manure-based biogas	16 775
		Agricultural residue-based electricity	26 875
Myanmar	Not stated		
Nepal	Not stated		
Timor-Leste	Not stated		

Source: <https://tech-action.unepdtu.org>.



**Table 16**  
**Least developed countries in Asia: prioritized sectors for adaptation technology, associated actions**  
**and estimated costs for each action**  
*(USD thousand)*

Adaptation technology		Adaptation action	Adaptation technology costing
Bangladesh	Water	Embankments, dykes and dredging	430
		Early warning systems	365
		Sea level rise, tidal fluctuation, salinity intrusion, sedimentation and coastal erosion	375
		Tidal river management	590
		Tidal barriers	425
		Urban drainage development	290
	Agriculture	Salinity- and drought-tolerant and fast-maturing rice variety	3 675
		Improved farming practices for crops, irrigation and water management and soil fertility management	420
		Climate-smart agriculture technology dissemination centre and agricultural research and development centre	1 295
		Land-use planning	560
Bhutan	Water resources	Efficient irrigation methods	Not stated
	Agriculture	Development of drought-resistant and pest-resistant crop varieties	
	Natural disasters and infrastructure	Climate-resilient roads	
Cambodia	Water	Rainwater harvesting from rooftops, small reservoirs, small dams and microcatchments, wells for domestic water supply, community irrigation systems, household water treatment and safe storage, water use efficiency, leakage management, water gates and water culverts, Upper Mekong and provincial waterways, water reclamation and reuse, community flood preparedness, water user communities, community and household flood-safe areas, and drainage for roads	1 185
	Coastal zone	Mangrove management (conservation, restoration, sustainable use); seawalls, dykes, barriers, storm and flood early warning systems, flood-proofing, community flood preparedness, vegetation buffers, flood drainage, flood hazard mapping, emergency planning, beach nourishment, desalination, coastal setbacks, managed realignment, saltwater intrusion barriers, and awareness-raising and education on climate change issues	1 020
Lao People's Democratic Republic	Water resources	Early warning system	42 919
		Developing and sustaining a disaster impact reduction fund	16 240
		River basin management for climate change adaptation	26 511
		Climate-resilient water supply system	40 732
	Agriculture	Livestock disease prevention and control surveillance	13 546
		Agricultural development subsidy mechanism	23 307
		Crop diversification	10 432
		Climate-resilient rural infrastructure	18 382
Myanmar		Not stated	
Nepal		Not stated	
Timor-Leste		Not stated	

Source: <https://tech-action.unepdtu.org>.



## E. Capacity-building priorities

52. Capacity-building is required across all countries to support the successful implementation of mitigation and adaptation. The capacity-building priorities for each country, as stated in country NCs and NAPAs and during project workshops, are provided in [table 17](#).

**Table 17**  
**Priorities for capacity-building needs for the least developed countries in Asia**

Capacity-building needs	
Bangladesh	<ul style="list-style-type: none"> <li>• Continuous monitoring of weather parameters and events and analysis for forecasting future changes in both the short- and long-term;</li> <li>• Long-range weather forecasting;</li> <li>• Analysis of future climate change and its sectoral, temporal and spatial dimensions;</li> <li>• Integration of climate change impacts in designs of plans, programmes and projects;</li> <li>• Redesign of projects when climate change impacts are known;</li> <li>• Compilation of financial, insurance and weather data;</li> <li>• Microfinance and its contribution to climate action;</li> <li>• Increased capacity for the estimation of non-economic losses and damages; and</li> <li>• Strengthened fiduciary management systems.</li> </ul>
Bhutan	<ul style="list-style-type: none"> <li>• Development of coordination mechanism to foster inter-institutional collaboration on and synergy for training in the area of ECP mainstreaming;</li> <li>• Review and enhancement of existing modules to build in or enhance ECP mainstreaming elements;</li> <li>• Development of new courses, such as those envisioned by the College of Natural Resources and College of Science and Technology, with special attention to ECP mainstreaming topics;</li> <li>• Development of teaching aids and materials and knowledge for ECP mainstreaming training depending upon the design of revised or newly developed curricula and modules;</li> <li>• Development and conduct of customized short training courses addressing specific ECP mainstreaming topics on a pilot basis with the dual objectives of providing hands-on training experience to faculty members and of developing knowledge and skills on specific ECP mainstreaming approaches and tools among certain target groups;</li> <li>• Development of partnerships with overseas institutes with expertise in ECP mainstreaming;</li> <li>• Development of knowledge and skills of the faculty members in the various institutes, through an in country training workshop on ECP mainstreaming. In the short term for orientation and general understanding of the subject followed by specialization courses in the medium term for advanced knowledge and skills in ECP mainstreaming topics; and</li> <li>• Urgent capacity-building for accessing the UNFCCC Financial Mechanism.</li> </ul>
Cambodia	<ul style="list-style-type: none"> <li>• Capacity-building of human resources at subnational level to address climate change issues. Local authorities, for example, are not widely engaged in climate change issues, therefore training schemes are needed;</li> <li>• Further development of teaching and research in climate change across Cambodia's academic institutions. Training should cover analytical skills on specific topics, for example, climate change impact assessments, GHG mitigation, REDD+ and payments for ecosystem services;</li> <li>• Capacity-building of capable technical experts and financial resources for running impact assessments and adaptation measure development models;</li> <li>• Capacity-building of technical experts capable of conducting analysis in all mitigation sectors; and</li> <li>• Strengthening of technical and institutional capacity of relevant line ministries in conducting climate change impact assessments, climate change projections and mainstreaming climate change into sector and subsector development plans.</li> </ul>

**Table 17 (continued)**  
**Priorities for capacity-building needs for the least developed countries in Asia**

	Capacity-building needs
Lao People's Democratic Republic	<ul style="list-style-type: none"> <li>• Development of training and public awareness programmes, campaigns or activities at national level;</li> <li>• Inclusion of climate change subjects into the curriculum at secondary and higher education level;</li> <li>• Reach grass-roots level with dissemination of knowledge and experience in climate change;</li> <li>• Further development of national capacity, especially in the global climate change negotiation process. To promote active participation at international level, negotiation and diplomatic skills, including language proficiency, are vital; and</li> <li>• Development of research networks and forums among academics in national institutions, scientists and researchers to exchange resources, experience and cooperate in climate change research, including a regular technical forum to promote cooperation.</li> </ul>
Myanmar	<ul style="list-style-type: none"> <li>• Development of human resource capacities on climate change issues across institutions, including training on global warming and climate change issues and their impacts; environmental management including waste management; environmentally sound technologies; clean development mechanism and carbon trading;</li> <li>• Development of training on solar power technology, bioenergy and biofuel technologies;</li> <li>• Development of training for information and communications technology and research and development for GHG inventory, TNA and vulnerability and adaptation needs assessment; and</li> <li>• Development of specific training for (i) Ministry of Industry for technology needs relating, among others, to cleaner production of cement, efficient and cleaner boilers, and reduction of GHG emission in textile manufacturing; (ii) Ministry of Livestock and Fisheries for technology for methane gas reduction from the livestock sector; (iii) Ministry of Health for technology needs related to air quality monitoring; and (iv) Biodiversity and Nature Conservation Association for technology and strategies related to REDD+.</li> </ul>
Nepal	<ul style="list-style-type: none"> <li>• Identification of technological needs in the context of climate change;</li> <li>• Further development of public policies and strategies to support technology transfer for climate change adaptation and mitigation;</li> <li>• Development of awareness and technological knowledge of adaptation and mitigation technologies; and</li> <li>• Identification of financial resources for research and development. Development of institutional capacity of various governmental organizations engaged in climate-change-related research and studies.</li> </ul>
Timor-Leste	<ul style="list-style-type: none"> <li>• Development of roles and responsibilities of the a Secretary of State for the Environment;</li> <li>• Need for public awareness and dissemination of information to provide greater benefit for people at local, subdistrict and district level;</li> <li>• Development of human capacity-building at the local level;</li> <li>• Development of a plan for protected areas and national parks;</li> <li>• Development of a clear role and commitment to share and disseminate information to students, local leaders and communities;</li> <li>• Development of training, workshops and seminars on climate change issues and solutions;</li> <li>• Clearer evaluation and communication of finance for technology;</li> <li>• Capacity-building for climate modelling and climate projections; and</li> <li>• Overcoming institutional and technical barriers for climate modelling and projections; renewable energy; formulation of financing needs for the GCF, GEF and other international climate funds; and addressing requirements of the Paris Agreement such as reporting, and monitoring.</li> </ul>

## F. Loss and damage

53. Loss and damage were highlighted during the validation workshop as important needs for the region. The Paris Agreement reaffirmed the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts as the main vehicle under the UNFCCC process to avert, minimize and address loss and damage associated with climate change impacts, including extreme weather events and slow onset events. Most LDCs-Asia will need support to address climate-change-related loss and damage, areas for which need to be clearly indicated within a regional climate change strategy. For example, the Global Facility for Disaster Risk Reduction and Recovery that has supported the Lao People's Democratic Republic since 2008 estimated that, following Typhoons Ketsana in 2009 and Haima in 2011 losses were estimated at over USD 58 million and USD 63 million, respectively.<sup>20</sup> Supporting and enhancing climate and disaster resilience needs assessments for LDCs-Asia is a critical precursor to attracting finance.

## G. Climate finance needs

54. This section provides the volume of climate finance needed as provided in NAPAs, NCs and NDCs for LDCs-Asia, where such data exists (see [table 18](#)). Overall, while all countries have identified needs in various communications, costing of such needs is not provided by all.

55. Bangladesh has provided investment cost estimates for identified mitigation and adaptation priority actions. Cambodia's NDC provides an estimate of the total investment cost needed to support sectoral climate change action plans. In case of Nepal, Timor Leste and Lao People's Democratic Republic, finance costs only related to mitigation are included.

56. Bhutan and Myanmar do not provide information in their NDC's on the investment costs for identified mitigation and adaptation actions and relevant information from the NC are provided.

57. It should be noted that each country has its own methodological approach to estimating investment costs for mitigation and adaptation as well as time frames therefore the aggregation of costs is only for illustration purposes. The total volume of climate finance currently declared as needed by LDCs-Asia amounts to approximately USD 105 billion of which USD 45 billion is for adaptation.

**The total volume of climate finance currently declared as needed by LDCs-Asia amounts to approximately USD 105 billion of which USD 45 billion is for adaptation.**

**Table 18**  
**Estimated investment costs for the least developed countries in Asia**  
(USD billion)

	Finance needs for mitigation	Finance needs for adaptation
Bangladesh (2011–2030)	27.1 (NDC)	42 (NDC)
Bhutan	0.526 (NC)	0.385 (NC)
Cambodia (until 2018)	2.132 (NDC)	2.085 (NDC)
Lao People's Democratic Republic (2020-2030)	4.762 (NDC)	0.174 (NAPA)
Myanmar	0.21 (NC)	Not available
Nepal (until 2030)	25 (NDC)	0.35 (NAPA)-0.745 (NC)
Timor-Leste	0.002 (NDC)	0.07 (NC) – 0.09 (NAPA)
<b>Total</b>	<b>60 billion</b>	<b>45.06 (lower range)</b> <b>45.5 (upper range)</b>

<sup>20</sup> <https://www.gfdr.org/en/lao-peoples-democratic-republic>.



58. To illustrate further the specific financing needs indicated by countries, the investment required between 2011–2030 to implement key mitigation measures in Bangladesh is indicated in [table 19](#) below.

<b>Table 19</b> <b>Estimated costs of mitigation measures in Bangladesh</b> <i>(USD billion)</i>	
Mitigation measure or action	Estimated investment required for 2011–2030
Switching to 100% super-critical coal power generation	16.5
Developing utility-scale solar energy	1.3
Scaling up wind energy	0.6
Repowering steam turbine with combined cycle gas turbine	0.6
Expanding the Solar Homes programme	1.2
Solar irrigations pumps	0.6
Solar mini-grids	0.3
Solar nano-grids	0.3
Pico-solar	0.1
Scaling up biomass production from sugar	0.2
Building an elevated express highway in Dhaka to reduce congestion on the main urban traffic arteries	2.7
Dhaka mass rapid transit system	2.7
<b>Total</b>	<b>27.1</b>

59. BCCSAP estimates adaptation investment costs at USD 42 billion for 2015–2030. This estimate includes the actions included in the NAPA, BCCSAP and new adaptation needs for 2015–2030 based on the current NAP road map and the Seventh Five-Year Plan. Some examples of investment costs required for adaptation activities in Bangladesh are provided in [table 20](#) below.

<b>Table 20</b> <b>Estimated costs of adaptation measures in Bangladesh</b> <i>(USD billion)</i>	
Adaptation measure/action	Estimated investment required for 2015–2030
Food security and livelihood and health protection (including water security)	8.0
Comprehensive disaster management	10.0
Salinity intrusion and coastal protection	3.0
River flood and erosion protection	6.0
Building climate-resilient infrastructure	5.0
Rural electrification	3.0
Urban resilience	3.0
Ecosystem-based adaptation (including forestry co-management)	2.5
Community-based conservation of wetlands and coastal areas	1.0
Policy and institutional capacity-building	0.5
<b>Total</b>	<b>42.0</b>

## V. Climate finance flows

60. Increasing effort has been made towards monitoring climate-related financial support for developing countries. The following sections are compiled from publicly available information to provide information on domestic and international climate finance for LDCs-Asia.

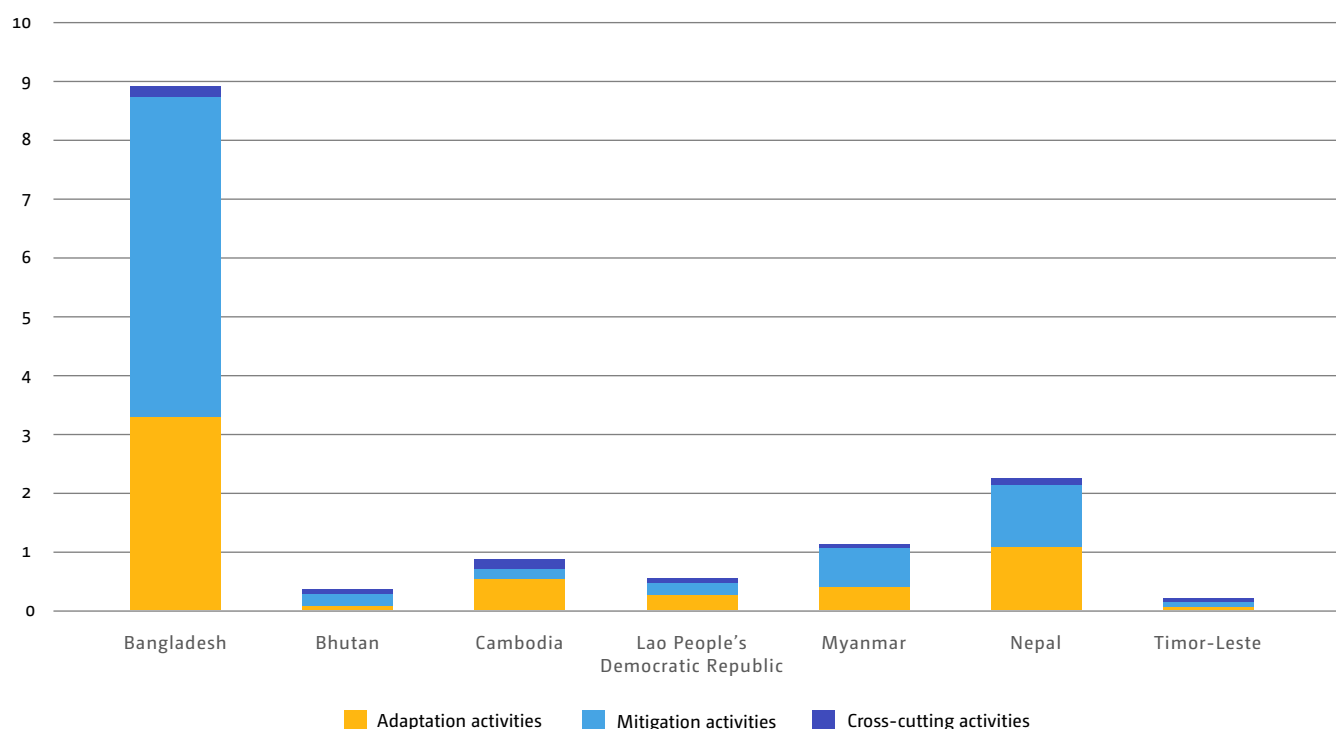
### A. International climate finance

61. LDCs-Asia received international public climate finance of USD 13.9 billion between 2013 and 2018. Of this amount, roughly USD 7.8 billion was for mitigation, USD 5.6 billion for adaptation, and USD 0.55 billion for cross-cutting activities, namely activities that have both mitigation and adaptation attributes.<sup>21</sup>

62. Between 2013 and 2018 Bangladesh received the highest amount of climate finance at USD 8.9 billion,

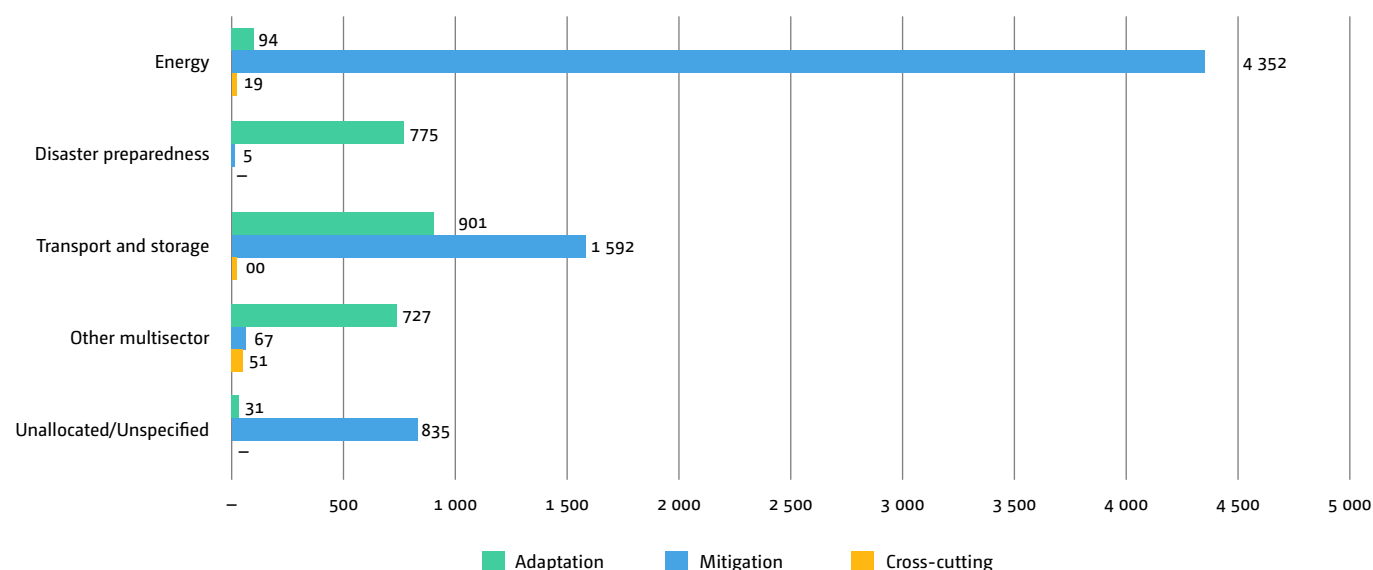
followed by Nepal at USD 2.2 billion, Myanmar at USD 1.1 billion, Cambodia at USD 835 million, Lao People's Democratic Republic at USD 498 million, Bhutan at USD 268 million and Timor-Leste at USD 142 million. The amount of mitigation finance is higher than that for adaptation finance in Bangladesh, Bhutan, Myanmar and Nepal. The total amounts of international climate finance committed to mitigation and adaptation activities vary among the countries (see [figure 4](#)).

**Figure 4**  
**International climate finance flows, 2013–2018**  
(USD billion)



<sup>21</sup> Graphs were generated from data compiled from the OECD DAC database.

**Figure 5**  
**Total international climate finance, 2013–2018**  
*(USD million)*



63. Energy, transport and storage and disaster preparedness were the top five sectors to have received international climate finance between 2013–2018.

Figure 5 provides the amounts of climate finance for mitigation, adaptation and cross-cutting activities for each sector.

64. For each country in the region, the top five sectors that received the highest allocations of climate finance are as follows:

(a) Bangladesh: energy (32%), transport and storage (21%) disaster preparedness (6%), water supply and sanitation (5%) and an unallocated amount (5%);

(b) Bhutan: energy (60%), other multisector (9%), general environmental protection (8%), agriculture, forestry and fishing (5%) and disaster prevention and preparedness (4%);

(c) Cambodia: transport and storage (33%), energy (21%), general environmental protection (11%), forestry and fishing (9%) and agriculture (8%);

(d) The Lao People's Democratic Republic: transport and storage (19%), water supply and sanitation (11%), energy (10%), forestry (9%) and agriculture (8%);

(e) Myanmar: energy (45%), unallocated (12%), general environmental protection (12%), agriculture (9%) and government and civil society (6%);

(f) Nepal: energy (33%), other multisector (13%), transport and storage (11%), disaster preparedness (10%), and unallocated (10%); and

(g) Timor-Leste: agriculture, forestry and fishing (47%), general environmental protection (17%), water supply and sanitation (15%) and transport and storage (11% and 7%).<sup>22</sup>

65. Climate finance for the energy sector was primarily for electric power transmission and distribution (centralized grids) and natural gas-fired electric power plants (see figure 6 below). Climate finance for transport

**Energy, transport and storage and disaster preparedness were the top five sectors to have received international climate finance between 2013–2018.**

<sup>22</sup> The transport and storage category is captured twice in the OECD database.

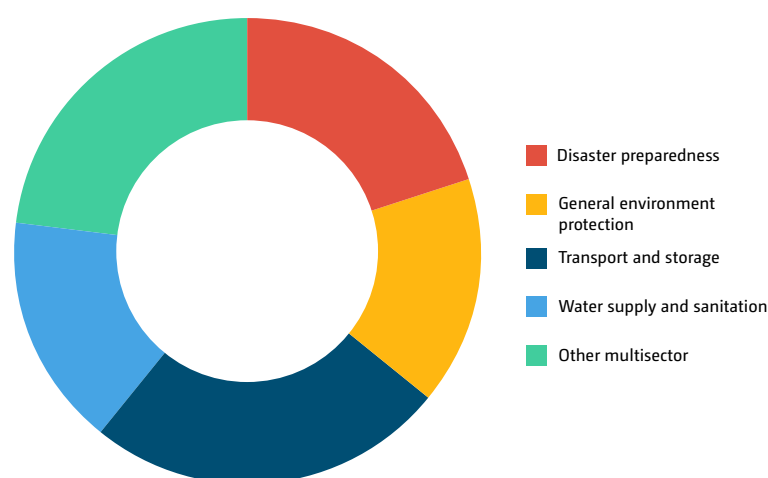


and storage was primarily for rail and road transport activities. Climate finance categorized as 'unallocated/unspecified' is for sectors and activities not specified and constitutes contributions to the general development of the recipient and spending in donor countries for awareness-raising in the interest of development cooperation.

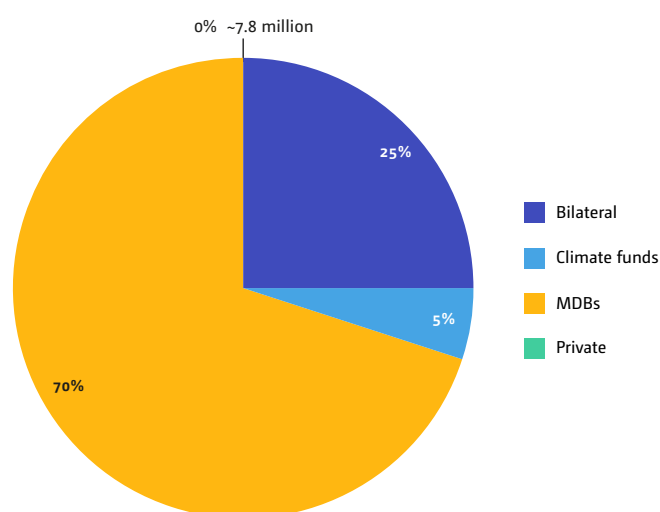
66. Regarding adaptation finance, transport and storage, disaster preparedness, general environment protection, water supply and sanitation received the most climate finance (see [figure 6](#)).

67. Of the total USD 13.9 billion committed international climate finance between 2013–2018 to LDCs-Asia USD 3.45 billion came from bilateral sources, USD 10.49 billion from multilateral sources and USD 7.8 million from private sector sources. MDBs contributed USD 9.8 billion and climate funds contributed USD 650 million (see [figure 7](#)).

**Figure 6**  
Total international climate finance for adaptation, 2013–2018



**Figure 7**  
Total international climate finance by contributor, 2013–2018



## (i) Bilateral climate finance

68. Japan was the main bilateral contributor, with USD 2 billion of the total bilateral climate finance flows between 2013–2018, followed by Germany contributing USD 411 million, the United States of America contributing USD 334 million, and France contributing USD 259 million (see figure 8).

## (ii) Multilateral climate finance

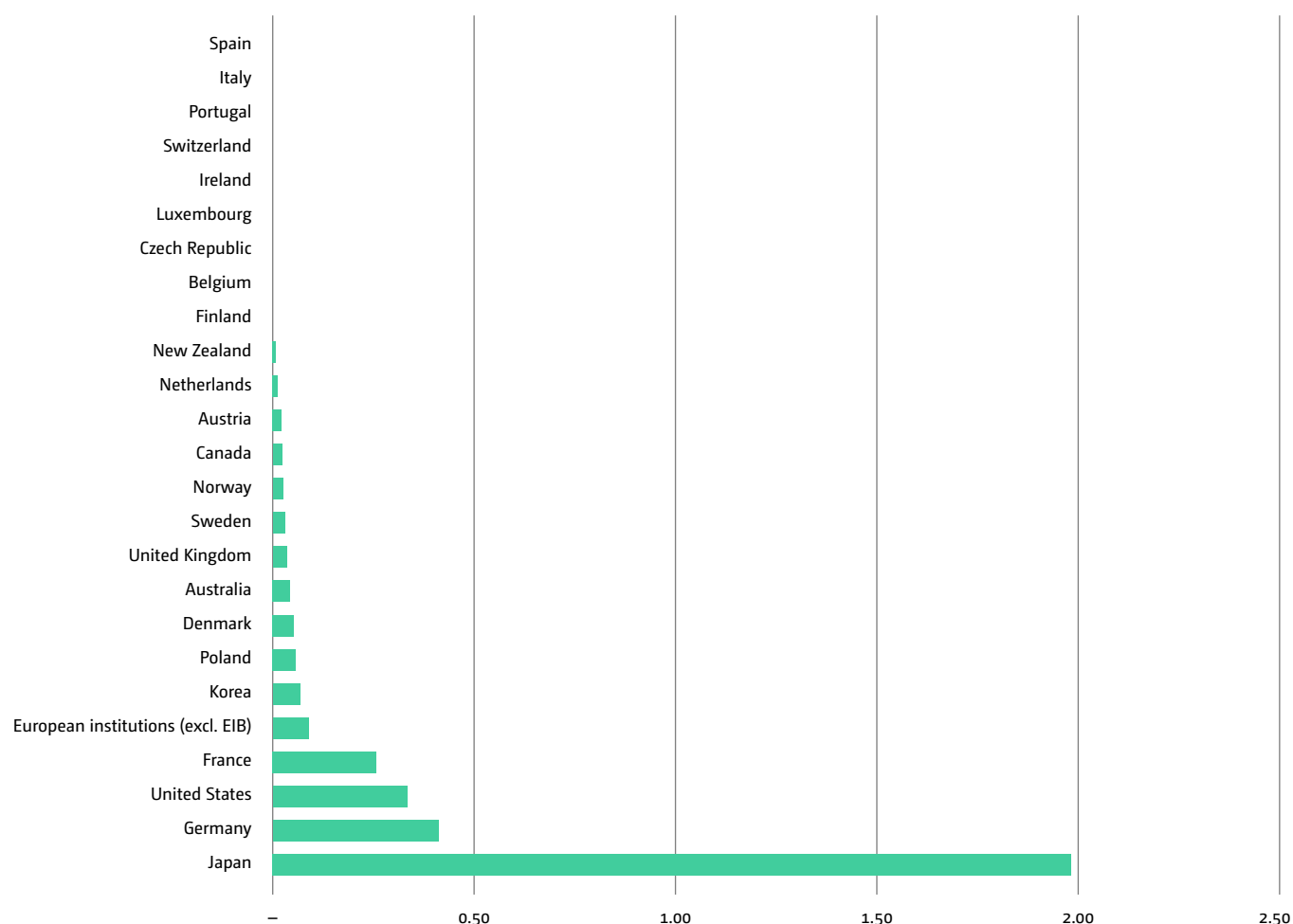
69. The WB was the main multilateral contributor, channelling USD 5.3 billion of the total multilateral climate finance flows for 2013–2018, followed by ADB at USD 3.5 billion and EIB at USD 675 million (see figure 9).

## (iii) Private and public sector investment in renewable energy

70. Of the USD 2 million contributed by private sector sources for renewable energy, as reported to the OECD DAC database, 96% was from the Dutch Postcode Lottery, with the remaining amount being from the William and Flora Hewlett Foundation and The David and Lucile Packard Foundation.<sup>23</sup>

71. To complement these data, private and public investment data from BloombergNEF have been analysed and are estimated at USD 2.16 billion between 2013 and 2019, reaching USD 700 million in 2019.<sup>24</sup> Of this total investment, 70% is in solar power, with projects in Bangladesh, Cambodia, the Lao People's Democratic Republic and Myanmar (see figure 10).

**Figure 8**  
**Bilateral international climate finance, 2013–2018**  
(USD billion)

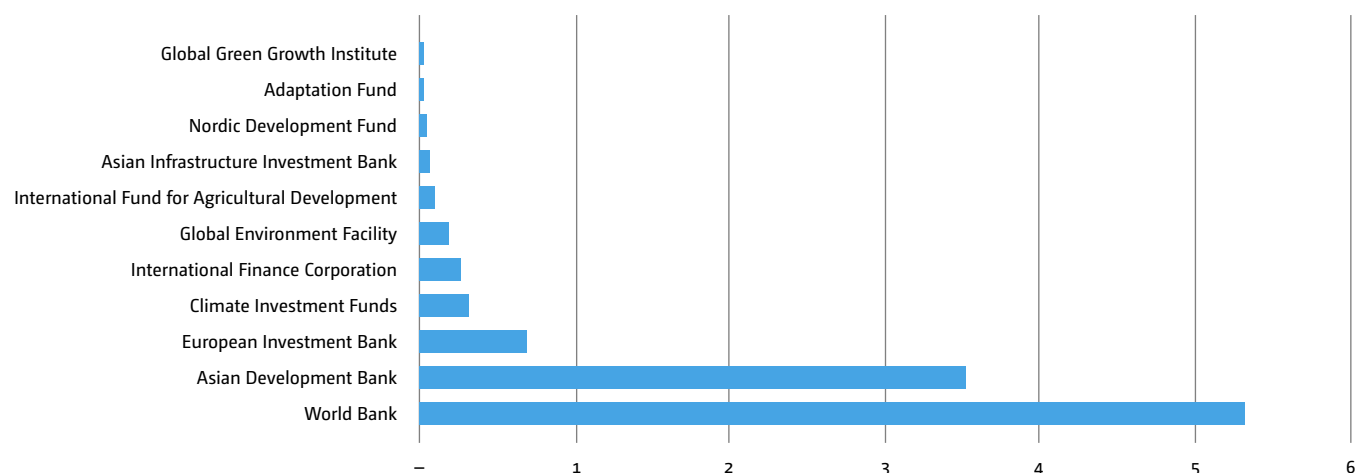


<sup>23</sup> <https://www.packard.org/>.

<sup>24</sup> <https://about.bnef.com/>.

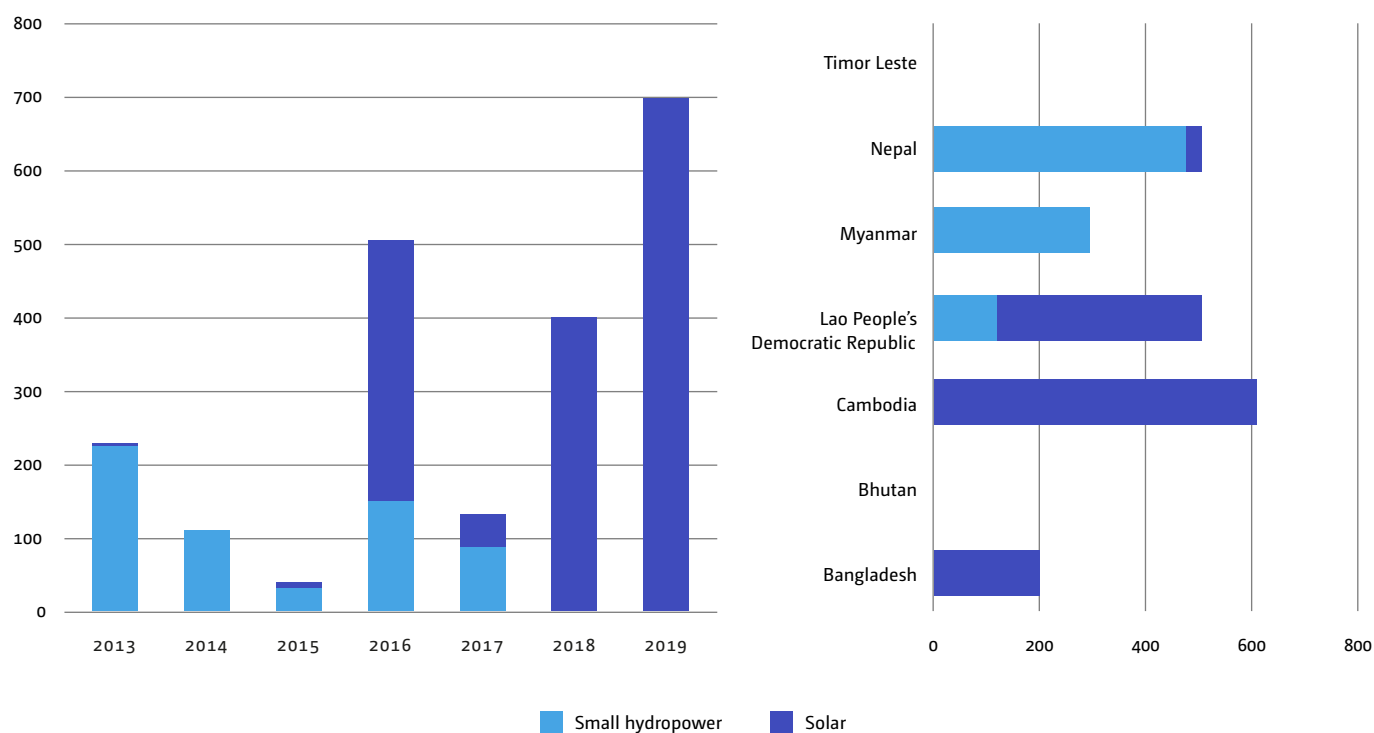
**Figure 9**  
**Multilateral international climate finance, 2013–2017**

(USD billion)



**Figure 10**  
**Climate finance for renewable energy, 2013–2019**

(USD million)



Source: BloombergNEF database.

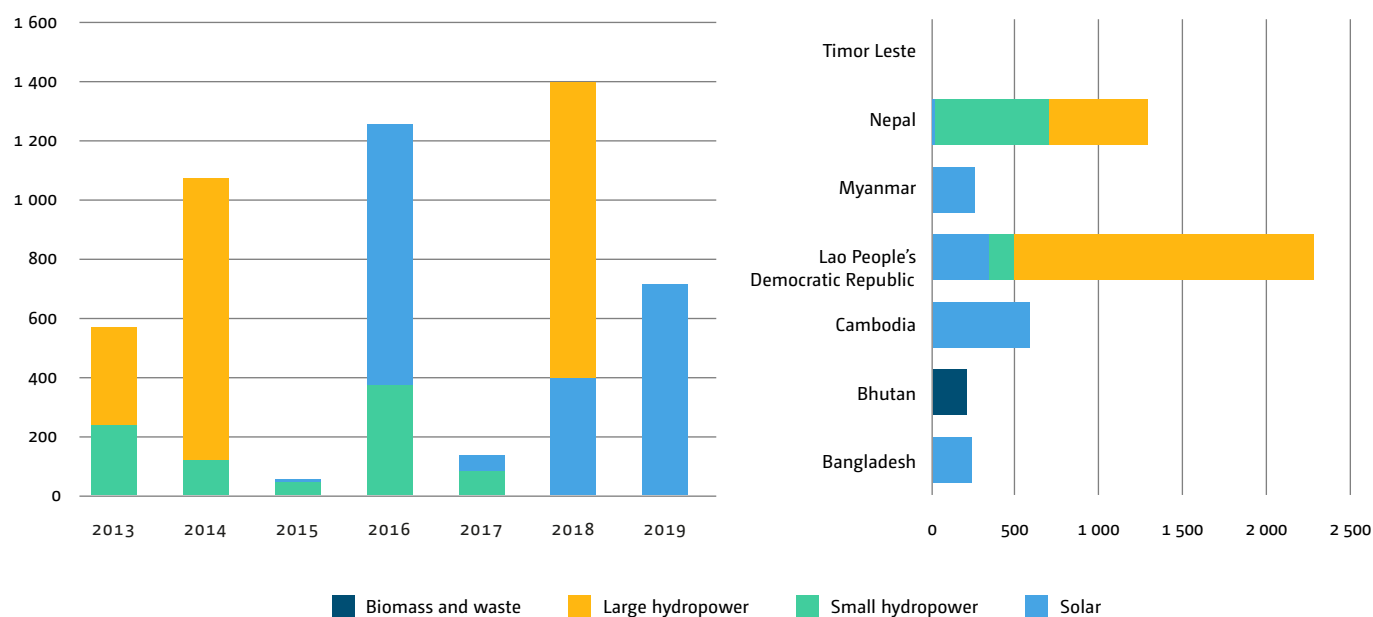
72. Taking into consideration large hydropower projects, the total investment more than doubles to USD 4.6 billion, with significant projects located in Bhutan, the Lao People's Democratic Republic and Nepal (see figure 11).

## 2. Instruments for international public climate finance

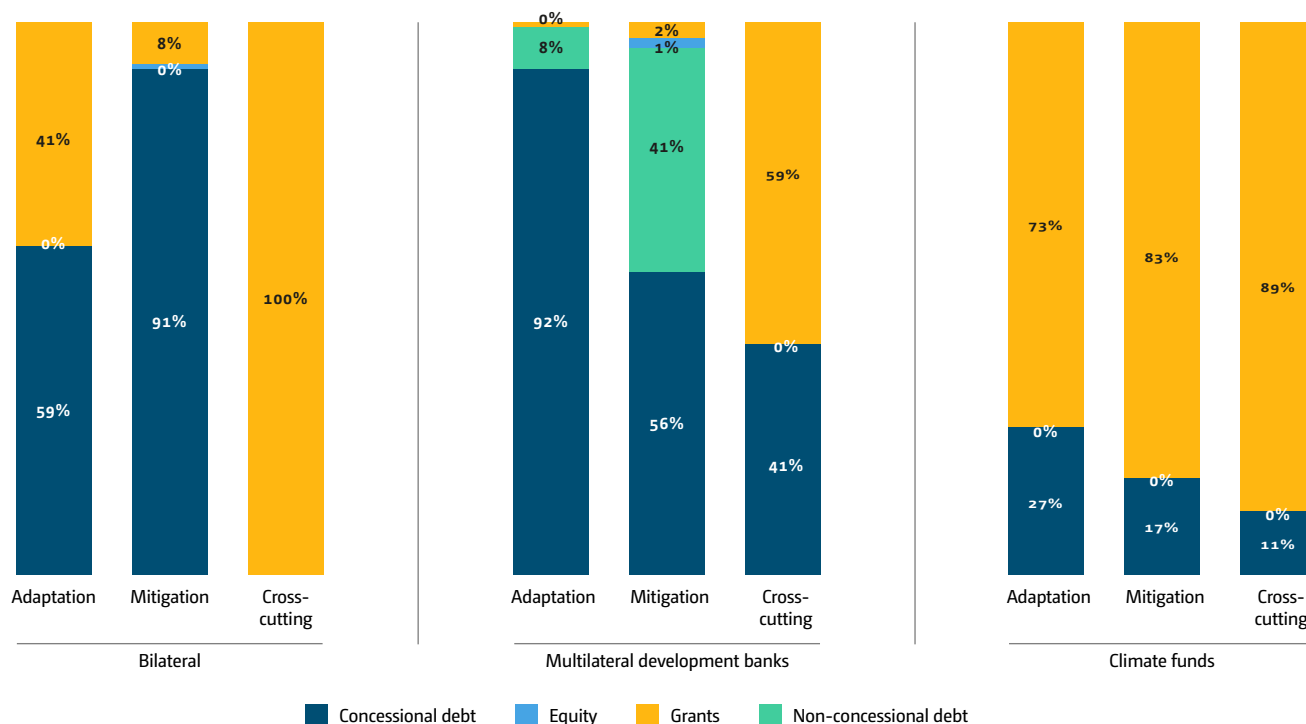
73. The OECD DAC database reports on four types of financial instruments: debt, equity, grants and debt relief.

For 2013–2018, a combination of concessional debt, non-concessional debt, equity and grant instruments was used to fund climate-related activities. Of these, concessional debt is the most used instrument by bilateral sources to finance mitigation activities, and accounts for more than 90% of mitigation finance. In contrast, climate funds mostly use grants to finance mitigation activities, which account for 83% of mitigation finance (see figure 12).

**Figure 11**  
Climate finance for renewable energy including large hydropower, 2013–2019  
(USD million)



**Figure 12**  
International finance flows by financial instrument, 2013–2018





## B. Domestic climate finance

74. Data on climate-related finance flows from domestic or local sources in LDCs-Asia are not widely available on aggregate levels. Cambodia and Nepal have a Climate Change Financing Framework in place, which is a strategic government plan to better manage, mobilize and target climate finance. Bangladesh, Cambodia and Nepal have also completed a CPEIR, which allows for a review of the expenditure on activities that are related to climate change, and assesses the extent to which the national policy and institutional context guides those expenditures.<sup>25</sup>

75. Bhutan conducted a Public Environmental Expenditure Review in 2014 to ascertain the size and composition of public environmental expenditures and thereby evaluate the Government's environmental policies and priorities and its environmental management as reflected in public expenditure.<sup>26</sup>

76. The remaining section is a case study of an analysis conducted by the Ministry of Finance of Bangladesh. The Climate Fiscal Framework, which was created in 2014 and updated in 2019, provides a road map to include climate considerations in Bangladesh's public financial management systems. It is aligned to the development priorities in BCCSAP (see [box 1](#)).

### Box 1

#### Case study: State of climate finance in Bangladesh 2020

Between 1996 and 2015, Bangladesh sustained USD 2.283 billion in damages due to a combination of climate-related natural disasters. As one of the most climate-vulnerable countries in the world, Bangladesh has taken the lead in addressing climate vulnerabilities. The Government of Bangladesh currently spends USD 1 billion a year, around 6–7% of its annual budget, on climate change adaptation. This represents a fifth of the USD 5.7 billion that the WB estimates Bangladesh will need as adaptation finance by 2050. Three-quarters of money spent on climate change in the country comes directly from the Government, while the rest comes from international development partners. Key results from the Climate Financing for Sustainable Development: Budget Report 2020–21 are provided below.

The Government's Finance Division has reported on climate allocation and expenditure for the past four years through an initiative called the Inclusive Budgeting and Financing for Climate Resilience Project, which is funded by UNDP. Reporting is carried out across 25 ministries and divisions that have implemented climate actions. The latest report, Climate Financing for Sustainable Development: Budget Report 2020–21, provides the updated information presented in this case study.

For the effective implementation of Bangladesh's NDC adaptation activities, it has been estimated that a total of BDT 3,528,000 million is required for 2015–2030, which implies that BDT 235,200 million is required annually. Since fiscal year 2015–2016, 21.5% (BDT 757,794 million) of the required amount has been allocated in the budgets for implementing the programmes of the NDC adaptation portfolio. For the effective implementation of Bangladesh's NDC mitigation activities, it has been estimated that a total of BDT 2,268,000 million is required for 2011–2030, which implies that BDT 113,400 million is required annually. Since fiscal year 2014–15, the Government has allocated BDT 120,972.6 million across various climate mitigation programmes. So far, the highest allocation, of BDT 85,697.9 million, has been made for improved energy efficiency since fiscal year 2014–2015, while a comparatively lower allocation was made to renewable energy development (BDT 6,819.7 million), lower emission from agricultural land (BDT 77.5 million) and management of urban waste (BDT 185.3 million).

The total budget allocation of the 25 ministries and divisions accounts for 56.69% of the national budget of fiscal year 2020–2021. The climate relevant allocation as percentage of total budget for the 25 ministries and divisions for fiscal year 2020–2021 has declined to 7.52% compared with the previous fiscal year's allocation of 7.81%. This may be attributable to the significant allocations required for the COVID-19 pandemic and economic recovery.

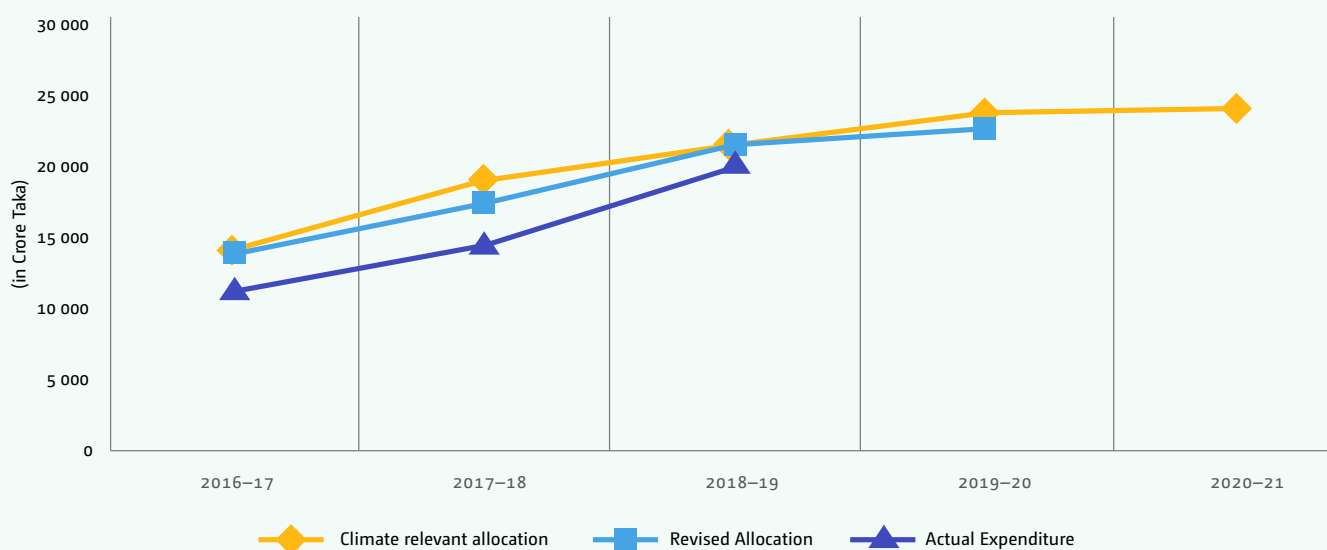
<sup>25</sup> Bird N, Beloe T, Hedger M et al. 2012. *The Climate Public Expenditure and Institutional Review (CPEIR): a methodology to review climate policy, institutions and expenditure*. Available at [www.cbd.int/financial/climatechange/g-cpeirmethodology-undp.pdf](http://www.cbd.int/financial/climatechange/g-cpeirmethodology-undp.pdf).

<sup>26</sup> Royal Government of Bhutan. 2014. *Public Environmental Expenditure Review*.

### Box 1 (continued) Case study: State of climate finance in Bangladesh 2020

Figure 13 below shows the trend of climate-relevant allocations and expenditure since fiscal year 2016–2017 for the 25 ministries and divisions. The total climate-relevant allocation shows an increase from fiscal year 2016–2017 to fiscal year 2020–2021 by 69.14%. Actual expenditure against climate-relevant allocation for these ministries and divisions was 82.21% in fiscal year 2016–2017 and 93.63% in fiscal year 2018–2019. The data on actual expenditure for the entire year are yet to be finalized for fiscal year 2019–2020.

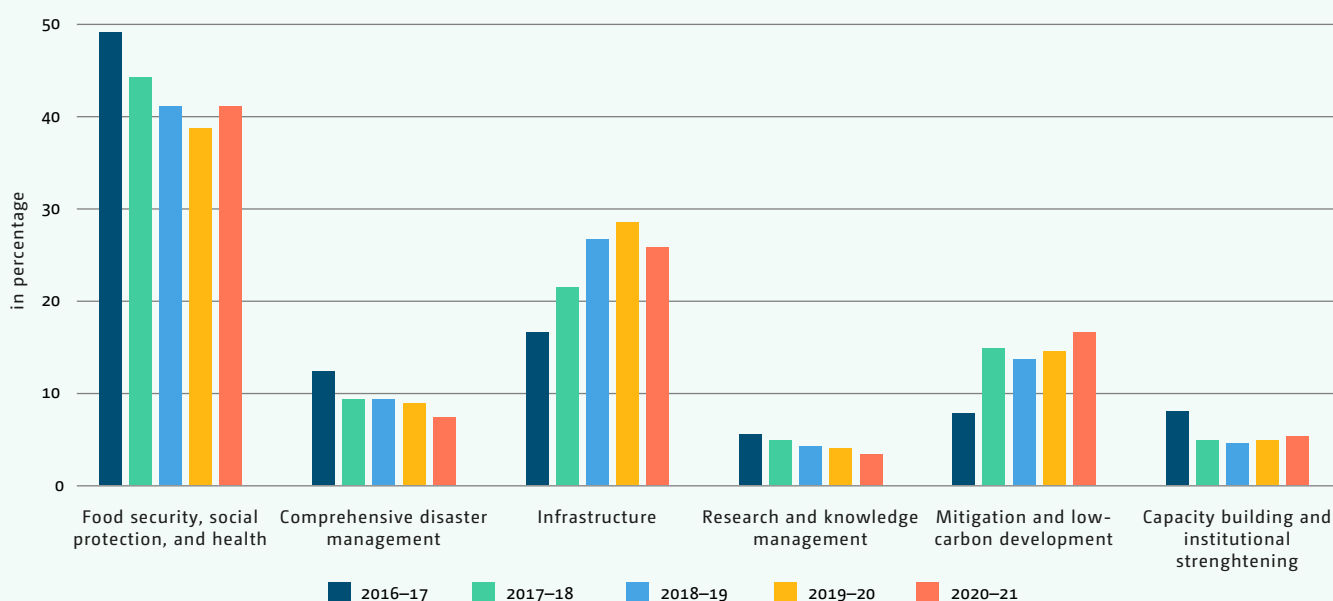
**Figure 13**  
Trend of climate relevant allocation and expenditure in selected ministry and division budgets (100 USD)



Source: Finance Division, Ministry of Finance.

Figure 14 below shows the climate-related allocation, from fiscal year 2016–2017 to fiscal year 2020–2021, as a percentage of the budget of the 25 ministries and divisions for each BCCSAP thematic area. Among the thematic areas, maximum allocation was made to food security, social security and health, followed by infrastructure.

**Figure 14**  
Allocation in Bangladesh Climate Change Strategy and Action Plan thematic areas across selected ministry and division budgets

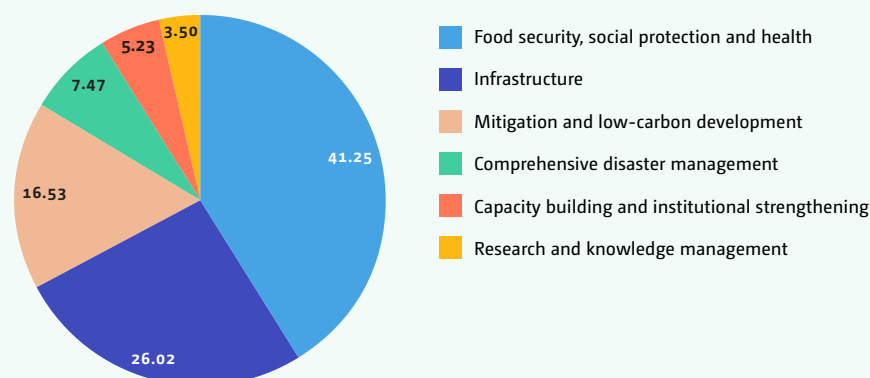


Source: Finance Division, Ministry of Finance.

### Box 1 (continued) Case study: State of climate finance in Bangladesh 2020

Figure 15 below shows the distribution of allocation by BCCSAP thematic area in fiscal year 2020–2021 for the 25 ministries and divisions. Of the total allocation, 7.52% is climate-relevant. This allocation is further distributed across six thematic areas, where the largest share of 41.25% goes to food security, social protection and health.

**Figure 15**  
Climate relevant allocation as a percentage across Bangladesh Climate Change Strategy and Action Plan thematic areas in fiscal year, 2020–2021



Source: Finance Division, Ministry of Finance.

The Climate Financing for Sustainable Development Budget Report 2020–2021 provides details of budget allocation and actual expenditure for each of the 25 ministries and divisions, and corresponding climate relevance in the budget from fiscal year 2016–2017 to fiscal year 2020–2021. Among the 25 ministries and divisions, the 5 ministries with the highest climate spending are the Ministry of Environment, Forest and Climate Change; Ministry of Water Resources; Ministry of Agriculture; Ministry of Disaster Management and Relief; and Ministry of Fisheries and Livestock. These ministries allocated an average 32.37% of their total budget for climate change relevant activities, which ranges from 24.01% by the Ministry of Disaster Management and Relief to 43.58% by the Ministry of Environment, Forest and Climate Change.

The Climate Financing for Sustainable Development budget reports have improved climate finance accountability and transparency in Bangladesh. The Government of Bangladesh has made deliberate efforts to address any gaps and limitations from the reports of previous year to improve the quality of climate finance reporting.

## C. Barriers to accessing climate finance

77. During the inception and validation workshops of the Needs-based Finance project in LDCs-Asia, the main barriers to accessing climate finance were reported by the participating countries. These are summarized as follows:

- (a) Lack of support in translating NDCs into investment plans;
- (b) Lack of skill sets required to formulate NAPs;
- (c) Lack of support in accessing international climate funds such as the GCF;
- (d) Lack of a common understanding of the definition of climate finance;
- (e) Lack of options on financing instruments that support scaling up of climate solutions, both for mitigation and adaptation;
- (f) Lack of appropriate research and development funds to support new climate technologies;
- (g) Lack of robust domestic climate finance planning and accounting systems;
- (h) Lack of capacity to develop bankable project proposals;
- (i) Lack of South–South knowledge exchange opportunities; and
- (j) Insufficient international climate finance to fund ambitious climate action.







## VI. Sources of climate finance

78. This section provides information on primary sources of multilateral and bilateral finance as reported to the UNFCCC for the LDCs-Asia.<sup>27</sup>

### A. National Climate Trust Funds

#### 1. Bangladesh

79. Bangladesh initiated the Bangladesh Climate Change Resilience Fund in 2008 as a channel for receiving international support. Herewith, the United Kingdom, Denmark, Sweden, European Union, and Switzerland subsequently contributed which amounts to a total of USD 125.5 million. Besides, the Bangladesh Climate Change Trust Fund was established in 2009 which consists of a block budgetary allocation of USD 100 million each year in the first three years from Government resources. The overall objective of the Fund is to enhance climate change adaptation and mitigation activities and to finance projects in different thematic areas, mainly in infrastructure (71%). As of 2015, 397 projects had been completed and USD 385 million were allocated to the diverse projects. Administrative ministries are responsible for project screening, approval and monitoring of this Government-owned Fund.

#### 2. Bhutan

80. BTFEC was established in 1991 as a collaboration between Bhutan, WWF United States of America and UNDP.<sup>28</sup> The Fund is guided by a five-year strategic plan on financing climate change adaptation programmes for Bhutan's protected areas. Revenues are generated from investments in the capital markets of the United States and Bhutan, as well as from international contributions, which amount to USD 21 million in total. The aim is to involve local industries for resource mobilization. In total, the Fund has generated USD 29.3 million in revenue and provided grants to 109 individuals and institutions, and continues to fund 28 ongoing projects (BTFEC, 2021). BTFEC was nationalized as instructed by the Royal Charter, and as an endowment fund, it is an independent grant maker.



<sup>27</sup> Article 11, para.5 of the Convention.

<sup>28</sup> Irawan, et al. 2012. Case Study Report: Bhutan Trust Fund for Environmental Conservation. A UNDP/BTFEC Working Paper (<http://www.snap-undp.org/elibrary/default.aspx>).

### 3. Cambodia

81. In 2010, CCCA was established to strengthen the capacity of the National Climate Change Committee in coordinating with climate change policies. Under this umbrella, the CCCA Trust Fund is a multi-donor fund created to guarantee a more coherent approach to climate change support by pooling financial resources provided by development partners, thus, channelling them to respective national and local projects, partners and policies. Awareness-raising projects to prepare the Government and civil society for the challenges of climate change and projects aiming at institutional strengthening and capacity development in support of the NSDP and the NAPA are also funded. The Fund serves as an engagement point for development partners, mainly the Danish International Development Agency, European Union, Swedish International Development Cooperation Agency, and UNDP, with UNDP acting as interim Trust Fund manager. A total of USD 8.9 million was committed for the initial period of three years. The Fund was extended to 2014 with additional donor commitments. In 2020, CCCA continued to provide grants to projects that include innovative elements in technology or processes up to a maximum of USD 100,000.

## B. International public finance

### 1. Green Climate Fund

82. The GCF<sup>29</sup> channels public and private finance flows, through a range of financing instruments including loans, equity, guarantees and grants. It provides a readiness and preparatory support programme (Readiness Programme) that supports countries in strengthening institutional capacities such as that of NDAs and direct access entities seeking accreditation. The GCF also supports countries in adaptation planning initiatives and strategic frameworks as requested by country NDAs. The aim is that at least 50% of the readiness support provided by the GCF will go to vulnerable countries, including the least developed countries. Funding is provided by grants. The GCF also has a project preparation facility that provides technical and financial assistance for the preparation of project and programme funding proposals and up to USD 1.5 million of funding is available for each application. Support is provided in the form of grants and repayable grants, although equity is considered for private sector projects. The Initial Resource Mobilization of the GCF raised USD 10.3 billion in pledges with USD 7.2 billion made available for commitment. The first formal replenishment process of the GCF in 2019 resulted in pledges being made by 29 contributors totalling USD 9.8 billion equivalent.

83. The GCF Accredited Entities can be either direct access or international access entities. Apart from the AF,

the GCF is the only international climate fund that allows for direct access. Direct access entities are nominated by the NDAs of the country and can be subnational, national or regional entities. The international access entities can be United Nations Accredited Entity agencies, MDBs, international financial institutions or regional institutions. Of the LDCs-Asia, Bangladesh (PKSF and the Infrastructure Development Company Limited), Bhutan (Bhutan Trust Fund for Environmental Conservation) and Nepal (the Alternative Energy Promotion Centre) have direct access entities accredited with the GCF. In 2019 PKSF has been successful in obtaining approval for a project; the Extended Community Climate Change Project focused on flood projection and adaptation activities for USD 9.68 million.

84. LDCs-Asia have total GCF funding allocated for approximately USD 700 million.<sup>30</sup> Readiness programmes in the least developed countries in Asia are focused on strengthening the NDAs and upscaling regulatory landscape of green financial institutions, capacity building on the green mobilization and strategic frameworks for engagement with GCF. Implementation timespan of country readiness programs are in an average of 2 years. LDCs-Asia have readiness funding approved for approximately USD 24 million.

85. Country programming processes in the least developed countries in Asia have proved to be implemented in an average of 8 years and focus on mainstreaming climate-resilient infrastructure, climate-friendly agribusiness value chains, enhancing adaptive capacities and improving climate resilience of vulnerable communities, and safeguarding rural communities and their physical and economic assets from climate-induced disasters.

### 2. Global Environment Facility

86. The GEF<sup>31</sup> administers its funds primarily through the LDCF and the SCCF. The LDCF is currently the primary source of funding that LDCs can tap into for their NAPAs and NAPs. By 2017, the GEF had financed the formulation of NAPAs in 51 LDCs to help countries identify urgent and immediate adaptation needs. As of 2017, just over USD 1.3 billion in grant financing had been approved for more than 280 projects in LDCs.<sup>32</sup> The SCCF considers funding requests from all vulnerable developing countries. As of 2017, the SCCF has a portfolio of nearly USD 350 million in voluntary contributions supporting 77 projects in 79 countries.<sup>33</sup>

87. Within LDCs-Asia only Cambodia has accessed funding from the SCCF for a project on building adaptive capacity by scaling up of renewable energy technologies in rural areas. The LDCF has contributed over USD 187 million in 42 projects towards climate adaptation.

<sup>29</sup> <https://www.greenclimate.fund/>.

<sup>30</sup> <https://www.greenclimate.fund/countries>.

<sup>31</sup> [www.thegef.org/country](http://www.thegef.org/country).

<sup>32</sup> [www.thegef.org/topics/least-developed-countries-fund-ldcf](http://www.thegef.org/topics/least-developed-countries-fund-ldcf).

<sup>33</sup> [www.thegef.org/topics/special-climate-change-fund-sccf](http://www.thegef.org/topics/special-climate-change-fund-sccf).

These projects enable the countries to enhance adaptive capacity, promote community-based climate-resilient infrastructure and livelihoods in vulnerable landscapes, strengthen climate monitoring and information systems, address the risk of climate-induced disasters and build early warning systems.

88. CBIT was created at the request of Parties to the UNFCCC with a primary objective to strengthen the institutional and technical capacities of non-Annex I countries to meet the enhanced transparency requirements defined in Article 13 of the Paris Agreement.<sup>34</sup> Bangladesh, Cambodia and the Lao People's Democratic Republic have accessed funding from CBIT whereby the projects have focused on strengthening capacity and transparency for monitoring environmental emissions and land-use sectors.

89. STAR determines the amount of GEF resource that a given country can access in a replenishment period for biodiversity, climate change and land degradation on the basis of a replenishment level of USD 4,433 million.<sup>35</sup> Through the STAR allocation projects, LDCs-Asia have utilized exceeding USD 65 million.

### 3. Adaptation Fund

90. The AF<sup>36</sup> pioneered the direct access modality through which implementing entities are able to directly access funds. Implementing entities can be national, regional or multilateral institutions that oversee all aspects of adaptation and resilience projects. Since 2010, the AF has allocated USD 850 million, which includes the financing of 100 adaptation and resilience interventions.<sup>37</sup> Bangladesh, Cambodia, the Lao People's Democratic Republic, Myanmar and Nepal have successfully accessed the fund with amounts varying between USD 4-9 million each.

## C. Other climate funds

91. IFAD is an international financial institution and a specialized agency of the United Nations, with a focus on poverty and hunger eradication in rural areas of developing countries. All IFAD interventions are therefore focused on food security and agriculture and it provides financing through grants and low-interest loans. There are two types of grant: global or regional grants, and country grants. Global grants are driven by a common theme or challenge faced by several countries in a given region. Country-level grants are for specific countries, which can include the piloting of new agricultural technologies. IFAD was established in 1978 and has provided over USD 21 billion in grant funding and low-interest loans that

have reached about 481 million people.<sup>38</sup> LDCs-Asia have successfully accessed IFAD financing of up to USD 1.75 billion for implementing 89 approved projects.<sup>39</sup> Note that financing as reported on the IFAD website does not specify which portion is climate-related.

92. The Nordic Development Fund is a joint development finance institution comprising governments of Denmark, Finland, Iceland, Norway and Sweden that aims to facilitate climate change investments to low income countries. Projects can be financed using grants, loans, equity or a combination of financing instruments. The Fund has been accessed by Bangladesh, Cambodia, the Lao People's Democratic Republic and Nepal for amounts that range between EUR 0.3 million and EUR 11 million. Resources available for funding projects seek to advance climate finance, adaptation and mitigation actions.<sup>40</sup>

93. CIF hold USD 8 billion to support mitigation and adaptation programmes in developing and middle-income countries, available as grants, concessional loans and risk mitigation instruments.<sup>41</sup> The financing is delivered through MDBs as implementing agencies. Bangladesh, Cambodia and Nepal have previously accessed and have several ongoing programmes with CIF totaling roughly USD 405 million. The projects are aimed to accelerate climate action transformations by contributing to capacity-building, SME financing, improving transportation and agricultural infrastructures, addressing climate hazards and risks.<sup>42</sup>

94. PPCR, the world's largest active adaptation fund, is a USD 1.3 billion funding window from the CIF for climate change adaptation and resilience building. Using a two-phase, programmatic approach, the PPCR assists national governments in integrating climate resilience into development planning across sectors and stakeholder groups. It also provides additional funding to put the plan into action and pilot innovative public and private sector solutions to pressing climate-related risks. To date, USD 962 million (about 96% of PPCR funding) has been approved for 60 projects expecting around USD 2 billion in co-financing from other sources. PPCR empowers countries to approach climate resilience in a programmatic manner and to move towards achieving large-scale systematic impacts. Bangladesh, Bhutan, Cambodia and Nepal have existing programmes with PPCR.<sup>43</sup>

## D. Multilateral financial institutions

95. This section provides further information on the primary multilateral financial institutions<sup>44</sup> that channel climate finance to LDCs-Asia, namely the ADB, WB (and related facilities) and EIB.

<sup>34</sup> [www.thegef.org/topics/capacity-building-initiative-transparency-cbit](http://www.thegef.org/topics/capacity-building-initiative-transparency-cbit).

<sup>35</sup> [www.thegef.org/publications/system-transparent-allocation-resources-star](http://www.thegef.org/publications/system-transparent-allocation-resources-star).

<sup>36</sup> <https://www.adaptation-fund.org/projects-programmes/project-information/projects-table-view/>.

<sup>37</sup> <https://www.adaptation-fund.org/about/>.

<sup>38</sup> [www.ifad.org/en/grants-design-and-management](http://www.ifad.org/en/grants-design-and-management).

<sup>39</sup> [www.ifad.org/en/web/operations/regions/apr](http://www.ifad.org/en/web/operations/regions/apr).

<sup>40</sup> [www.ndf.fi](http://www.ndf.fi).

<sup>41</sup> <https://www.climateinvestmentfunds.org/>.

<sup>42</sup> <https://www.climateinvestmentfunds.org/topics/climate-resilience>.

<sup>43</sup> [www.climateinvestmentfunds.org/topics/climate-resilience](http://www.climateinvestmentfunds.org/topics/climate-resilience).

<sup>44</sup> <https://unfccc.int/topics/climate-finance/resources/multilateral-and-bilateral-funding-sources>.



## 1. Asian Development Bank

96. ADB<sup>45</sup> is one of the primary channels of multilateral climate finance to LDCs-Asia. As of 31 December 2018,<sup>46</sup> the bank has provided loans, grants and technical assistance for all LDCs-Asia countries in order to expand predominantly agriculture, energy, transport, urban infrastructures and multisector with the exceeding amount of USD 14 billion.<sup>47</sup>

97. The Clean Energy Financing Partnership Facility, established in 2007, is administered by ADB to help improve energy security in developing member countries.<sup>48</sup> It is supported by the Governments of Australia, Canada, Japan, Norway, Spain, Sweden and the United Kingdom, and the Global Carbon Capture and Storage Institute. The Facility has allocated USD 264.0 million to 198 projects which contribute to the development and deployment of clean energy. Bangladesh, Bhutan, Cambodia and Nepal have 20 ongoing programmes financed by the Facility for approximately USD 33 million. Programmes contribute to energy, agriculture, education and transport sectors by improving capacity development for renewable energy investment programming and implementation, solar power infrastructures, power transmission and distribution efficiency, education in public schools about disaster resilience.

98. The Water Financing Partnership Facility<sup>49</sup> is also administered by ADB and financially supported by Australia, Austria, the Bill & Melinda Gates Foundation, the Netherlands, Norway, Spain and Switzerland. It was established by ADB in November 2006 to support the disbursement of financing for water projects. Under this programme's initial phase (2006–2010), ADB devoted 25%

of its investment portfolio to water projects and increased its water investments to over USD 2 billion annually, delivering a total of USD 11.44 billion in investments by the end of 2010. Target investments will be sustained at between USD 2.0 billion and USD 2.5 billion annually, or a total of between USD 20 billion and USD 25 billion for the decade, by the end of 2020. Information on specific programmes for LDCs Asia is not available.

## 2. European Investment Bank

99. Between 2014 and 2020, EIB<sup>50</sup> was authorized to lend up to EUR 1.1 billion to Asian countries for operations supporting the European Union cooperation strategies and complementing other European Union development and cooperation programmes and instruments. The countries currently eligible for EIB financing are Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, India, Indonesia, Iraq, the Lao People's Democratic Republic, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, the Republic of Korea, Singapore, Sri Lanka, Thailand, Viet Nam and Yemen. Between 2021 and 2019, Bangladesh, Cambodia, Lao People's Democratic Republic and Nepal have received total value of EUR 110 million, EUR 137 million, EUR 144 million and EUR 162 million respectively for resilient transportation, renewable energy, water supply and hydropower projects.

## 3. International Bank for Reconstruction and Development

100. The IBRD<sup>51</sup> of the WB is the primary channel of multilateral climate finance to LDCs-Asia. The WB's Climate Change Fund Management Unit finances initiatives that deliver innovative and scalable climate and environmental



<sup>45</sup> <https://data.adb.org/dataset/cumulative-lending-grant-and-technical-assistance-commitments>.

<sup>46</sup> <https://unfccc.int/topics/climate-finance/resources/multilateral-and-bilateral-funding-sources>.

<sup>47</sup> <https://unfccc.int/topics/climate-finance/resources/multilateral-and-bilateral-funding-sources>.

<sup>48</sup> [www.adb.org/site/funds/funds/clean-energy-financing-partnership-facility](http://www.adb.org/site/funds/funds/clean-energy-financing-partnership-facility).

<sup>49</sup> [www.adb.org/sectors/water/financing-program](http://www.adb.org/sectors/water/financing-program); [www.adb.org/site/funds/funds/water-financing-partnership-facility](http://www.adb.org/site/funds/funds/water-financing-partnership-facility).

<sup>50</sup> <https://www.eib.org/en/index.htm>.

<sup>51</sup> [www.worldbank.org/en/topic/climatechange/brief/world-bank-carbon-funds-facilities](http://www.worldbank.org/en/topic/climatechange/brief/world-bank-carbon-funds-facilities).

action of more than USD 5 billion in capital. Apart from the CIF, the WB delivers climate finance through a number of facilities and programmes. The WB administers the Forest Carbon Partnership Facility, which works with 47 developing countries channelling climate finance totalling USD 1.3 billion.<sup>52</sup> The Forest Carbon Partnership Facility supports REDD+ efforts through its Readiness and Carbon Funds. Bhutan, Cambodia, the Lao People's Democratic Republic and Nepal have accessed finance from the Readiness Fund, USD 8.6 million, USD 8.8 million, USD 8.35 million and USD 8.23 million, respectively.

101. Other WB-related climate finance support available to LDCs-Asia are the Community Development Carbon Fund, the Carbon Initiative for Development, the Biocarbon Fund and the Transformative Carbon Asset Facility. At the twenty-fourth session of the Conference of the Parties, the WB Group announced that it would double its climate investments to around USD 200 billion for 2021–2025, including about USD 67 billion in mobilized private capital.<sup>53</sup> IFC is the largest development finance institute supporting the private sector in emerging and developing markets, and has climate portfolios in all LDCs-Asia.<sup>54</sup> Climate-specific information is not available on the IFC website but climate-related financing for programmes has been reported to OECD DAC.

## E. Bilateral development cooperation agencies

102. Bilateral climate finance is channelled by developed countries to LDCs-Asia through bilateral development corporation agencies.<sup>55</sup> The five bilateral development cooperation agencies that channel the majority of climate finance to LDCs are the French Development Agency for France, the Federal Ministry for Economic Cooperation and Development for Germany, the Japan International Cooperation Agency for Japan and the Department for International Development for the United Kingdom.

## F. Private sector finance

103. Financing facilities and instruments designed to offer innovative ways to blend public and private sector finance for climate-related initiatives are needed to mobilize and improve the access to climate finance. This section provides information on some of the facilities relevant for LDCs-Asia.

104. The ASEAN Catalytic Green Finance Facility is an innovative financing facility designed to scale up green infrastructure projects in South-east Asia. The Facility was launched in 2019 and will provide loans and technical assistance for sovereign green infrastructure projects on sustainable transport, clean energy and resilient water systems. Of the LDCs-Asia, Cambodia, Lao People's Democratic Republic and Myanmar have access to the facility whereby the facility aims to catalyse private capital by mitigating risks through innovative financial structures. It aims to mobilize a total of USD 1 billion, including USD 75 million from the ASEAN Infrastructure Fund, USD 300 million from ADB, USD 336 million from the Credit Institute for Reconstruction, EUR 150 million from EIB, and EUR 150 million from the French Development Agency.<sup>56</sup>

105. The AGRI3 Fund is a USD 1 billion sustainable agriculture and forestry initiative to support the climate change mitigation actions of developing countries. The Fund will use public sector contributions to mobilize commercial finance to finance sustainable agriculture and accelerate forest protection. It was created by UNEP and Rabobank, together with the Sustainable Trade Initiative and supported by the Netherlands Development Finance Company. The Ministry of Foreign Affairs of the Netherlands announced in early 2020 that it will become an anchor public investor in the Fund by contributing USD 40 million.<sup>57</sup> The Fund is open to participation from commercial banks aiming at sustainable agriculture and forest conservation. The blended finance vehicle provides de-risking financial instruments and grants for technical assistance through a dedicated technical assistance facility.

106. Business Oxygen Private Limited is a climate-focused private equity fund in Nepal. It is part of the IFC SME Ventures initiative with investments from the IFC, CIF (PPCR) and the Department for International Development.<sup>58</sup> It is a sector-agnostic fund which also supports SMEs to develop fundamental financial systems, quality assurance standards and corporate governance frameworks that contribute to the mainstreaming of climate finance.

107. Emerging markets for green bond issuance are expected to double in the next three years and to cross the USD 100 billion mark of annual issuance. Global initiatives related to climate change risks and mitigation efforts, including green and sustainable finance, underpin many

<sup>52</sup> [www.forestcarbonpartnership.org](http://www.forestcarbonpartnership.org).

<sup>53</sup> [www.worldbank.org/en/news/press-release/2018/12/03/world-bank-group-announces-200-billion-over-five-years-for-climate-action](http://www.worldbank.org/en/news/press-release/2018/12/03/world-bank-group-announces-200-billion-over-five-years-for-climate-action).

<sup>54</sup> [https://www.ifc.org/wps/wcm/connect/corp\\_ext\\_content/ifc\\_external\\_corporate\\_site/home](https://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/home).

<sup>55</sup> <https://unfccc.int/topics/climate-finance/resources/multilateral-and-bilateral-funding-sources>.

<sup>56</sup> [www.adb.org/publications/asean-catalytic-green-finance-facility](http://www.adb.org/publications/asean-catalytic-green-finance-facility).

<sup>57</sup> [www.unenvironment.org/news-and-stories/press-release/dutch-government-and-rabobank-announce-anchor-investments-agri3-fund](http://www.unenvironment.org/news-and-stories/press-release/dutch-government-and-rabobank-announce-anchor-investments-agri3-fund).

<sup>58</sup> <https://bo2.com.np/about-us/>.

of the policies and strategies launched at the national and regional levels. The implementation of these initiatives means that the further adoption of guidance and standards is likely in many jurisdictions. Furthermore, the economic recession caused by COVID-19 provides an opportunity for recovery measures to focus on large-scale public investments in green and sustainable sectors. Despite the economic fallout in 2020, the green bond market proved resilient and has achieved USD 1 trillion in cumulative issuance since 2007.<sup>59</sup>

(a) Nepal has submitted its pledge to the United Nations to become carbon neutral by 2050. Central banks in Nepal circulated guidance on environment and social risk management and green banking. With the establishment of Nepal Rastra Bank's Guideline on Environmental and Social Risk Management<sup>60</sup> for Banks and Financial Institutions, there now exists a framework in the country for domestic mobilization of environmentally and socially responsible investments. This Guideline requires financial institutions to integrate environmental risk and social management into credit risk processes. Blended finance options are increasingly being discussed at the policy level in Nepal, particularly since the 2019 Nepal Investment Summit 2019.

(b) Cambodia's Association of Banks has published sustainable finance principles implementation guidelines.<sup>61</sup> In 2018, IFC supported the first green bond by investing USD 20 million equivalent in riel-denominated bonds issued by the Cambodian microfinance institution Hattha Kaksekar Limited. The investment helped to create a domestic corporate bond market and allows Hattha Kaksekar Limited to expand its local currency lending to micro and small businesses, including farmers and women entrepreneurs. IFC, the Association of Banks in Cambodia and the Mongolian Bankers Association have signed a memorandum of understanding to jointly develop and promote an environmental and social risk management system and sustainable finance principles for Cambodian financial institutions.

(c) In fiscal year 2016, the new green bond-financed commitments of IFC were almost USD 1 billion across 22 countries, including new markets such as Bangladesh and Cambodia. Investments in green banking and green

building represented the two largest sectors. Furthermore, the Bangladesh Bank established its Sustainable Finance Policy and Rating for Banks and Financial Institutions, which provides a sustainable finance taxonomy and a sustainability rating system. Bangladesh's Sustainable Finance Policy, established in 2020, includes targets for green and sustainable finance in alignment with the Sustainable Development Goals and the country's NDC. In 2021, Bangladesh Bank officially asked all financial institutions to ensure that between 2 and 15% of their loans meet the sustainable finance requirements and 5% of the portfolio must also be green-finance-related.<sup>62</sup> Five investors have been prioritized for having the highest potential to invest in a green bond in Bangladesh because they have significant current exposure in both green bonds and emerging market debt: NN Investment Partners, PIMCO, Ostrum Asset Management, BNP Paribas and HSBC Bank. Additionally, four investors with dedicated green bond funds who also have high investment potential are Amundi Asset Management, Robeco, Nikko Asset Management and Lombard Odier, all being specialist asset managers that typically manage a number of funds with a clear environmental, social and governance focus.

(d) The number of regional green bond frameworks has increased, contributing to improved harmonization of practices and definitions. These include the ASEAN Green, Social, and Sustainability Bond Standards. Potential for green bond issuance varies among emerging market countries. In October 2020, ASEAN formulated the ASEAN Central Banks' Agenda on Sustainable Banking. This framework will encourage banks to align business practices with sustainability. A taxonomy across ASEAN, green lending principles and supervisory guidelines could support banks in integrating climate-related risks into their risk management. The ASEAN Green Map could strengthen efforts to green the financial system at the regional level.

108. Convergence is a global network for blended finance, generating blended finance data, intelligence and deal flow to increase private sector investment in developing countries. The global membership includes public, private and philanthropic investors, as well as sponsors of transactions and funds. All LDCs-Asia, with the exception of Bhutan, are currently priority countries.<sup>63</sup>

<sup>59</sup> Amundi Asset Management and IFC. 2020. *Emerging Market Green Bonds Report 2019: Momentum Builds as Nascent Markets Grow*. Amundi and IFC report and Amundi Asset Management and IFC. 2021. *Emerging Market Green Bonds Report 2020: On the Road to Green Recovery*. Amundi and IFC report.

<sup>60</sup> [https://www.nrb.org.np/contents/uploads/2019/12/Guidelines-Guideline\\_on\\_Environmental\\_\\_Social\\_Risk\\_Management\\_for\\_Banks\\_and\\_Financial\\_Institutions\\_2018-new.pdf](https://www.nrb.org.np/contents/uploads/2019/12/Guidelines-Guideline_on_Environmental__Social_Risk_Management_for_Banks_and_Financial_Institutions_2018-new.pdf).

<sup>61</sup> <https://www.ifc.org/wps/wcm/connect/8ce9ddc0-2422-4e69-aa8b-e4f3c8cc3eec/Cambodia+SF+Principles+-+Implementation+Guidelines.pdf?MOD=AJPERES&CVID=mGdMKuz>.

<sup>62</sup> IFC and Bangladesh Bank. 2020. *Green Bonds Development in Bangladesh – A Market Landscape*.

<sup>63</sup> [www.convergence.finance/design-funding/open-window/indo-pacific-open-window](http://www.convergence.finance/design-funding/open-window/indo-pacific-open-window).







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