



Climate finance in Bangladesh, India and Nepal

Nov 2022

A compendium of finance
sources and instruments to
support climate action



About the authors

This compendium was written by Ritu Thakur, Keshav Jha and Rahul Singh from ICLEI – Local Governments for Sustainability, South Asia, based in New Delhi, India.

Acknowledgements

We are extremely grateful to our external reviewers for their critical feedback and inputs:

- Mr. Kamal Devkota, Programme Director, Southasia Institute of Advanced Studies (SIAS)
- Mr. Allie Ebrahim, Director, Yubifin (Pty) Ltd.
- Mr. Chirag Gajjar, Head, Subnational Climate Action, Climate Programme, World Resources Institute (WRI)
- Ms. Shanice Mohanlal, CDKN Climate Finance Coordinator, SouthSouthNorth (SSN)
- Mr. S M Munjurul Hannan Khan, Climate Change and Environmental Expert, Bangladesh
- Dr. Indu K Murthy, Principal Research Scientist, Centre for Study of Science, Technology and Policy
- Mr. Pawan Kumar Neupane, Scientific Officer, Nepal Academy of Science and Technology
- Mr. Kamlesh Pillay, CDKN Climate Finance Lead, SSN
- Dr. Umamaheshwaran Rajasekar, Chair Urban Resilience – Global Resilience Cities Network, National Institute of Urban Affairs (NIUA)
- Ms. Divya Sharma, Executive Director-India, The Climate Group
- Dr. Pratima Singh, Research Scientist, Centre for Study of Science, Technology and Policy
- Mr. Yogendra Subedi, Senior Researcher and Programme Manager, Institute for Social and Environmental Transition (ISET)

We would also like to express our gratitude to Ms. Lisa McNamara (SouthSouthNorth, CDKN), Ms. Bedoshruti Sadhukhan (ICLEI South Asia, CDKN Asia) and Dr. Tanya Goodman for their review and editorial support.

List of abbreviations

ACROSS	Atmosphere and Climate Research Observing Modelling Systems and Services
ADB	Asian Development Bank
AEPC	Alternative Energy Promotion Centre
AE	Accredited Entity
AF	Adaptation Fund
AFD	Agence Française de Development
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
AMC	Advanced Market Commitment
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ASAP	Adaptation for Smallholder Agriculture Programme
ASDP	Agriculture Sector Development Programme
ASHA	Adaptation for Smallholders in Hilly Areas
BB	Bangladesh Bank
BCCRF	Bangladesh Climate Change Resilience Fund
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BCCTF	Bangladesh Climate Change Trust Fund
BCRWE	Building Climate Resilience of Watershed in Mountain Eco-Regions
BDP	Bangladesh Delta Plan
BDT	Bangladeshi Taka
BEE	Bureau of Energy Efficiency
BEIS	Business, Energy and Industrial Strategy
BMU	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BMUB	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
BMZ	Federal Ministry for Economic Cooperation and Development
BRT	Bus Rapid Transit
BRAC	Bangladesh Rural Advancement Committee
BRICS	Brazil, Russia, India, China, and South Africa
BUR	Biennial Update Report
BWDB	Bangladesh Water Development Board
CAF	Compensatory Afforestation Fund
CALIP	Climate Adaptation and Livelihood Improvement Project
CAQM	Commission for Air Quality Management
CBIT	Capacity-building Initiative for Transparency
CBT	Climate Budget Tagging
CCF	Climate Change Fund
CCFF	Climate Change Financing Framework
ccGAP	Climate Change and Gender Action Plan
CCSC	Climate Change Steering Committee
CDM	Clean Development Mechanism

CHF	Swiss Franc
CEIP	Coastal Embankments Improvement Project
CIDA	Canadian International Development Agency
CIF	Climate Investment Fund
CIP-EFCC	Country Investment Plan for Environment Forestry and Climate Change
CITIS	City Investments to Innovate, Integrate and Sustain
CMU	Country Management Unit
COP	Conference of Parties
COSOP	Country Strategic Opportunities Paper
CPEIR	Climate Change Public Expenditures and Institutional Review
CREF	Central Renewable Energy Fund
CSO	Civil Society Organisation
CSR	Corporate Social Responsibility
CTF	Clean Technology Fund
DANIDA	Danish International Development Agency
DDC	District Development Committee
DEECC	District Energy, Environment and Climate Change Section
DEFRA	Department for Environment, Food and Rural Affairs
DFID	Department for International Development, now known as the UK Foreign, Commonwealth and Development Office (FCDO)
DHM	Department of Hydrology and Meteorology
DIBs	Development Impact Bonds
DLS	Department of Livestock Services
DoA	Department of Agriculture
DoE	Department of Environment
DPSP	Dedicated Private Sector Programmes
DSCWM	Department of Soil Conservation and Watershed Management
DST	Department of Science and Technology
EbA	Ecosystem-based Approaches
EBRD	European Bank for Reconstruction and Development
ECD	Environment and Climate Division
EIB	European Investment Bank
Eoi	Expression of Interest
EPIC	Ecosystem Protecting Infrastructure and Communities
ERD	Economics Relations Division
ESG	Environmental, Social and Governance
EU	European Union
FAO	Food and Agriculture Organisation
FCDO	Foreign, Commonwealth and Development Office (previously DFID)
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Programme
FIP-SC	Forest Investment Programme Sub Committee
FNCCI	Federation of Nepalese Chamber of Commerce and Industry

FNCSI	Federation of Nepalese Cottage and Small Industries
FSF	Fast-Start-Finance
FSP	Full-Sized Project
GCCA	Global Climate Change Alliance
GCCC	Global Climate City Challenge
GCDB	Green Cities Development Bank
GCF	Green Climate Fund
GCoM	Global Covenant of Mayors
GDP	Gross Domestic Product
GED	General Economics Division
GEF	Global Environment Facility
GESI	Gender Equality and Social Inclusion
GFDRR	Global Facility for Disaster Reduction and Recovery
GFEI	Global Fuel Efficiency Initiative
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoB	Government of Bangladesh
GoI	Government of India
GoN	Government of Nepal
GPCB	Gujarat Pollution Control Board
GTF	Green Transformation Fund
HAP	Household Air Pollution
HDI	Human Development Index
HIDCL	Hydroelectricity Investment and Development Company Limited
HRIDAY	Heritage City Development and Augmentation Yojana
IBRD	International Bank for Reconstruction and Development
ICCA	Initiative for Climate Change Adaptation
ICIMOD	International Centre for Integrated Mountain Development
ICLA	Infrastructure, Cities and Local Action
IADB	Inter American Development Bank
IsDB	Islamic Development Bank
IDCOL	Infrastructure Development Company Limited
IDRC	International Development Research Centre Canada
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IKI	International Climate Initiative
INR	Indian Rupee
IPCC	Intergovernmental Panel on Climate Change
IPPAN	Individual Power Producers Association of Nepal
IPP	Independent Power Producer
IREDA	Indian Renewable Energy Development Agency
IRFC	Indian Railway Finance Corporation
IRM	Initial Resource Mobilisation

JICA	Japan International Cooperation Agency
KfW	German Development Bank
LAPA	Local Adaptation Plan of Action
LDCF	Least Developed Countries Fund
LECDS	Low-Carbon Economic Development Strategy
LGED	Local Government Engineering Department
LUCI	Leadership for Urban Climate Investment
MDBs	Multilateral Development Banks
MoA	Ministry of Agriculture
MoAD	Ministry of Agricultural Development
MoAFW	Ministry of Agriculture and Farmers' Welfare
MoEF	Ministry of Environment and Forest (replaced by Ministry of Environment, Forest and Climate Change, MoEFCC)
MoEFCC	Ministry of Environment, Forest and Climate Change
MoEST	Ministry of Environment, Science and Technology
MoF	Ministry of Finance
MoFE	Ministry of Forests and Environment
MoFSC	Ministry of Forests and Soil Conservation
MoHUA	Ministry of Housing and Urban Affairs
MoNRE	Ministry of New and Renewable Energy
MPEMR	Ministry of Power, Energy and Mineral Resources
MoSTE	Ministry of Science, Technology and Environment
MoWR	Ministry of Water Resources
MSME	Micro-, Small- and Medium-sized Enterprises
MSP	Medium-Sized Project
MW	Megawatt
NABARD	National Bank for Agriculture and Rural Development
NAFCC	National Adaptation Fund for Climate Change
NAP	National Adaptation Plan
NAPAs	National Adaptation Programs of Actions
NAPCC	National Action Plan on Climate Change
NARC	Nepal Agricultural Research Council
NBFC	Non-Banking Finance Companies
NBSAP	National Biodiversity Strategy Action Plan
NCAP	National Clean Air Plan
NCCSP	Nepal Climate Change Support Programme
NCF	Nordic Climate Facility
NDA	National Designated Authority
NDB	New Development Bank
NDC	Nationally Determined Contributions
NDF	Nordic Development Fund
NEEP	Nepal Energy Efficiency Programme
NGOs	Non-Governmental Organisations

NICFI	Norway International Climate and Forest Initiative
NICRA	National Initiative on Climate-Resilient Agriculture
NIE	National Implementing Entity
NIUA	National Institute of Urban Affairs
NMEEE	National Mission for Enhanced Energy Efficiency
NMGI	National Mission for Green India
NMSA	National Mission on Sustainable Agriculture
NMSH	National Mission on Sustainable Habitat
NMSHE	National Mission for Sustaining the Himalayan Ecosystem
NMSKCC	National Mission on Strategic Knowledge for Climate Change
NORAD	Norwegian Agency for Development Cooperation
NPR	Nepalese Rupee
NREP	Nepal Renewable Energy Programme
NRREP	National Rural Renewable Energy Programme
NSM	National Solar Mission
NTNC	National Trust for Nature Conservation
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OOF	Other Official Flows
OPIC	Overseas Private Investment Corporation
OSC	Operational Strategy and Policy Guidance Committee
PAT	Perform Achieve and Trade
PDR	Project Design Report
PFC	Power Finance Corporation
PCMC	Pimpri Chinchwad Municipal Corporation
PIF	Project Identification Form
PKSF	Palli Karma Sahayak Foundation
PMAMP	Prime Minister Agriculture Modernisation Programme
PPCR	Pilot Program for Climate Resilience
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public Private Partnership
PRSP	Partial Risk Sharing Program
PV	Photovoltaic
RBF	Results-Based Financing
RECs	Renewable Energy Certificates
RERED	Rural Electrification and Renewable Energy Development
RERL	Renewable Energy for Rural Livelihood
RIMS-Nepal	Resource Identification and Management Society-Nepal
SAPCC	State Action Plans on Climate Change
SASEC	South Asia Sub-regional Economic Cooperation
SBI	State Bank of India
SCCF	Special Climate Change Fund
SCF	Strategic Climate Fund

SCM	Smart Cities Mission
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SECURE	Sustainable Use and Restoration of High Range Himalayan Ecosystems
SEDA	Sustainable Energy Development Authority
SEID	Sustainable and Efficient Industrial Development
SIBs	Social Impact Bonds
SIDA	Swedish International Development Agency
SIDBI	Small Industries Development Bank of India
SLACC	Sustainable Livelihoods and Adaptation to Climate Change
SME	Small- and Medium-sized Enterprise
SREDA	Sustainable Renewable Energy Development Authority
SREP	Scaling Up Renewable Energy Programme
SSCF	South-South Climate Finance
SSTrC	SouthSouth Triangular Cooperation
STF	Spanish Trust Fund
TAP	Transformative Actions Programme
TCCL	Tata Cleantech Capital Limited
ULBs	Urban Local Bodies
UN REDD	United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UK	United Kingdom
USA	United States of America
USAID	United States Agency for International Development
VCS	Voluntary Carbon Standard
WII	Weather Index Insurance
WWF	World Wildlife Fund for Nature

Currency equivalents

As of June 2022

- 1 US\$ = 78.19 Indian Rupee (INR)
- 1 US\$ = 92.93 Bangladeshi Taka (BDT)
- 1 US\$ = 125.09 Nepalese Rupee (NPR)
- 1 crore = 10 million
- 1 crore = 0.01 billion

Table of contents

1. Introduction	4
1.1 The purpose and scope of the compendium	4
1.2 Why finance climate action?	6
1.3 Climate change risk and finance needs in South Asia	7
1.4 The global climate finance landscape	9
2. Multilateral and bilateral sources.....	16
2.1 Overview of multilateral and bilateral sources	16
2.2 Multilateral climate funds.....	18
2.3 Multilateral Development Banks (MDBs)	22
2.4 Multilateral finance sources in Bangladesh, India and Nepal	23
2.2 Bilateral climate finance	37
3. Financing climate action in Bangladesh, India and Nepal	42
3.1 Bangladesh.....	42
Country profile and global climate change commitments.....	42
Climate finance needs.....	45
The climate finance landscape in Bangladesh: Sources and instruments.....	46
International climate finance sources in Bangladesh.....	46
Domestic climate finance sources.....	61
Private finance sources and opportunities	70
3.2 India.....	72
Country profile and global climate change commitments.....	72
Climate finance needs.....	75
The climate finance landscape in India: Sources and instruments	76
International climate finance sources in India	76
Domestic climate finance sources	88
Private finance sources and opportunities	96
3.3 Nepal	98
Country profile and global climate change commitments	98
Climate financing needs.....	100
The climate finance landscape in Nepal: Sources and instruments	100
International climate finance sources in Nepal	101
Domestic climate finance sources.....	110
Private finance sources and opportunities	117
4. Tools and platforms for facilitating climate finance at the local level	120
5. Accessing climate finance: Challenges faced by Bangladesh, India and Nepal.....	123
6. Recommendations to improve the access to and use of climate finance in Bangladesh, India and Nepal	126
7. Endnotes.....	132

List of figures

- Figure 1: International climate finance sources and actors 10
- Figure 2: Climate finance provided and mobilised (US\$ billion)..... 14
- Figure 3: Public climate finance per instrument, excluding export credits (US\$ billion)..... 14
- Figure 4: Thematic split of climate finance provided and mobilised (US\$ billion)..... 15
- Figure 5: Regional split of climate finance provided and mobilised 2016–19, annual average (US\$ billion)..... 15
- Figure 6: Multilateral and bilateral sources of climate finance 16
- Figure 7: Evolution of multilateral climate finance from 2001–2021 17
- Figure 8: Multilateral climate funds..... 18
- Figure 9: Allocation of funds from MDBs to low-income and middle-income economies, by region (in 2020).....22
- Figure 10: Climate projections and key climate impacts in Bangladesh..... 42
- Figure 11 Timeline of climate change policies, frameworks and strategies in Bangladesh 43
- Figure 12: Trend of climate-relevant allocation and expenditure in selected ministry/division budgets 62
- Figure 13: Climate-relevant allocation (%) across BCCSAP thematic areas in FY2021–22..... 62
- Figure 14: BCCTF allocations to the BCCSAP themes..... 63
- Figure 15: Climate projections and key climate impacts in India 72
- Figure 16: Climate change policies, strategies and frameworks in India..... 73
- Figure 17: Allocation of funds to the NAFCC over 2015–2021 in INR crore..... 88
- Figure 18: Climate projections and key climate impacts in Nepal 98
- Figure 19: Climate change policies, frameworks and strategies in Nepal..... 99
- Figure 20: Analysis of international climate funds received by Nepal from 2013–2017 102
- Figure 21: Allocation of climate-relevant budget in Nepal in 2021–22 111
- Figure 22: Climate-relevant budget allocation at the local level (2021–22) 111
- Figure 23: Allocation of climate-relevant budget from 2013–2021 in Nepal..... 112
- Figure 24: Climate change budget allocation of key ministries in Nepal for 2021–2022 112
- Figure 25: Barriers to access climate finance 123
- Figure 26: Recommendations to improve the access to and use of climate finance in Bangladesh, India and Nepal 126

List of tables

Table 1: An overview of the finance categories considered in this report	4
Table 2: Instruments for the public sector to mobilise private finance	11
Table 3: Total MDB climate finance by type of recipient (in US\$ million)	22
Table 4: Climate finance received by Bangladesh, India and Nepal from MDBs (2016–2020)	23
Table 5: Multilateral climate finance available in Bangladesh, India and Nepal	24
Table 6: Bilateral channels for climate finance in focal countries	37
Table 7: Climate finance sources and instruments in Bangladesh	46
Table 8: International climate finance sources in Bangladesh (2010-to date)	47
Table 9: Climate finance from domestic sources in Bangladesh	63
Table 10: Budget allocation for the CIP-EFCC over the course of five years (2016–21) in Bangladesh	64
Table 11: Budget allocated in the last seven years (2015–2022) for adaptation and mitigation actions identified under the previous NDC (2015)	67
Table 12: Estimates for mitigation actions identified in the updated NDC (2021)	69
Table 13: Climate finance sources and instruments in India	76
Table 14: India’s total funding from the GEF (2000–2022)	77
Table 15: International climate finance sources in India (2012 to date)	78
Table 16: Budget allocation for the NAPCC in India	89
Table 17: Climate finance landscape in Nepal	101
Table 18: International climate finance sources in Nepal (2012 to date)	103
Table 19: Allocation of climate-relevant budget across the levels of governance in Nepal (2021–2022)	112
Table 20: Priority programmes identified under the NAP (2021–2050) and envisaged budget	113

Forewords



The Government of Bangladesh (GoB) is deeply involved in action on climate change. The topography and geographical location of the country, along with the socio-economic factors, make the country significantly vulnerable to climate change impacts. The Global Climate Risk Index 2021 ranked Bangladesh the 13th most climate change impacted countries in the world. As per the Nationally Determined Contribution (NDC) of the country, climate change can incur an annual loss of 2% of the Gross Domestic Product (GDP) by 2050 and 9.4% of GDP by 2100 for Bangladesh.

Although the national government has come up with a range of policies, programmes and institutional initiatives including the National Adaptation Programmes of Action (NAPA), Bangladesh Climate Change Strategy and Action Plan (BCCSAP), and more

recently the Bangladesh Delta Plan (BDP 2100), overcoming the climate challenges in Bangladesh will require a strong political will, effective institutional structures, sufficient technical capacity, and strategic and efficient use of domestic as well as international climate finance. The Bangladesh Climate Change Trust Fund (BCCTF) was developed in 2010 to finance climate action by the government. Currently, the Bangladesh Climate Fiscal Framework of 2014 provides principles and tools for climate fiscal policymaking as well as sensible distribution of resources among development sectors. However, local governments face considerable challenges in applying for and accessing climate finance in Bangladesh due to the limited information and capacity on climate finance that is accessible to them.

This document – *Climate finance in Bangladesh, India, and Nepal: A compendium of finance opportunities and funding instruments to support climate action* – prepared by CDKN Asia thus comes at an opportune time, especially when the country is responding to the unprecedented crisis by the Covid-19 pandemic with equally unparalleled recovery measures. I am confident that the compendium, through its overarching view of the national and global climate finance landscape in Bangladesh, will help to navigate the evolving framework of climate finance. Encapsulated information on international climate finance would bring immense benefits to its users.

I would like to thank the team at CDKN Asia for taking on this compendium in such a robust and structured way. I am sure that the compendium will be able to draw the attention of larger stakeholders including policy-makers, decision-makers, think tanks, non-governmental organisations (NGOs), civil society organisations (CSOs), media, private sector, and other practitioners to the various financing opportunities available, the pattern of resource allocation and expenditure, and other relevant information regarding climate finance, accessibility and drive towards a more sustainable pathway.

Dr. S. M. Munjurul Hannan Khan
Former Additional Secretary
Ministry of Environment, Forest and Climate Change (MoEFCC)
The Government of the People's Republic of Bangladesh



This publication comes at a time when there is a larger realisation among varied stakeholders of the imperative to undertake climate action. While this need is recognised, the means and approaches for implementing impactful climate responses at scale are still a challenge. This is more applicable for countries in the global South and more specifically for countries in South Asia, where the focus of development and investments are more towards basic infrastructure and return on investment. While the developmental needs are of high priority, innovative projects are needed for mitigating and adapting to current climate variability and future possible changes. This will require change from business-as-usual approaches through either alternate or additional finance mechanisms.

Having worked in climate resilience for more than a decade, I personally know that while finance for climate action is available, it is usually considered as a black box by several developmental professionals and more so by government agencies, who find it too difficult to keep track and access the different sources given their varying institutional mandates and needs. This compendium tries to bridge that gap, by providing an insight into the black box and demystifying the types of finance instruments and amounts available, and their modalities for Bangladesh, India and Nepal. The document is well structured and provides information on a range of finance options available for different types of interventions.

The authors and partnering institutions have invested much time and effort to make this publication relevant to diverse stakeholders, while ensuring that complex finance landscape is demystified to help non-financial experts to understand and choose the most appropriate alternatives for their context. I am sure this compendium with its comprehensive lists and simplified reference to detailed online resource materials can act as a guide. This is especially so for government officials and development professionals who would like to access additional finance for implementing sustainable and climate-resilient actions on the ground.

Dr. Umamaheshwaran Rajasekar
Chair Urban Resilience – Global Resilience Cities Network
National Institute of Urban Affairs
India



Nepal is highly vulnerable to the impacts of climate change. Climate-related natural hazards, such as floods, landslides, drought and extreme weather events, are already causing loss of life, and widespread damage to livelihoods and property. Despite the country's negligible greenhouse gas (GHG) emissions, Nepal is committed to translate the Paris Agreement into action on climate change in the country. Nepal's climate change commitments require a considerable investment in adaptation and mitigation. It is estimated that our country would need an additional investment of at least US\$ 2.4 billion from now to 2050 to build sufficient climate resilience.

Moreover, climate change has become one of the top priorities of Nepal's development policies and plans. Nepal submitted its Nationally Determined Contribution (NDC) to the United Nations

Framework Convention on Climate Change (UNFCCC) in December 2020. Nepal has been a front runner in preparing a National Adaptation Programme of Action (NAPA) and introducing a climate budget code to track climate-change related expenditure on a regular basis. The revised Climate Change Policy (2019) focusses on mobilising financial resources from bilateral and multilateral sources to mitigate and adapt to climate change.

Adequate and sustained financing will be required to implement Nepal's climate change-related policies and plans. This *compendium of finance sources and instruments to support climate action*, prepared by CDKN Asia, helps to set out the finance opportunities and funding instruments to support climate action. I believe that the compendium will help to enable policy-makers and practitioners to assess the overall climate finance landscape in their countries.

I would like to thank the team at CDKN Asia for developing this compendium. I am hopeful that it will provide reliable information to assist policy-makers and planners focussed on climate change management to make evidence-based decisions.

Pem Narayan Kandel, PhD
Secretary, Ministry of Forests and Environment
Government of Nepal

Executive summary

Although it has become increasingly clear that climate change impacts are already being experienced around the world, the recent report – *Climate Change 2021: The Physical Science Basis* – released in 2021 by the Intergovernmental Panel on Climate Change (IPCC) reconfirms unequivocally that human-induced climate change has intensified and recent observed changes in the climate system are widespread, rapid and intensifying; and unprecedented in thousands of years.¹ Intense heat waves and extreme weather phenomena are likely to become more common in South Asia. The report warns that unless there is a rapid and large-scale reduction in greenhouse gas (GHG) emissions, the chance of meeting the internationally-agreed target of limiting warming to a 1.5°C threshold will be beyond reach.

The forthcoming years will be critical if the world is to prevent the most catastrophic impacts of climate change. We need to ramp up our collective efforts to reduce GHG emissions as rapidly as possible, and – at the same time – invest in measures to adapt to the changing climate and increase resilience to more extreme weather events in the future. And this will need trillions of dollars. Accelerating the implementation of the Paris Agreement along with other international goals and commitments will require greater mobilisation and shifting of investments – both public and private – towards climate action. To this end, the role of climate finance at all governance levels – international, multilateral, national, subnational and local – is crucial.

Climate Finance in Bangladesh, India and Nepal: A compendium of finance sources and instruments to support climate action has been developed as a primer for the South Asia focal countries under the Climate and Development Knowledge Network (CDKN) programme – Bangladesh, India and Nepal – to enhance their awareness of the various opportunities available to finance their climate activities. The compendium has been developed for national and subnational policy-makers, decision-makers, elected representatives, climate and urban practitioners, as well as experts involved in assisting governments in catalysing finance for climate investment. It may also be useful for municipal officials, donors, private investors, non-governmental organisations (NGOs) and other civil society organisations (CSOs) that provide technical support and advice while preparing funding proposals.

The compendium provides a detailed overview of the climate finance landscape in the three countries both within and outside of the financial mechanisms of the United Nations Framework Convention on Climate Change (UNFCCC). It outlines the various international, multilateral and bilateral sources of climate finance available, along with the volume of funds from these sources, the various intermediaries involved in channelling finance, as well as the instruments used, and purposes and sectors served. Domestic resources play a pertinent role in scaling up climate action and, hence, the compendium also includes information on domestic financial resources committed and mobilised by the three national governments.

The compendium also briefly touches upon the growing private channels for financing climate action in the three countries, along with some innovative instruments. It identifies various platforms and tools for cities in the three countries to explore for accessing finance to implement climate actions at the local level. Finally, the compendium provides a set of recommendations for the three countries to enhance the access, planning, use and monitoring of climate finance. It is recommended that Bangladesh, India and Nepal:

- **Mainstream climate finance into public financial management systems** and adopt the practice of Climate Budget Tagging (CBT) to help integrate climate change in public financial planning and management. Mainstreaming climate finance across a government's budget will help streamline reporting on spending and make it more regular and transparent, thereby demonstrating the cross-cutting impact of climate-related programming.

- **Strengthen technical capacity** and financial expertise to design, implement and monitor climate finance projects and programmes through a project preparation facility. The project preparation facility will help develop a pipeline of 'bankable' or investment-ready projects, improve the quality of project proposals to access finance for specific climate change-related programmes, assist in identifying finance opportunities, and provide support for developing relevant measurement, reporting and verification (MRV) systems.
- **Establish and strengthen institutional arrangements with clear roles and responsibilities** to demonstrate high standards in fiduciary systems, environmental and social safeguards, management practices, transparency and accountability. This will help to build credibility and demonstrate to financiers that countries will use funds and monitor implementation effectively. Ensuring that at least one or more institutions become approved as accredited entities at the national and subnational level to the relevant fund will facilitate the overall process of accessing international climate finance.
- **Develop and institutionalise robust MRV systems** to enhance the access and effectiveness of climate finance by processing climate finance information periodically, supporting transparency, assessing compliance with international climate change commitments as well as the effectiveness of climate change activities against international metrics/measures. This will increase the trust between the donors and recipient countries, which could result in increased financial flows.
- **Mainstream and integrate gender equality and social inclusion in policies and practices** by including a robust set of social, gender and environmental safeguards and guidelines during the project design phase, as well as identifying and budgeting for any capacity-building and other support needed for the whole project team to guarantee gender equality and women's full participation throughout project cycle. Local gender experts need to lead gender work, and local women's groups and gender institutions must be engaged throughout the project. They are the most knowledgeable about the gender norms and dynamics at work within communities.²
- **Aggressively pursue blended finance** as a financial structuring tool where catalytic finance (from public and philanthropic sources) can be used to attract private finance at scale. Blended finance helps to reduce perceived risks and lowers the cost of capital, allowing a crowding-in of private sector capital.
- **Enhance domestic enabling environments to attract private and public finance** through robust and predictable regulatory frameworks and well-designed economic incentives to appeal to public and private international climate finance providers. National governments need to create the necessary enabling regulatory environment through policy measures and guiding documents that: 1) facilitates the flow of resources from the national to the local level where climate action takes place, 2) ensures more autonomy for local and regional governments to systematically leverage investments from public-private partnerships, and 3) provides attractive financial incentives, such as subsidies, tax rebates, etc.
- **Improve research and knowledge sharing to develop robust project proposals by** identifying and collaborating with multiple stakeholders – including CBOs, think tanks and NGOs – to deliver locally-relevant research outputs, which can then inform the prioritisation of climate finance needs and project proposals and design. Urban practitioners and decision-makers should have relevant climate information to address information gaps and develop pro-poor and inclusive project proposals that address the needs of communities and clearly outline the scientific basis for the project.

- **Build the capacity of non-state stakeholders and local organisations to act on climate change** and facilitate the channelling of finance to local levels as well as the effective use of resources. Domestically, coordinated and informed non-state actors can play a greater role in accessing additional climate finance from national and international sources, and support government to strengthen Nationally Determined Contribution (NDC) implementation.

Lastly, the Covid-19 pandemic has drastically altered the context for international climate finance. The pandemic has highlighted that the old 'normal' was deeply fragile and unsustainable. The Covid-19 crisis presented an enormous threat, but also an opportunity to restructure economies at the pace and scale the climate crisis requires. In the aftermath of the Covid-19 pandemic, it is imperative for the governments, while 'building back better', to simultaneously tackle the Covid-19 and climate crises and ensure that funds are directed towards creating long-term, sustainable impact.



Local residents cross a flooded stream in Raigad district, Maharashtra, India. © Akella Srinivas Ramalingaswami via Shutterstock

1. Introduction

1.1 The purpose and scope of the compendium

There is a critical need to enhance the capacity of developing countries to access, allocate and spend climate finance effectively. In response, the *Climate finance in Bangladesh, India and Nepal: A compendium of finance sources and instruments to support climate action* aims to generate awareness among national and subnational policy-makers, decision-makers, and climate practitioners about the spectrum of opportunities available to the South Asian countries of Bangladesh, India and Nepal to finance their mitigation and adaptation actions. It has been developed by ICLEI South Asia under the Climate and Development Knowledge Network (CDKN) programme.

Who is the compendium for?

The compendium has been developed for key actors and stakeholders in the three focus countries, including elected representatives and climate practitioners. It may also be useful for municipal officials, donors, private investors, NGOs and other CSOs who provide technical support and advice to those responsible for preparing project and/or funding proposals.

What does it cover?

This compendium provides a detailed overview of the climate finance landscape in Bangladesh, India, and Nepal, both within and outside of the financial mechanism of the UNFCCC. It provides insights on the evolution of the climate finance architecture in the three countries and assesses opportunities and challenges to accessing and mobilising finance for climate action.

Table 1 below gives an overview of the different categories of international and domestic finance sources and instruments detailed in the document for the three countries.

TABLE 1: An overview of the finance categories considered in this report³

Scale	Category	Coverage	Instruments
International	Multilateral	Climate finance flows from Multilateral Development Banks (MDBs) and climate funds set up by developed countries for developing countries; developed countries' climate-related inflows to other multilateral channels	Grants, loans, equity
	Bilateral	Climate finance flows from donor governments to recipient country governments and/or civil society organisations (NGOs or CBOs)	Grants, loans, equity
	Private funds	Private finance mobilised by bilateral and multilateral public climate finance	Private finance mobilised by grants, loans, equity and guarantees
Domestic	National budgets, taxes, subsidies	Funds allocated in the national budget for climate actions and allocation to subnational governments	Grants, loans, taxes or levies
	Private funds	Finance mobilised by project developers, commercial financial institutions, philanthropies, corporate actors	Finance from carbon markets, debt instruments, equity finance and partial risk guarantee facilities

Compendium structure

The compendium has six chapters covering the following topics:

- The **first chapter** briefly introduces climate change threats in South Asia, focusing on Bangladesh, India and Nepal specifically. The chapter provides an estimate of the investment required for the three countries to move towards low-emission and climate-resilient development. It also provides an overarching view of the global climate finance landscape and different financing instruments.
- The **second chapter** presents the evolution of multilateral climate finance and captures the climate finance flowing through multilateral channels both within and outside of the UNFCCC financial mechanism, as well as through bilateral and regional channels. This section also provides a brief overview of various multilateral and bilateral funds directed towards climate action in the three countries.
- The **third chapter** discusses the overall climate finance landscape in the three countries, including multilateral, bilateral, domestic and private channels. It provides an in-depth analysis of the countries' policy and regulatory landscape, along with various programmes and policies to integrate climate change in planning, budgeting and financial monitoring. The chapter also assesses national governments' domestic finance commitments to climate action over recent years, followed by upcoming private sources of finance for funding climate actions.
- The **fourth chapter** collates information on various platforms and tools that can assist cities to explore financing opportunities and identify and implement climate-resilient development projects.
- Based on the research and analysis, the **fifth chapter** identifies key challenges faced by developing countries to access finance for climate action, including policy, regulatory, institutional, technical, financial, business and social barriers.
- Finally, in the **sixth chapter**, the compendium builds on the key insights and learning gathered to provide a set of recommendations to improve the access, planning, use and monitoring of climate finance in Bangladesh, India and Nepal.

Limitations

While efforts have been made to capture the most comprehensive and latest information available about sources and financial instruments driving climate investment in Bangladesh, India and Nepal, the authors wish to acknowledge the limitations due to data coverage. This includes data gaps where investments are made but are not necessarily categorised as climate action, and the potential issue of double counting where the same financial flows are counted for both climate and development activities. There is also a lack of clear and agreed definitions for climate finance across the three countries, with no set boundaries to ascertain the scope of low-carbon and climate-friendly investments given the lack of a common approach.

The compendium is developed primarily by desk research consulting a range of information sources and includes information available in the public domain. As such, the figures presented might not necessarily capture all finance for climate action in the three countries. The compendium, thus, presents the most recent information available at the time of writing. It does not aim to be exhaustive or prescriptive and should be considered as a 'living' document that will need to be regularly updated to reflect ongoing shifts in climate finance flows.

1.2 Why finance climate action?

Climate change is one of the most pressing threats to development today. The recent report by the IPCC – *Climate change 2021: The physical science basis (2021)*⁴ – unequivocally asserts that the climate is indeed warming due to human activities. The report outlines that climate change will increase in all regions of the globe over the coming decades and, even with 1.5°C global warming, there will be increasing heat waves, longer warm seasons and shorter cold seasons – which will become more intense at 2°C of warming. The IPCC’s *Mitigation of climate change (2022)* report warns that unless there are rapid and deep reductions in GHG emissions, limiting warming to close to 1.5°C, or even 2°C, will be beyond reach.⁵

Unquestionably, the changing climate will impact everyone, but those who will suffer the most will be the vulnerable and the poor.⁶ The landmark Paris Agreement of 2015 aims to substantially reduce global GHG emissions to limit global warming to well below 2°C and pursue efforts to limit it to 1.5°C. However, without a drastic transition from a business-as-usual scenario limiting warming to 1.5°C, while also moving towards sustainable development, will be extremely difficult, if not impossible.

Although achieving a 2°C goal will avoid many devastating impacts from climate change, if we can reach a 1.5°C goal or lower, the consequences will be significantly less severe. For example, studies have highlighted that 2°C warming in South Asia will increase people’s exposure to unsafe labour temperature by more than two-fold and exposure to lethal temperatures by 2.7 times as compared to recent years, while limiting warming to 1.5°C will likely reduce that exposure to half.⁷

There is, therefore, a significant incentive for countries to move towards a new paradigm that supports low-emission and climate-resilient development. However, the cost for achieving climate targets is massive, especially for developing countries, and the need for finance, technology and capacity-building are urgent and immediate.

*The United Nations Environment Programme (UNEP) estimated in 2021 that the cost of adapting to climate change in developing countries alone could amount to US\$ 300 billion per year by 2030.*⁸ As of 31 May 2021, developing countries estimated finance needs across 78 Nationally Determined Contributions (NDCs) cumulatively amounted to US\$ 5.8–5.9 trillion up until 2030 (with more costs identified for mitigation than adaptation).⁹

The longer the status quo is maintained, the more it will cost and the greater the technological, economic, social and institutional challenges. This puts an additional stress on developing countries, which are at a critical juncture between sustaining their economic growth and reducing emissions.

Many countries have highlighted the need for scaled-up international support in implementing their UNFCCC National Adaptation Plans (NAPs) as well as increasing the ambition of their NDCs. Policies need to be backed by financial commitments if countries are to “reduce their emissions, decarbonise their economies, and adapt to the impacts of climate change”.¹⁰ The Paris Agreement reiterated that developed countries need to take the lead in mobilising climate finance “from a wide variety of sources, instruments and channels” in a “progression beyond previous efforts” for supporting climate actions in developing countries.¹¹

The target for developed countries to mobilise US\$ 100 billion a year by 2020 for developing countries was based on a commitment developed countries made 11 years ago in Copenhagen in 2009, and then confirmed in the Cancun Agreements in 2010 and the Durban Platform in 2011. In the Paris Agreement this target was reiterated, with a goal of raising the target after 2025. However, the US\$ 100 billion a year goal has not yet been met and is estimated only to be achieved by 2023.¹²

Work has also begun on setting a new and more ambitious post-2025 climate finance goal that is led by the needs and priorities of developing countries.¹³

The magnitude of finance required for moving to a low-carbon and climate-resilient economy implies that in all circumstances public budgets alone will be insufficient to address the financing challenge. Therefore, the full strength of the entire financial sector would be needed and climate finance from multiple sources indisputably plays a pivotal role.

1.3 Climate change risk and finance needs in South Asia

South Asia, home to around 1.5 billion people, is recognised as being highly vulnerable to climate variability and change, particularly due to high population density, poverty and lack of resources for adaptation and mitigation. According to the latest IPCC *Climate change 2021: The physical science basis* (2021) report,¹⁴ intense heat waves and extreme weather phenomena involving high humidity, increased monsoon precipitation extremes as well as increase in droughts are likely to become more common in South Asia. It has been observed that the Indian Ocean has warmed faster than the global average, and the report warns that the global warming of 2°C above pre-industrial levels would result in the increase of numerous hazard thresholds for marine ecosystems.

Climate change impacts in South Asian countries are multifaceted, and these countries face huge challenges when seeking to avoid enormous social, economic and environmental damage. Climate change could result in a loss of 2% of Gross Domestic Product (GDP) in South Asian countries by 2050.¹⁵ Disasters caused by natural hazards in the region already resulted in damage worth US\$ 149.27 billion between 2000 and 2017.¹⁶ The assessment from the Asian Development Bank (ADB) indicates that South Asia could lose an equivalent of 1.8% of its annual GDP by 2050 under a business-as-usual scenario, and this would progressively increase to 8.8% by 2100.¹⁷

The International Finance Corporation (IFC) estimated in 2017 that if each South Asian country fully meets its NDC, a US\$ 3.4 trillion climate investment opportunity will arise in South Asia in key sectors (such as renewable energy, green building, transport) between 2018 and 2030.¹⁸ Of this, US\$ 3.1 trillion in investment opportunities will emerge in India alone due to the scale of its economy and population.

Bangladesh

According to the Global Climate Risk Index 2021, Bangladesh was ranked 13th among the countries most impacted by climate change in the world from 1999–2018.¹⁹

Bangladesh's topography and geographical location make it particularly susceptible to extreme weather events, including cyclones, floods and storm surges. Its vulnerability is caused not only by its biophysical factors (being a flat, low-lying delta country exposed to flooding and cyclones), but also its socio-economic factors (such as its dependence on agriculture, high population density and high rates of poverty).²⁰

The World Bank (2018) projects that Bangladesh's average annual temperatures are expected to rise by 1.0°C to 1.5°C by 2050, even if preventive measures are taken along the lines of those recommended by the Paris Agreement. Further, if no measures are taken, then the country's average temperatures are projected to increase by 1.0°C–2.5°C by 2050. It is estimated



A man wades through flood water in Dhaka, Bangladesh. © Rehman Asad via Shutterstock

that this could cost Bangladesh 6.7% of GDP and depress the living standards of more than three-quarters of the country's population by 2050.²¹ It is calculated that the country will need about US\$ 3 billion per year to achieve climate adaptation by 2030, and about US\$ 2 billion per year to mitigate against the effects of climate change over the same period. The average domestic and international investment for adaptation amounts to US\$ 1.3 billion, leaving a US\$ 1.7 billion climate finance 'adaptation gap' each year.²²

India

The Climate Risk Index of 2021 has ranked India as the seventh most climate-vulnerable country in the world. The country has also recorded the highest number of fatalities due to climate change globally, and the second highest global monetary losses from its impact in 2018.²³ It is estimated that extreme weather events are costing India US\$ 9–10 billion annually, and climate change is projected to impact agricultural productivity with increasing severity from 2020 to the end of the century.²⁴ Recently, the Indian agriculture ministry warned in the media that there could be a 10–40% decrease in major crop productivity by 2100 in comparison to 2020, unless farming practices are adapted to climate change-induced weather patterns.²⁵

The country's 2015 NDC indicated that India would need around US\$ 206 billion between 2015 and 2030 for implementing adaptation actions in key areas like agriculture, forestry, fisheries, infrastructure, water resources and ecosystems. Apart from this, additional investments are needed for strengthening resilience and disaster management. The NDC preliminary total estimates for meeting India's climate change actions between 2015 and 2030 are US\$ 2.5 trillion.²⁶

Nepal

Nepal is expected to lose around a fifth of its glaciers by 2100, even if emissions are strictly curtailed immediately.²⁷ If business-as-usual continues, however, glacier loss will increase to one-third – severely endangering the fragile ecosystem and the livelihoods of the 250 million people who live in the region, as well as the 1.65 billion who live downstream. Climate change is likely to exacerbate both flooding and droughts, which can affect infrastructure, livelihoods and hydropower.

According to the Global Climate Risk Index 2021, Nepal is ranked as the 12th most vulnerable country to climate change.²⁸ It is estimated that increased variability and more extreme climate events in Nepal could lead to a loss of 2–3% of GDP per year in the water management and agricultural sectors, with an anticipated loss of almost US\$ 62.38 billion by the year 2050.²⁹ Financial loss due to floods alone was estimated to be about Nepalese Rupees (NPR) 15.5 billion (US\$ 0.12 billion), whereas the estimated cost from landslides is over NPR 1 billion (US\$ 7.97 million) between the years 2010 and 2016.³⁰ Out of 77 districts, 29 are vulnerable to landslides, 22 to droughts, 12 to glacial outbursts, and nine to flash floods.³¹



In addition to economic losses, the climate change impacts threaten the development trajectory of the country with consequent socio-environmental disruptions. It is estimated that Nepal would need an additional investment of at least US\$ 2.4 billion from now to 2050 to build sufficient climate resilience.³²

Glacial Lake in Himalayan Mountains in Nepal. © Tristan Barrington via Shutterstock

Given the current and future projections of climate change and the cost of its impacts, it is evident that the countries of South Asia will experience massive economic, social and environmental damage, threatening their development growth potential. In order to withstand the shocks, enhance their resilience, and grow into a low-carbon economy without compromising their future ambitions, South Asian countries will require a substantial amount of financial and technological support to enable mitigation and adaptation.

1.4 The global climate finance landscape

The authors of the compendium acknowledge that there is no universally agreed definition of the 'climate finance'. The UNFCCC (2016) defines climate finance as financial resources that aim to reduce emissions and increase sinks of GHGs by "reducing the vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts".³³

International climate finance can be mobilised through multiple channels both within and outside of the UNFCCC financial mechanism, including from bilateral, multilateral as well as regional and national sources. Climate finance can be both public and private. **Public sources** include financial resources from multilateral organisations, government, aid agencies and Multilateral Development Banks (MDBs). **Private sources**, such as commercial financial institutions, philanthropies, corporate and social investment actors, among others, can also be explored to leverage funding. In order to mobilise private finance, **blended finance** is also being explored, where multilateral, philanthropic and public funding is leveraged to promote more private investment towards climate action.

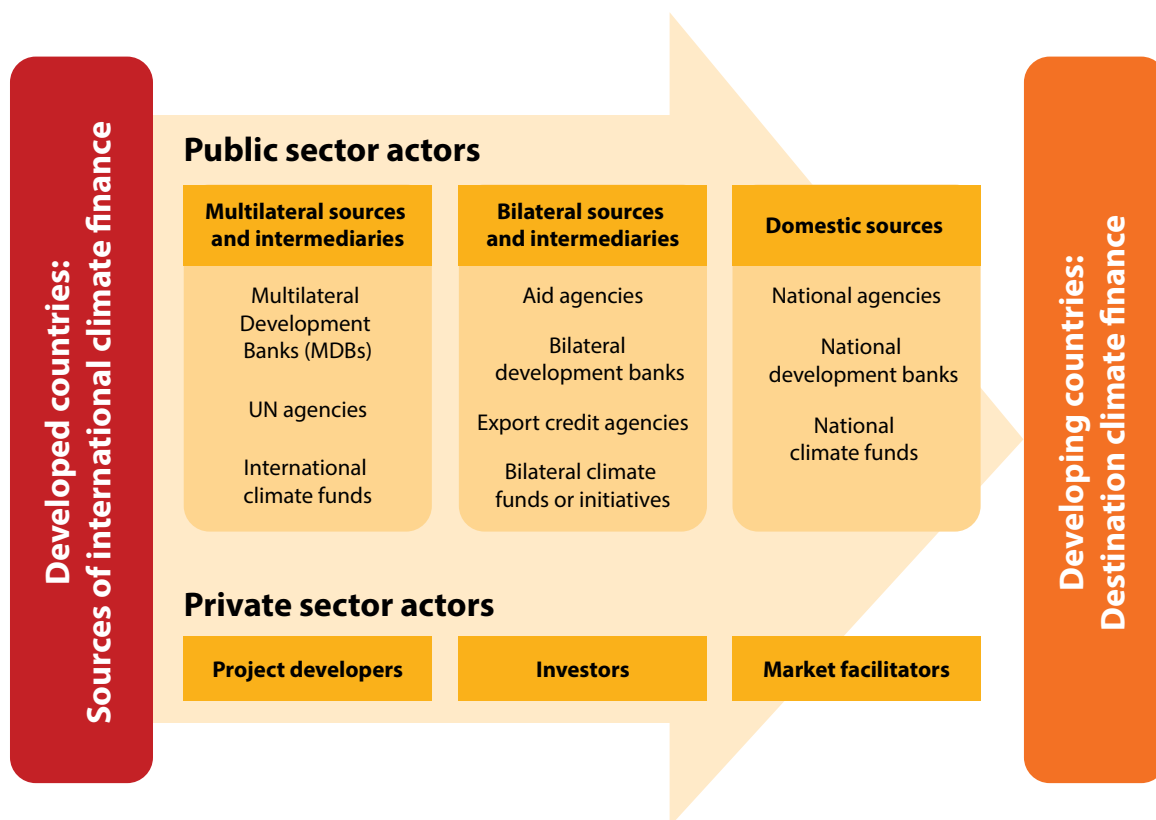
The types of climate finance instruments available vary from grants and concessional loans to guarantees, bonds and private equity (Box 1).

BOX 1: SOME COMMON CLIMATE FINANCE INSTRUMENTS

- **Grants:** A sum of money given by the government or international finance institutions that does not need to be repaid.
- **Concessional loans:** Loans provided on terms (often significantly) more favourable than prevailing market rates and/or with longer repayment terms (also referred to as "soft loans").
- **Non-concessional loans:** Loans provided at a market-based interest rate, also known as commercial loans. These are typically senior debt, which means that these lenders are among the first creditors to be repaid from a project or investment.
- **Subordinated loans:** Loans that rank between senior debt (non-concessional loans) and equity. Subordinated loans are more risky than senior debt because they are paid after senior debt lenders, but before equity holders. In return for the higher risk, these loans usually attract higher returns than senior debt.
- **Equity:** Finance available on the basis of gaining a share in the receiving entity, with the right to receive a portion of the profits and value gain of the business.
- **Guarantee:** A pledge to fulfil the obligations of a borrower to a lender in the event of non-performance or default of its obligations by the borrower, in exchange for a fee. Guarantees can cover the entire investment or just a portion of it.
- **Insurance and similar risk management instruments:** Involves the transfer of the risk of a loss from one entity to another, in exchange for money.
- **Climate/green bonds:** A type of debt instrument (loan) that is used to raise funding to finance or refinance projects that address climate change and/or environmental impacts.

Figure 1 provides a high-level outline of the types of international climate finance and the associated public and private actors.

FIGURE 1: International climate finance sources and actors³⁴



Public sources

Some of the major public channels for international climate funds include:

- The **two largest operating funds under the UNFCCC** umbrella are the Green Climate Fund (GCF), with a budget of US\$ 10.3 billion (2021),³⁵ and the Global Environmental Facility (GEF), with US\$ 4.1 billion replenished under the GEF-7 (2018–2022).³⁶ While the GCF finances both adaptation and mitigation projects, the GEF is dedicated largely to mitigation.
- A substantial volume of climate finance is also mobilised through **institutions not directly under the guidance of the UNFCCC**, like the United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation (UN REDD), which provides funding to reduce emissions from deforestation and forest degradation in developing countries. Other funds or programmes that are not under the guidance of the UNFCCC, include (among others) Global Energy Efficiency and Renewable Energy Fund (GEEREF), Adaptation for Smallholder Agriculture Programme (ASAP), Scaling Up Renewable Energy Programme (SREP), Strategic Climate Fund (SCF), Clean Technology Fund (CTF) and Climate Investment Funds (CIFs) administered by the World Bank Group.
- **Development banks at the multilateral, regional and national level** play an important role in financing climate-related projects. Within this framework, the US\$ 8.5 billion CIFs³⁷ play a crucial role in funding climate change mitigation and adaptation projects. MDBs committed US\$ 66 billion in climate finance in 2020. This included the African Development Bank (AfDB), the ADB, the Asian Infrastructure Investment Bank (AIIB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank Group (IADB), the Islamic Development Bank (IsDB) and the World Bank Group (WBG).³⁸

Private sources

In addition to the public sources mentioned above, recipient countries are also exploring different finance instruments to mobilise private finance from international and domestic markets. Some key instruments are included in Table 2 below:

TABLE 2: Instruments for the public sector to mobilise private finance

Instrument	How it can be used
<p>Green bonds</p>	<p>These are designated bonds used to finance green projects. The bonds mobilise resources from domestic and international capital markets for climate change adaptation, mitigation (for example, renewables) and other environment-friendly projects.</p> <p>A number of government agencies in India have contributed significantly to green bond issuances. For example, the Indian Railway Finance Corporation (IRFC) raised US\$ 500 million green bonds in 2017 to fund a series of low-carbon upgrades to Indian Railway infrastructure.³⁹ In 2018, the State Bank of India (SBI) entered the market with a US\$ 650 million certified green bond. Recently, SBI issued another US\$ 100 million certified green bond in 2020.⁴⁰ The proceeds of these bonds were allocated to renewable energy projects, low carbon transportation, and energy efficiency projects and green buildings.</p> <p>Bangladesh issued its first green sukuk bond in 2022 to raise US\$ 400 million to fund 230 megawatts (MW) of solar power generation. With the funds raised, the local conglomerate, Beximco Group, will finance two solar photovoltaic (PV) power plants: the 200 MW Teesta Solar Limited in Rangpur district, and the 30 MW Korotoa Solar Limited in Panchagarh district.⁴¹</p> <p>Urban local governments and city-level agencies, such as utility and transport companies, are increasingly using green bonds to finance climate actions, such as developing solar plants and urban mass transit systems, etc. The Ghaziabad Municipal Corporation became India's first municipal corporation to raise INR 150 crore (US\$ 19.19 million) by issuing a green bond in the domestic market and plans to construct a tertiary sewage treatment plant with this capital.⁴²</p>
<p>Climate policy performance bonds⁴³</p>	<p>Governments issue these bonds to raise funds based on the government's climate policy performance, such as reduction in GHG emissions against an NDC target or an increase in the share of renewable energy in relation to the total energy produced in the country. It provides for a targeted mechanism to raise funds for climate mitigation projects, while giving a clear incentive for the bond issuer to reduce GHG emissions.</p> <p>This instrument is less expensive to administer and harder-hitting on underperformance. For example, in the case of Brazil's Amazon Fund, where fundraising is based on the effective reduction of carbon emissions, resources are only raised when emissions in the Amazon fall below a historical 10-year average, which is revised every five years. Under this mechanism, the government cannot raise funds in a year when the deforestation rate in the reference year is higher than the average, and it will have to compensate the reduction in the following year.</p>

Public-private partnerships (PPPs)

A public-private partnership (PPP) is an innovative approach used by many governments to work with the private sector to finance the infrastructure they need to adapt to climate change. PPPs are designed to leverage private flows to fill funding gaps, transfer service delivery risks, and improve the cost-effectiveness of service delivery.

The Ahmedabad Bus Rapid Transport System (BRTS) in India, for example, was implemented using a PPP model. This is a good case of how a planned commuting system can help reduce emissions and improve air quality as well as have a positive impact on urban development.

Risk-sharing instruments

Risk-sharing instruments, such as insurance and guarantees, do not provide finance directly but protect financiers against certain risks – such as a borrower’s default risk or risks from hazards such as fire and flood – to protect investments and assets. This enables the mobilisation of commercial finance at acceptable costs, as lenders would otherwise charge a premium in the absence of these risk-sharing instruments.

Insurances are typically used in developing countries like India and Nepal for crop protection and public property rehabilitation. For example, Shikhar Insurance, a Nepal-based insurance-service provider, offers a Weather Index Insurance (WII) for apple farmers and plans to expand it to cover paddy and sugarcane.

Results-based financing (RBF)

Results-based financing (RBF) is a financing modality where a donor or investor disburses funds to a recipient when they achieve a pre-agreed set of climate-related results, particularly reducing carbon emissions. The key defining criteria under RBF include payments made only after the project is implemented and outcomes delivered. The reported results are independently verified before payments are made. The Bangladesh Rural Electrification and Renewable Energy Development (RERED) Project funded by the World Bank used an outcome-based approach to increase electricity access in rural Bangladesh.

Some measures to implement RBF include Development Impact Bonds (DIBs), Social Impact Bonds (SIBs) and Advanced Market Commitments (AMCs).

- **SIBs** are contracts with government entities where they pay for the achievement of targets related to better social outcomes. It blends and brings together the strengths of impact investing, RBF and PPPs. In an impact bond, private investors provide up-front capital for social services and are repaid by an outcome funder – the government entity – contingent on the achievement of agreed-upon results related to improved social impacts. Pimpri Chinchwad Municipal Corporation (PCMC) became the first city in India to raise a social impact bond to improve healthcare services for local residents, especially with respect to the Covid-19 [pandemic](#), while incurring minimum investment risks.⁴⁴
- **DIBs** finance development programmes with money from private investors who earn a return if the programme is successful, paid by a third-party donor. The outcomes to be measured are agreed upon at the outset and independently verified. For example, a US\$ 10 million DIB by the British Asian Trust was designed to improve the education system for marginalised children in India.⁴⁵ The Dolma Impact Fund (DIF)⁴⁶ in Nepal invests in companies that contribute towards the UN sustainable development goals (SDGs) across the technology, healthcare and renewable energy sectors.

Results-based financing (RBF)

- **AMC** is a binding instrument, typically offered by a government or other financial entity, used to guarantee a viable market for a product once it is successfully developed. It is used in circumstances where the cost of developing a new product is too high to be worthwhile for the private sector without a guarantee of a certain quantity of purchases in advance.

The impact bonds above are playing an important role in filling the funding gap, especially for meeting the SDGs. They provide an opportunity to achieve climate change and resilience-related impacts along with financial returns.

Green banking

Green banking encourages innovative financing for scaling up domestic investment in climate solutions along with multiple co-benefits, including livelihood opportunities, pollution reduction and energy access. It promotes bankability by creating financial products to mitigate investor risk on initial transactions in low-carbon, climate-resilient sectors.

Bangladesh Bank (BB) has been the pioneer in formulating policies and facilitating innovative schemes for promoting green finance. The BB's green banking policy guidelines require banks and financial institutions to form a climate risk fund and allocate at least 10% of their Corporate Social Responsibility (CSR) budget to this fund. Recently, the bank set the minimum annual target of direct green finance at 5% of the total loan disbursement for all banks and financial institutions.⁴⁷

Carbon credits

Carbon markets help in reducing GHG emissions by enabling the trading of emission units, and further aid in lowering the economic cost of reducing emissions. The Clean Development Mechanism (CDM) under the Kyoto Protocol to the UNFCCC allowed developing countries to sell the carbon whose emissions they have avoided by installing less-polluting equipment in industries or switching to renewable energy or protecting forests.

As the second commitment period of the Kyoto Protocol came to an end in December 2020, the international community began looking forward to the new rules for carbon credits under the Paris Agreement. Article 6 of the Paris Agreement sets the framework to establish a market mechanism for climate actions and proposes an accounting framework for international cooperation, allowing for international transfer of carbon credits between countries. It also sets up a central UN mechanism to trade credits for emissions reduction in certain projects and provides for a work programme for non-market approaches.



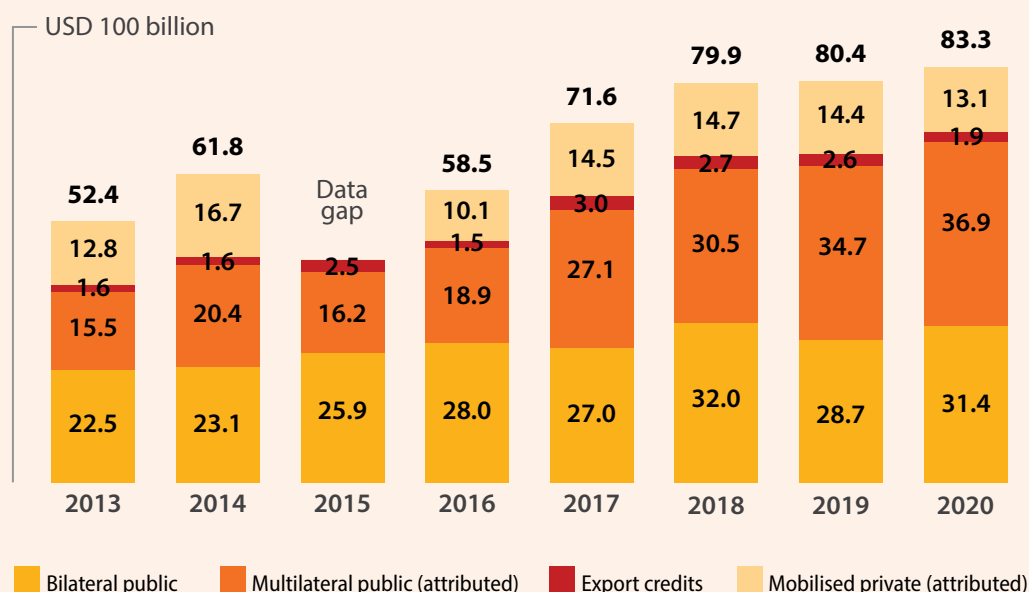
Women return home after completing work in the fields in India. © njbfoto via Shutterstock

The latest reports by the Organisation for Economic Co-operation and Development (OECD) and Oxfam highlight the volumes of climate finance provided and mobilised from 2013–2020 (Box 2).

BOX 2: VOLUMES OF CLIMATE FINANCE PROVIDED AND MOBILISED FROM 2013–2020 ACCORDING TO THE OECD⁴⁸

The OECD estimates that in 2020 US\$ 83.3 billion was mobilised as climate finance by developed countries for developing countries. Out of this, international public climate finance amounted to US\$ 68.3 billion, and private climate finance amounted to US\$ 13.1 billion, while US\$ 1.9 billion was mobilised through climate-related officially supported export credits.

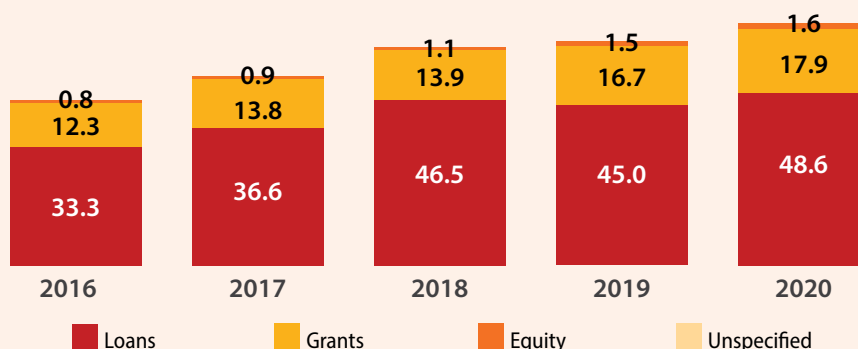
FIGURE 2: Climate finance provided and mobilised (US\$ billion)



Source: OECD (2022)⁴⁹

In terms of public financing, 71% was provided as loans (including both concessional and non-concessional), 26% as grants and 3% as equity.

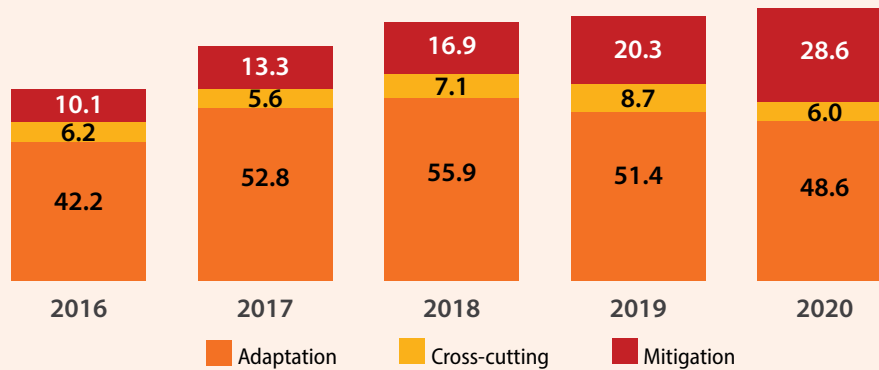
FIGURE 3: Public climate finance per instrument, excluding export credits (US\$ billion)



Source: OECD (2022)⁵⁰

A larger part of climate finance, almost 58%, was provided for mitigation, while 34% was for adaptation, and the remainder for cross-cutting issues (Figure 4).

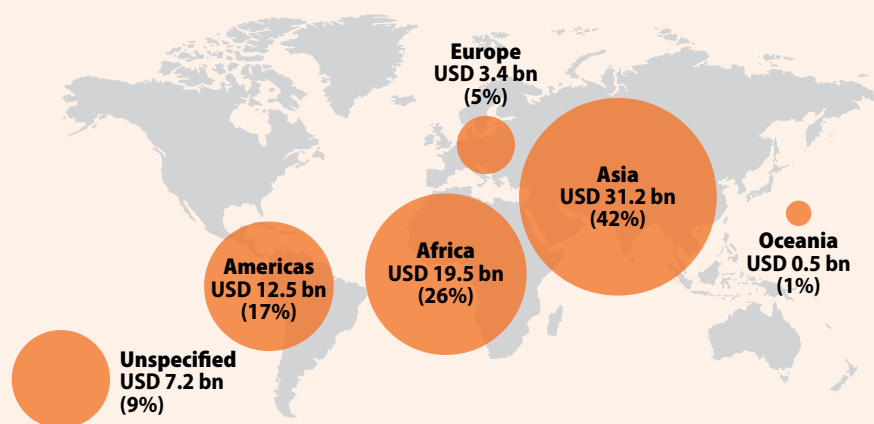
FIGURE 4: Thematic split of climate finance provided and mobilised (US\$ billion)



Source: OECD (2022)⁵¹

Note: “Cross-cutting” relates to projects with both mitigation and adaptation benefits, or to climate finance that was not yet allocated to mitigation and/or adaptation at the point of reporting, e.g., capacity building grants, which the recipient will decide the use of.

FIGURE 5: Regional split of climate finance provided and mobilised 2016-20, annual average (US\$ billion)



Source: OECD (2022)⁵²

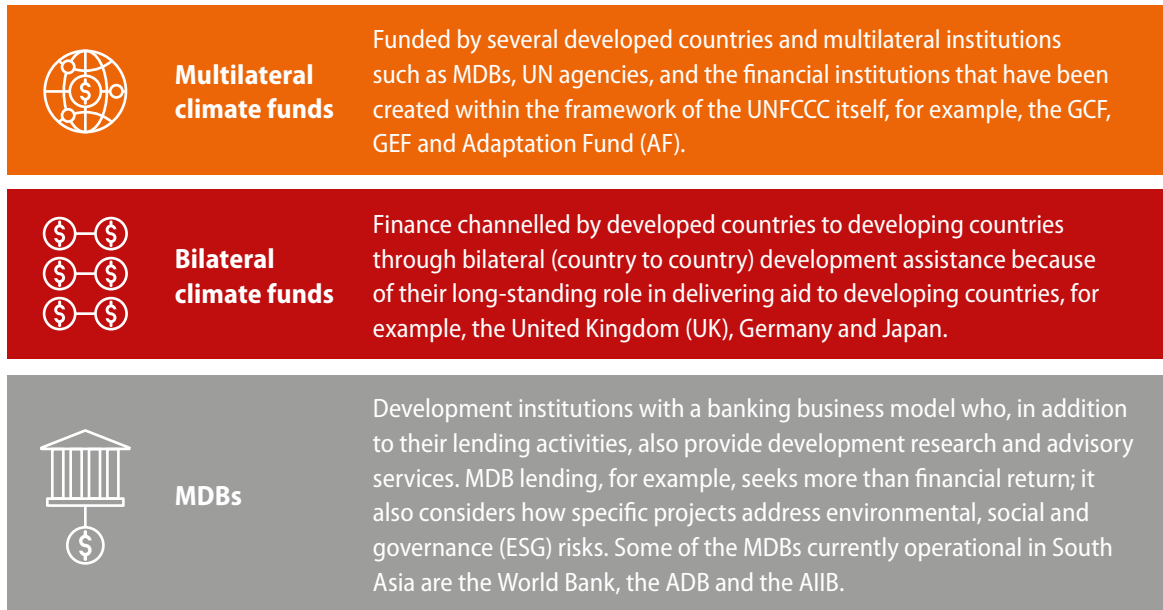
The *Climate finance shadow report (2020)*⁵³ by Oxfam highlights that there is a significant difference between climate finance reported by developed countries, multilateral institutions, and funds on the one hand, and the actual assistance provided to developing countries specifically targeting climate actions, on the other. The report highlights that due to double-counting and over-reporting of climate relevance, the donor reported figures of US\$ 59.5 billion for 2017–18 is highly inflated when compared to the public climate-specific net assistance received, which is estimated at between US\$ 19–22.5 billion in that period. The report analyses the climate relevance of reported funds and estimates how much climate finance is actually targeting climate actions. The report brings our attention to the underlying fact that reported climate finance might be significantly higher than the actual climate-specific net assistance.

2. Multilateral and bilateral sources

2.1 Overview of multilateral and bilateral sources

As highlighted above, the global climate finance landscape is complex and constantly evolving, with funds flowing through multilateral channels both within and outside of the UNFCCC financial mechanism, as well as through bilateral and regional (via regional MDBs) channels (Figure 6).

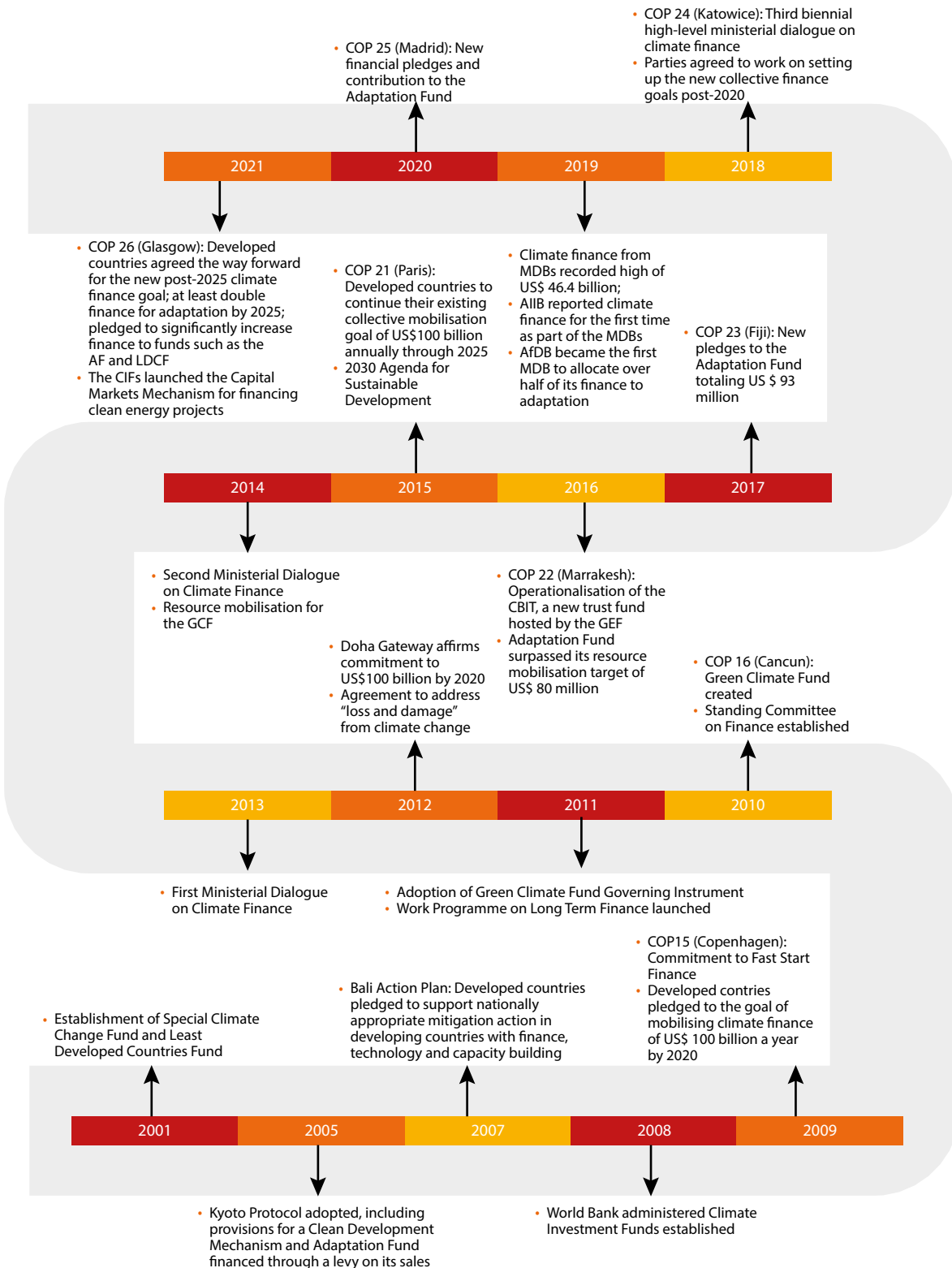
FIGURE 6: Multilateral and bilateral sources of climate finance



Mother and child stand next to their house on eroded landed next to a wind farm in Bangladesh.
© Salvacampillo via Shutterstock

Figure 7 below illustrates the evolution of the multilateral climate finance landscape from 2001 to 2021.

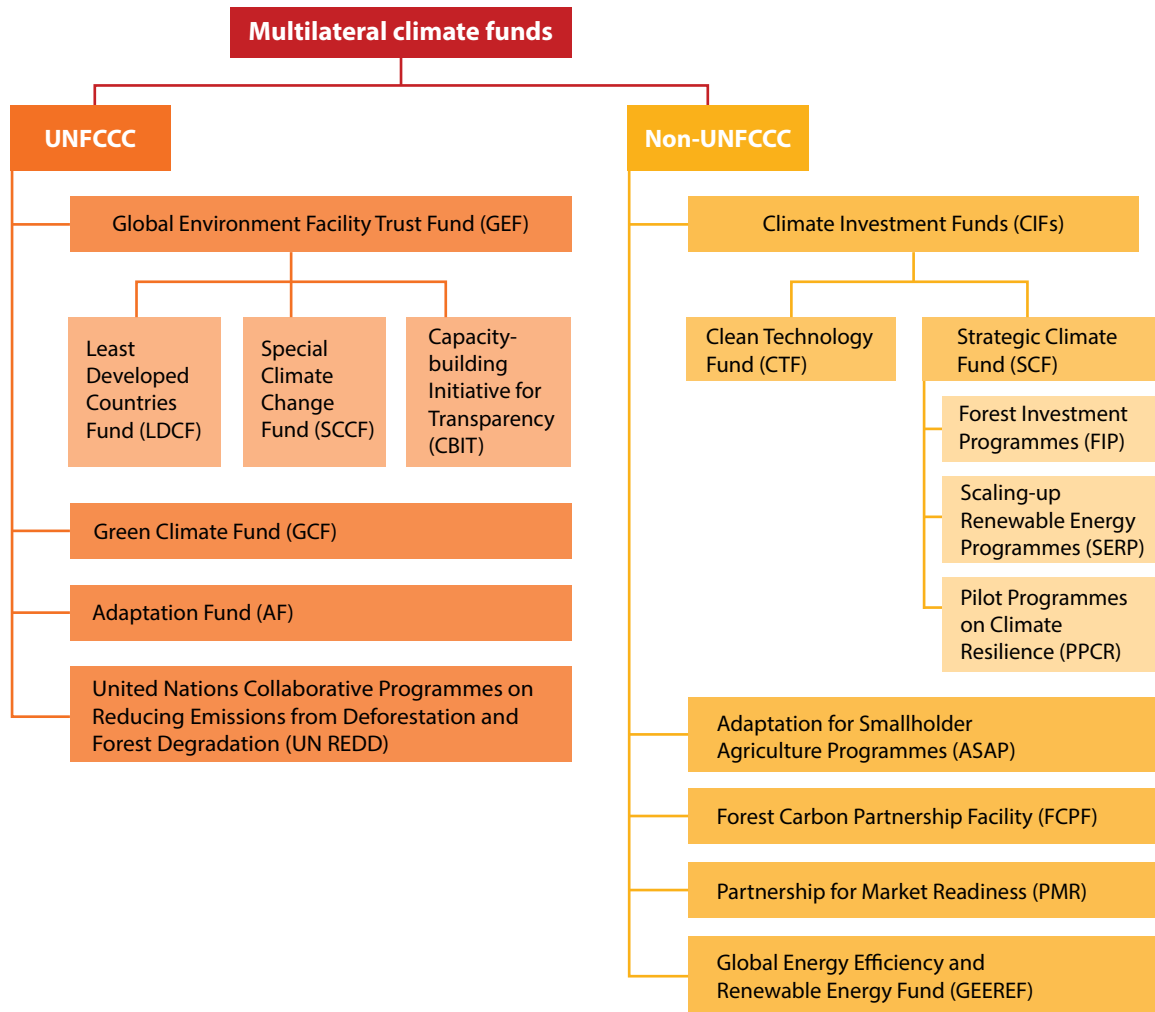
FIGURE 7: Evolution of multilateral climate finance from 2001–2021



2.2 Multilateral climate funds

The multilateral climate funds under the UNFCCC form the core of the financial architecture of the Paris Agreement and include: the GCF, GEF, AF, the Least Developed Country Fund (LDCF), and the Special Climate Change Fund (SCCF). Figure 8 outlines the various climate funds and how they move through multilateral channels.

FIGURE 8: Multilateral climate funds



As of January 2022, approximately US\$ 0.652 billion of climate finance from multilateral channels had been approved for Bangladesh, US\$ 1.478 billion approved for India, and US\$ 0.324 billion approved for Nepal.⁵⁴ The majority of the funding is to be delivered primarily through the PPCR and the LDCF. Below is a description of the different funds and how they operate.

Global Environmental Facility (GEF)

The [GEF](#)⁵⁵ is the operating entity of the financial mechanism of the UNFCCC. Since 1992, the GEF has invested over US\$ 21.7 billion in grants and leveraged US\$ 119 billion in co-financing for more than 5,000 projects in 170 countries. Under the GEF's seventh replenishment (2018–2022), 39 donor countries pledged US\$ 4.1 billion to the three major impact programmes focusing on sustainable cities, food systems, land use and restoration, and sustainable forest management.

The World Bank serves as the [GEF Trustee](#),⁵⁶ administering the GEF Trust Fund, mobilising GEF resources, disbursing funds to GEF Agencies and is responsible for overall monitoring. The GEF administers several trust funds, such as the LDCF, SCCF, and the Capacity Building Initiative for Transparency (CBIT) as well as providing secretariat services, on an interim basis, for the AF. GEF funds are channelled through a limited roster of 18 partner entities.⁵⁷

Green Climate Fund (GCF)

The [GCF](#)⁵⁸ is the world's largest climate fund and was set up by the UNFCCC in 2010. It became fully operational with its first projects approved at the end of 2015. The GCF adopts a country-driven approach, where developing countries lead GCF programming and implementation. The GCF's country-driven approach is underpinned by capacity-building support through its Readiness Programme. During the Initial Resource Mobilisation (IRM) period (2014), the GCF raised US\$ 10.3 billion from 45 countries, three regions and one city. The GCF aims to invest in low-emission and climate-resilient development in developing countries, with a commitment to a balanced allocation of finance for adaptation and mitigation.

The GCF is unique in its approach to engage directly with both the public and private sectors. Developing countries can access the GCF through both MDBs, international commercial banks and UN agencies, as well as directly through accredited national, regional and subnational implementing entities. GCF operates through a network of over 100 Accredited Entities (AEs) who support developing countries in designing their proposals as well as in further implementation.

The GCF first replenishment (2020–2023) included contributions from 30 countries and one region, totalling around US\$ 9.8 billion. As of May 2022, the GCF had approved 196 projects in 194 developing countries with US\$ 10.4 billion in approved funding.⁵⁹ As of May 2022, US\$ 16 billion in co-financing had been mobilised through its private sector portfolio of 41 projects worth US\$ 3.6 billion of GCF funding.⁶⁰

There is also a substantial volume of climate finance channelled through institutions like the World Bank (a MDB), regional development banks, and UN agencies not directly under the guidance of the UNFCCC.

Adaptation Fund (AF)

The [AF](#)⁶¹ is financed through a 2% levy on the sale of emissions credits from the CDM of the Kyoto Protocol. However, in the past few years, it has had to rely increasingly on developed country grant contributions due to the collapse of the international carbon market. The AF is considered to be one of the most innovative and unique climate funds, as it pioneered 'direct access' to finance by developing countries. In contrast to the GEF, for example, developing countries can access funds for adaptation directly through national institutions called National Implementing Entities (NIEs). The AF is the only international climate fund besides the GCF that is independent of development finance institutions.

Since 2010, the AF has committed US\$ 850 million to climate adaptation and resilience through 123 projects. The AF, at the COP 26, raised a huge amount of US\$ 356 million from contributing national and regional governments for supporting adaptation in developing countries through direct access, investment in small-scale locally-led [adaptation initiatives](#),⁶² and a new [innovation facility](#)⁶³ to scale up and accelerate new adaptation practices and technologies.

Least Developed Countries Fund (LDCF)

The [LDCF](#) was established in 2001 and seeks to address the needs of the Least Developed Countries (LDCs), whose economy and geography render them particularly vulnerable to climate change impacts.⁶⁴ The LDCF is the only existing fund whose mandate is to support the preparation and implementation of National Adaptation Programmes of Action (NAPAs) and the NAP process.⁶⁵ As of 2020, LDCF had financed 250 initiatives with US\$ 1.7 billion in grants.⁶⁶

Special Climate Change Fund (SCCF)

The [SCCF](#)⁶⁷ finances adaptation and technology transfer to reduce vulnerability and increase resilience in all developing countries. While adaptation is the top priority, the SCCF also funds technology transfer and its associated capacity-building initiatives for adaptation as well as mitigation in selected sectors. As of November 2020, the SCCF portfolio comprised 87 projects valued at US\$ 0.35 billion.⁶⁸

Climate Investment Funds (CIFs)

The [CIF](#),⁶⁹ established in 2008, is the only multilateral climate channel that works exclusively and collectively with the major MDBs, including the AfDB, the ADB, the EBRD, the Inter-American Development Bank (IADB) and the World Bank Group, including the IFC. Since its inception, 14 donor countries have contributed over US\$ 8.5 billion for scaling mitigation and adaptation actions in developing and middle-income countries. As of December 2020, leveraging its own resources of US\$ 8 billion, CIF had channelled over US\$ 61 billion additional finance as co-financing from governments, the private sector and MDBs into 325 climate projects across 72 developing countries. In June 2021, the G7 committed up to US\$ 2 billion in additional resources for the CIF. Asian countries receive 31% of the funds.

The design of the CIF includes a 'sunset clause', which requires necessary steps to conclude the fund operations once a new UNFCCC financial architecture takes effect. Any remaining funds may be transferred to another fund with a similar objective. However, the 'sunset clause' has been suspended repeatedly over the years, and in 2019 indefinitely. Until such time, donors and recipients operate under the existing framework.

CIF is comprised of two funds:

- [Clean Technology Fund \(CTF\)](#);⁷⁰
- [Strategic Climate Fund \(SCF\)](#)⁷¹ comprising of:
 - Forest Investment Programme (FIP);
 - Scaling up Renewable Energy Programme (SREP) in low-income countries and the Pilot Programme for Climate Resilience (PPCR).

The bulk of CIF investments (US\$ 4.8 billion) are through the CTF window. The CTF invests in projects and programmes with high GHG reduction opportunities, renewable energy, energy efficiency, access to low-carbon public transport, and overall low-carbon development at the country, regional or sub-regional levels. As of December 2020, the CTF portfolio consisted of 89 projects where US\$ 22.9 billion has been leveraged as co-financing for 63 projects. The fund operates through a range of financing instruments, including blended concessional finance to advisory/technical services.

The **Forest Investment Programme (FIP)**⁷² is a targeted programme under the SCF within the CIF. Contributions to the FIP amount to US\$ 0.78 billion. The fund supports reduction in deforestation and forest degradation (REDD) and promotes sustainable forest management in developing countries. As of December 2020, the FIP portfolio consisted of 44 projects worth US\$ 0.54 billion across 12 countries.

The US\$ 1.2 billion **Pilot Programme for Climate Resilience (PPCR)**⁷³ supports developing countries and regions in building their adaptation and resilience to the impacts of climate change. It supports national governments in integrating climate resilience into development planning across sectors, and provides additional funding to put these plans into actions and pilot innovative public and private sector solutions. As of December 2020, 65 projects in 17 countries and two regions amounting to US\$ 0.99 billion had been approved.

The US\$ 0.75 billion **Scaling Up Renewable Energy Programme (SREP)**⁷⁴ in low-income countries supports scaled-up deployment of renewable energy solutions to increase energy access and economic opportunities. As of December 2020, US\$ 0.55 billion in SREP funding had been committed to 46 projects, out of which 31 projects are at various stages of implementation. US\$ 0.67 billion is expected through co-financing from the governments of the recipient countries, MDBs, the private sector and bilateral agencies.

The US\$ 300 million **Adaptation for Smallholder Agriculture Programme (ASAP)**⁷⁵ is the International Fund for Agricultural Development's (IFAD) flagship programme for channelling funds to smallholder farmers to mainstream and scale-up climate change adaptation in rural development programmes. ASAP operated through several phases:

- ASAP 1: Operational in the years 2012-2017;
- ASAP 2: Operational in the years 2018-2020; and
- Proposed ASAP+ (Enhanced Adaptation for Smallholder Agricultural Programme): from 2021 with a finance mobilisation target of US\$ 0.5 billion.

The **Forest Carbon Partnership Facility (FCPF)** is a World Bank multi-donor fund of governments and non-governmental entities, including private companies.⁷⁶ The US\$ 1.3 billion fund was created in 2008 to assist developing countries to reduce emissions from deforestation and forest degradation, enhance and conserve forest carbon stocks, and sustainably manage forests (REDD+). It consists of two complementary funding mechanisms, namely a Readiness Fund and a Carbon Fund.



Women carrying firewood through a forest in India. © Auggiefern via Shutterstock

2.3 Multilateral Development Banks (MDBs)

Climate action is addressed as an integral part of MDB projects and programmes, and MDBs have the capacity to provide a wider range of opportunities beyond the dedicated climate funds mentioned above.

MDBs are international institutions, set up by two or more developed countries in order to promote economic and social development in developing countries. MDBs provide financial assistance, typically in the form of loans, grants and equity (although they also use instruments such as guarantees, lines of credit, policy-based financing, result-based financing), along with technical assistance.

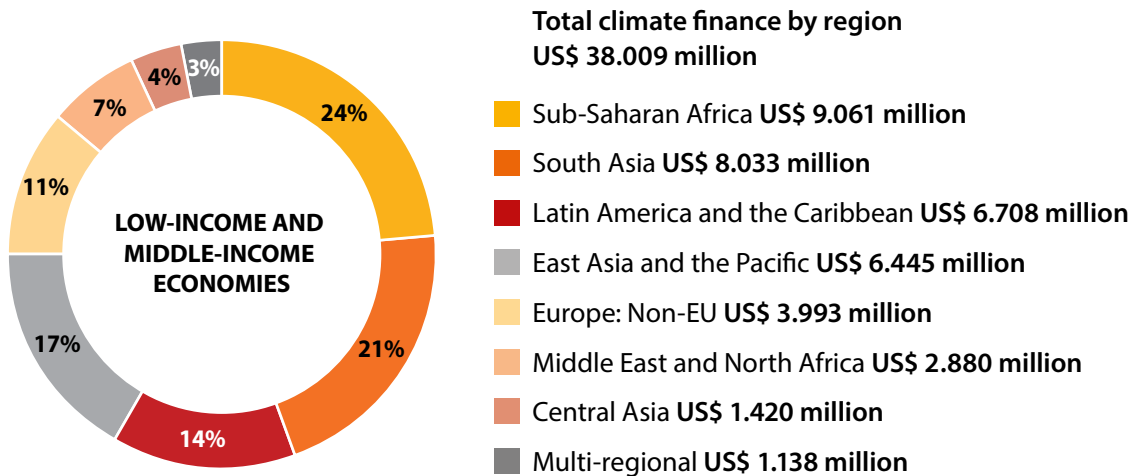
MDB lending seeks more than financial return and considers how specific projects address ESG risks. Some of the more prominent MDBs include the World Bank, regional development banks such as the ADB, the AfDB, the IDB, the European Investment Bank (EIB) and the EBRD. Some MDBs currently operational in South Asia are the World Bank, the ADB and the AIIB. As per the *Joint report on Multilateral Development Banks' climate finance (2020)*,⁷⁷ MDBs collectively committed US\$ 66.04 billion in climate finance in 2020,⁷⁸ out of which 76% was leveraged for mitigation actions while 24% was allocated to adaptation activities (see Table 3). Almost 76% of total climate finance was committed through investment loans, while only 5% was allotted through grants.

TABLE 3: Total MDB climate finance by type of recipient (in US\$ million)⁷⁹

Climate actions	For low- and middle-income economies	For high-income economies	Total
Adaptation	13,327	2,773	16,100
Mitigation	24,681	25,264	49,945

According to the *Joint report*, climate finance in the amount of US\$ 8.0 billion (12% of total climate finance of US\$ 66.04 billion) was directed to South Asian countries in 2020 for supporting climate actions (both adaptation and mitigation) (Figure 9).

FIGURE 9: Allocation of funds from MDBs to low-income and middle-income economies, by region (in 2020)



Source: EBRD⁸⁰

Table 4 below indicates the amount of climate finance received by Bangladesh, India and Nepal from MDBs over the 2016–2020 period. The table shows that India received the highest percentage in absolute terms in comparison to Bangladesh and Nepal, owing to the scale of economy and size of the country. When the funds received are assessed in terms of per capita, Bangladesh received the highest percentage, followed by Nepal. During 2020, Bangladesh, India and Nepal (combined) received 71% of the total finance from MDBs to South Asia, and India alone received 44%.

TABLE 4: Climate finance received by Bangladesh, India and Nepal from MDBs (2016–2020)⁸¹

Countries	Climate finance from MDBs (in US\$ billion)					
	2016	2017	2018	2019	2020	Total
Bangladesh	1.31	0.20	1.29	2.14	1.12	6.06
India	3.01	2.67	3.70	3.67	3.54	16.59
Nepal	0.11	0.20	0.43	0.25	1.02	2.01

In recent years, developing countries have also come together to launch new MDBs, namely the AIIB and the New Development Bank (also known as the BRICS [Brazil, Russia, India, China and South Africa] bank). It is hoped that these new institutions can lead to a fundamental shift in south-south climate finance by directing substantial funds and mainstreaming climate risks into infrastructure investments.

By the end of 2020, the AIIB had 103 member countries worldwide. The total committed capital of AIIB is expected to be US\$ 100 billion by 2024, with US\$ 18.8 billion already received by donors. As of 2020, AIIB's climate finance was estimated to be US\$ 1.19 billion, of which US\$ 1.05 billion (88%) was allocated for mitigation and US\$ 0.14 billion (12%) for adaptation.⁸²

2.4 Multilateral finance sources in Bangladesh, India and Nepal

Multilateral climate funds and development banks have invested billions of dollars in the three countries and have played a pertinent role in helping to address climate change in Bangladesh, India and Nepal. Table 5 below provides a brief overview of finance that has been channelled through different multilateral sources (as outlined in the previous sections 2.2 and 2.3) to the three countries for enhancing their climate response.



Women working in the tea gardens of Wayanad, India. © Sids via Shutterstock

TABLE 5: Multilateral climate finance available in Bangladesh, India and Nepal

Within the UNFCCC financial mechanism	
Fund: <u>Green Climate Fund (GCF)</u>⁸³	
Priority countries	Bangladesh, India, Nepal
Funding period	<ul style="list-style-type: none"> Established in 2010 Initial resource mobilisation period: 2014–2018 GCF 1 (2020–2023)
Disbursement mechanism	<ul style="list-style-type: none"> Grants Concessional loans Equity Guarantees
Finance (US\$ billion)	<p>Initial Resource Mobilisation</p> <ul style="list-style-type: none"> Pledged (2020): US\$ 10.32 billion Deposited (2022): US\$ 9.51 billion Approved (2022): US\$ 9.51 billion Disbursed (2022): US\$ 2.33 billion
Designated entities	<ul style="list-style-type: none"> Bangladesh: Economics Relations Division (ERD), Ministry of Finance (MoF) India: Ministry of Environment, Forests and Climate Change (MoEFCC) Nepal: Ministry of Finance (MoF)
Process of application	<ul style="list-style-type: none"> Project funding is channelled through Accredited Entities (AEs) and intermediaries. AEs are either Direct Access Entities –national, subnational or regional organisations – or International Access Entities, including UN agencies, MDBs, international financial institutions and regional institutions. Direct Access Entities are nominated by their NDA. The list of GCF-accredited entities can be accessed here.⁸⁴ The detailed guidance on how to access the GCF is provided here.⁸⁵
Sectors	<p>Cross-cutting</p> <ul style="list-style-type: none"> Agriculture and allied activities, coastal zones, disaster risk management, forestry and biodiversity, human health, infrastructure, water resources.
Fund: <u>Global Environment Facility (GEF) Trust Fund</u>⁸⁶	
Priority countries	Bangladesh, India, Nepal
Funding period	<ul style="list-style-type: none"> Pilot Phase: 1991–1994 GEF-1: 1994–1998 GEF-2: 1998–2002 GEF-3: 2002–2006 GEF-4: 2006–2010 GEF-5: 2010–2014 GEF-6: 2014–2018 GEF-7: 2018–2022
Disbursement mechanism	<ul style="list-style-type: none"> Grants Concessional loans Equity Guarantees
Finance (US\$ billion)	<p>For the GEF (4-7)</p> <ul style="list-style-type: none"> Pledged (2022): US\$ 4.08 billion Deposited (2022): US\$ 4.08 billion Approved: US\$ 4.22 billion Disbursed (2022): US\$ 1.62 billion
Designated entities	<ul style="list-style-type: none"> Bangladesh: MoEFCC India: MoEFCC Nepal: MoF

Process of application	<ul style="list-style-type: none"> • Countries are eligible for GEF funding if: <ul style="list-style-type: none"> ▫ the country has ratified the UNFCCC and conforms with the eligibility criteria decided by the CoP of the UNFCCC; or ▫ if the country is already eligible to receive World Bank funds or is a recipient of technical assistance from the United Nations Development Programme (UNDP). • The process to secure funding involves several actors, including the national government, project proponents (either a government entity or private sector actor), and GEF Implementing Agencies. • Entities seeking GEF funding work with the GEF Partner Agency to submit project proposals. • The selection of the project and the GEF Implementing Agency is formalised through a letter of endorsement issued by the country's operational focal points. The process to secure funding depends on: <ul style="list-style-type: none"> ▫ Full-sized Project (FSP): a GEF project financing of more than US\$ 2 million. ▫ Medium-sized Project (MSP): a GEF project financing of less than or equivalent to US\$ 2 million. ▫ Enabling Activity (EA): a project for the preparation of a plan, strategy, or report to obligate commitments under a Convention. ▫ Programme: a longer-term and strategic arrangement of individual yet interlinked projects that aim at achieving large-scale impacts on the global environment.
Sectors	<p>Cross-cutting</p> <ul style="list-style-type: none"> • Six key sectors including biodiversity, climate change, international waters, ozone depletion, land degradation and persistent organic pollutants.
Fund: Special Climate Change Fund (SCCF)⁸⁷	
Priority countries	Bangladesh, India, Nepal
Funding period	<ul style="list-style-type: none"> • From 2001–indefinite
Disbursement mechanism	<ul style="list-style-type: none"> • Grants
Finance (US\$ billion)	<ul style="list-style-type: none"> • Pledged (2022): US\$ 0.38 billion • Deposited (2022): US\$ 0.37 billion • Approved (2022): US\$ 0.28 billion • Disbursed (2022): US\$ 0.18 billion
Designated entities	<ul style="list-style-type: none"> • Bangladesh: MoEFCC • India: MoEFCC • Nepal: Ministry of Forest and Environment (MoFE)
Process of application	<ul style="list-style-type: none"> • Since the SCCF is administrated by the GEF, countries seeking SCCF fund should work with a GEF Partner Agency to submit project proposals. • To be eligible, projects/ programmes are to be country-driven, cost-effective and integrated into national sustainable development and poverty-reduction strategies. • In addition, the project proponent needs to secure the endorsement of a national GEF operational focal point, to confirm that the project proposals are consistent with national plans and priorities.

Process of application	<ul style="list-style-type: none"> FSPs (with GEF funding of more than US\$ 2 million) as well as some MSPs (with GEF project financing of less than or equivalent to US\$ 2 million) must be cleared by the GEF before they are formally approved by the SCCF Council, at which point funding is earmarked for their support. Projects are only considered to be approved after a Project Identification Form (PIF) ensures that the project meets certain criteria and then approved by the council. Finance is available for project preparation.
Sectors	Adaptation <ul style="list-style-type: none"> Water resource management; land management; agriculture; health; infrastructure development; fragile ecosystems and integrated coastal zone management; monitoring of diseases and vectors affected by climate change and capacity development for disaster prevention. It also funds, through separate financing windows, technology transfer; mitigation in energy; transport; industry; agriculture; forestry and waste management; economic diversification.
Fund: Least Developed Countries Fund (LDCF)⁸⁸	
Priority countries	Bangladesh, Nepal
Funding period	<ul style="list-style-type: none"> From 2001–indefinite
Disbursement mechanism	<ul style="list-style-type: none"> Grants
Finance (US\$ billion)	<ul style="list-style-type: none"> Pledged (2022): US\$ 1.87 billion Approved (2022): US\$ 1.33 billion Deposited (2022): US\$ 1.69 billion Disbursed (2022): US\$ 0.53 billion
Designated entities	<ul style="list-style-type: none"> Bangladesh: (MoF) Nepal: MoF
Process of application	<ul style="list-style-type: none"> To be able to access funds under the LDCF, the National Adaptation Programme of Action (NAPA) must be completed and sent to the UNFCCC Secretariat. Project criteria are informed by guidance from the UNFCCC and include country ownership; programme and policy conformity; financing; institutional coordination and support; and monitoring and evaluation. Since LDCF is administered by GEF, LDCs need to work with a GEF Partner Agency. Also, the project proposal needs to be endorsed by the national GEF operational focal point, confirming that the project proposals are in line with national plans and priorities. Finance is available for project preparation. FSPs (with GEF funding amount of more than US\$ 2 million) as well as some MSPs (GEF project financing of less than or equivalent to US\$ 2 million) must be cleared by the GEF before they are formally approved by the LDCF Council, at which point funding is earmarked for their support. Projects are only considered to be approved after a PIF ensures that the project meets certain criteria and then is approved by the council. A number of tools have been developed to help countries access LDCF funding.
Sectors	Adaptation <ul style="list-style-type: none"> Agriculture; industry and infrastructure; waste management; oceans and coastal resources; disaster risk reduction; health.

Fund: Adaptation Fund (AF)⁸⁹	
Priority countries	Bangladesh, Nepal, India
Funding period	<ul style="list-style-type: none"> From 2009–indefinite
Disbursement mechanism	<ul style="list-style-type: none"> Grants
Finance (US\$ billion)	<ul style="list-style-type: none"> Pledged (2022): US\$ 1.16 billion Approved (2020): US\$ 0.87 billion Deposited (2022): US\$ 1.11 billion Disbursed (2020): US\$ 0.52 billion
Designated entities	<ul style="list-style-type: none"> Bangladesh: <ul style="list-style-type: none"> National Implementing Entity (NIE): Palli Karma-Sahayak Foundation (PKSF) National Designated Agency (NDA): MoEFCC India: <ul style="list-style-type: none"> NIE: National Bank for Agriculture and Rural Development (NABARD). NDA: MoEFCC Nepal: <ul style="list-style-type: none"> Regional Implementing Entity: International Centre for Integrated Mountain Development (ICIMOD). NDA: MoFE
Process of application	<ul style="list-style-type: none"> There is a US\$10 million funding cap per country. Eligible parties seeking financial resources must submit their proposals through accredited National, Regional and Multilateral Implementing Entities. The project/programme needs to be in accordance with priorities laid out in national strategies, plans or in NDCs. Proposals can be submitted either using a one-step process (directly as fully developed project/ programme documents), or as a two-step process (first, as a concept and then as a fully developed proposal). Proposals are accepted three times a year. The practical guide on proposal preparation is available here.⁹⁰
Sectors	<p>Adaptation</p> <ul style="list-style-type: none"> Food security; agriculture and allied activities; water management and disaster risk reduction; ecosystem-based adaptation; early warning systems; forestry and land use; rural livelihood; urban small-scale infrastructure; waste management; oceans and coastal zone management.
Fund: United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation (UN REDD)⁹¹	
Priority countries	Bangladesh, India and Nepal
Funding period	<ul style="list-style-type: none"> 2008–2025
Disbursement mechanism	<ul style="list-style-type: none"> Grants

Finance (US\$ billion)	<ul style="list-style-type: none"> • Pledged (2022): US\$ 0.34 billion • Deposited (2022): US\$ 0.33 billion 	<ul style="list-style-type: none"> • Approved (2022): US\$ 0.34 billion • Disbursed (2022): US\$ 0.33 billion
Designated entities	<ul style="list-style-type: none"> • Bangladesh: MoEFCC • India: MoEFCC • Nepal: MoFE 	
Process of application	<ul style="list-style-type: none"> • National actions are identified and led by the host government and supported by the UN country team. • The implementing entities are the participating UN organisations, namely the Food and Agricultural Organisation (FAO), UNDP and UN Environment Programme (UNEP). • Partner countries also have observer status at UN REDD Policy Board meetings and may be invited to submit a request to receive funding for a national programme, if selected through a set of criteria. • National governments, regional development banks and NGOs can receive funding through one of the participating UN organisations by acting as executing agencies. 	
Sectors	Mitigation <ul style="list-style-type: none"> • Forest-ecosystem services; economic and social values. 	

Non-UNFCCC financial sources

Fund: Climate Investment Funds (CIF): Clean Technology Fund (CTF)⁹²

Priority countries	India	
Funding period	<ul style="list-style-type: none"> • From 2008–indefinite 	
Disbursement mechanism	<ul style="list-style-type: none"> • Contingent grants • Concessional loans • Equity 	<ul style="list-style-type: none"> • Guarantees • Co-financing
Finance (US\$ billion)	<ul style="list-style-type: none"> • Pledged (2022): US\$ 5.78 billion • Deposited (2022): US\$ 5.78 billion 	<ul style="list-style-type: none"> • Approved (2022): US\$ 5.65 billion • Disbursed (2022): US\$ 1.80 billion
Designated entities	<ul style="list-style-type: none"> • India: MoEFCC 	
Process of application	<ul style="list-style-type: none"> • Funding is only accessible through MDBs⁹³ acting as implementing partners. • Recipient countries develop an investment plan in coordination with the MDBs. MDBs jointly assess interested eligible countries' investment potential to meet CTF investment criteria. • The CTF Trust Fund Committee reviews the investment plan and authorises designated MDBs to proceed with development and preparation of individual investment operations for CTF co-financing. • Sectoral, subnational, regional, and national entities seeking funding for LSPs are eligible. • Private sector proposals are submitted either in the form of individual LSPs or in the form of aggregates of several small- and MSPs, each utilising less than US\$ 50 million • Dedicated private sector programmes under CTF finance large-scale private sector projects in clean technology. 	

Process of application	<ul style="list-style-type: none"> The criteria to assess and prioritise the proposed pipeline of programmes and projects include: <ul style="list-style-type: none"> potential for GHG emissions savings cost-effectiveness demonstration potential at scale development impact implementation potential additional costs and risk premium More information on application procedure is available here.⁹⁴
Sectors	Mitigation <ul style="list-style-type: none"> Clean energy across development sectors; energy efficiency (building; industry and agriculture); transportation.
Fund: CIF: Pilot Programme for Climate Resilience (PPCR)⁹⁵	
Priority countries	Bangladesh, Nepal
Funding period	<ul style="list-style-type: none"> From 2008–indefinite
Disbursement mechanism	<ul style="list-style-type: none"> Concessional loans Grants Contingent grants Market-rate loans Equity Guarantees
Finance (US\$ billion)	<ul style="list-style-type: none"> Pledged (2022): US\$ 1.15 billion Deposited (2022): US\$ 1.15 billion Approved (2022): US\$ 1.02 billion Disbursed: (2022): US\$ 0.73 billion
Designated entities	<ul style="list-style-type: none"> Bangladesh: Economic Relations Division (MoF); MoEFCC Nepal: MoFE
Process of application	<ul style="list-style-type: none"> PPCR funding is only accessible through MDBs acting as implementing partners. The CIF Administrative Unit (CIF AU), through MDBs, informs eligible countries and invites Expressions of Interest (EOIs). The CIF-AU coordinates with the MDBs and, with the approval of the PPCR Sub-Committee, organises an expert group to review the EOIs. The PPCR-SC identifies and agrees upon regional or country pilots informed by expert review. These are country-led, joint MDB missions to engage with the government, appropriate UN offices in the country and other stakeholders. Recipient countries and relevant MDBs jointly prepare proposals for PPCR funding. The proposal is reviewed on the basis of three key criteria: <ul style="list-style-type: none"> vulnerability (40%) enabling environment (30%) implementation capacity (30%)
Sectors	Adaptation <ul style="list-style-type: none"> Agriculture and allied activities; coastal zones management; resilient infrastructure; water resource; disaster risk reduction.

Fund: CIF: Scaling Up Renewable Energy Programme (SREP) in Low- Income Countries⁹⁶

Priority countries	Bangladesh, Nepal
Funding period	<ul style="list-style-type: none"> From 2009–indefinitely
Disbursement mechanism	<ul style="list-style-type: none"> Concessional loans Grants Contingent grants Equity Guarantees
Finance (US\$ billion)	<ul style="list-style-type: none"> Pledged (2022): US\$ 0.77 billion Deposited (2022): US\$ 0.77 billion Approved (2022): US\$ 0.67 billion Disbursed (2022): US\$ 0.13 billion
Designated entities	<ul style="list-style-type: none"> Bangladesh: Sustainable and Renewable Energy Development Authority (SREDA); Ministry of Power, Energy and Mineral Resources (MPEMR) Nepal: MoF, MoFE
Process of application	<ul style="list-style-type: none"> Only MDBs including the International Finance Corporation, can access funding from SREP. There are two phases to access the fund. In the Pre-Programming Phase: <ul style="list-style-type: none"> SREP Sub Committee (SREP SC) to agree upon number of country or regional pilots and criteria for country selection; CIF-AU, through MDBs to inform countries and invite EOIs; Selection of pilots by SREP SC based on expert group report; MDBs scoping mission to assess readiness and capacity for investment plans; and If requested, MDBs advance preparation grants and investment plan preparation grants to assist development of investment plans. The second phase i.e., programming phase: <ul style="list-style-type: none"> SREP-SC endorses Investment Plan; Investment and financing proposals are developed; and SREP-SC approves financing for investments and other proposals.
Sectors	<p>Mitigation</p> <ul style="list-style-type: none"> Scaled up deployment of renewable energy solutions to increase energy access and economic opportunities

Fund: CIF: Forest Investment Programme (FIP)⁹⁷

Priority countries	Bangladesh, Nepal
Funding period	<ul style="list-style-type: none"> From 2009–indefinitely
Disbursement mechanism	<ul style="list-style-type: none"> Concessional loans Grants Equity Guarantees
Finance (US\$ billion)	<ul style="list-style-type: none"> Pledged (2022): US\$ 0.74 billion Deposited (2022): US\$ 0.74 billion Approved (2022): US\$ 0.61 billion Disbursed (2022): US\$ 0.27 billion
Designated entities	<ul style="list-style-type: none"> Bangladesh: MoEFCC Nepal: REDD Implementation Centre; Ministry of Forests and Soil Conservation (MoFSC)

Process of application	<ul style="list-style-type: none"> FIP funding is only accessible through MDBs acting as implementing partners. Funds are accessed through two phases. The first phase i.e., the pre-programming phase includes: <ul style="list-style-type: none"> FIP Sub Committee (FIP-SC) to agree upon number of countries or regional pilots and criteria for country selection; CIF-AU, through MDBs, to inform countries and invite EOIs; Selection of country/ regional pilots by FIP-SC based on expert group report; Selected countries invited to confirm interest to participate The second phase i.e., the programming phase includes: <ul style="list-style-type: none"> Country-led joint MDBs mission to assist the development of investment strategy, which is endorsed by FIP-SC and followed by further development of programmes/ projects concepts. Preparation of FIP programmes and projects. Decisions on financing for programmes and projects by FIP-SC. Further processing of projects in accordance with MDBs' procedures, including final approval. 				
Sectors	Mitigation <ul style="list-style-type: none"> Forestry and land use. 				
Fund: Adaptation for Smallholder Agriculture Programme (ASAP)⁹⁸					
Priority countries	Bangladesh, India, Nepal				
Funding period	<ul style="list-style-type: none"> ASAP 1: 2012–2017 ASAP 2: 2018–2020 ASAP+: 2021 				
Disbursement mechanism	<ul style="list-style-type: none"> Grants Co-financing 				
Finance (US\$ billion)	<table border="0"> <thead> <tr> <th>ASAP</th> <th>ASAP+</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Pledged (2022): US\$ 0.38 billion Deposited (2022): US\$ 0.33 billion Approved (2022): US\$ 0.29 billion Disbursed (2022): US\$ 0.19 billion </td> <td> <ul style="list-style-type: none"> Pledged (2022): US\$ 0.02 billion Deposited (2022): US\$ 0.003 billion Approved (2022): NA Disbursed (2022): NA </td> </tr> </tbody> </table>	ASAP	ASAP+	<ul style="list-style-type: none"> Pledged (2022): US\$ 0.38 billion Deposited (2022): US\$ 0.33 billion Approved (2022): US\$ 0.29 billion Disbursed (2022): US\$ 0.19 billion 	<ul style="list-style-type: none"> Pledged (2022): US\$ 0.02 billion Deposited (2022): US\$ 0.003 billion Approved (2022): NA Disbursed (2022): NA
ASAP	ASAP+				
<ul style="list-style-type: none"> Pledged (2022): US\$ 0.38 billion Deposited (2022): US\$ 0.33 billion Approved (2022): US\$ 0.29 billion Disbursed (2022): US\$ 0.19 billion 	<ul style="list-style-type: none"> Pledged (2022): US\$ 0.02 billion Deposited (2022): US\$ 0.003 billion Approved (2022): NA Disbursed (2022): NA 				
Designated entities	<ul style="list-style-type: none"> Bangladesh: Ministry of Local Government, Rural Development and Cooperatives India: Ministry of Finance Nepal: Ministry of Finance 				
Process of application	<ul style="list-style-type: none"> ASAP applies the same procedures as regular International Fund for Agricultural Development (IFAD) investments and follows the typical IFAD design cycle. Implementing entities are government ministries and agencies. Implementing partners include research organisations, centres of excellence involved in rural poverty reduction, NGOs, and private sector and civil society organisations. Project concepts are developed as part of the Country Strategic Opportunities Papers (COSOPs) or through consultation between IFAD, governments and national stakeholders and then reviewed. 				

Process of application	<ul style="list-style-type: none"> Detailed project design and quality enhancement process involving field missions and interactions with local partners and stakeholders. Review and clearance by the IFAD Executive Board followed by negotiations and a financing agreement. The grant is then declared effective and implementation begins. More information on project design is provided here.⁹⁹ 				
Sectors	Adaptation <ul style="list-style-type: none"> Agriculture, forestry and land use; disaster risk reduction; gender. 				
Fund: Forest Carbon Partnership Facility (FCPF)¹⁰⁰					
Priority countries	Nepal				
Funding period	<ul style="list-style-type: none"> 2011–2025 				
Disbursement mechanism	<ul style="list-style-type: none"> Grants Within the Carbon Fund: Result-based-finance, carbon finance 				
Finance (US\$ billion)	<table border="0"> <thead> <tr> <th>FCPF Readiness Fund</th> <th>FCPF Carbon Fund</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Pledged (2022): US\$ 0.46 billion Deposited (2022): US\$ 0.46 billion Approved (2022): US\$ 0.31 billion Disbursed (2022): US\$ 0.27 billion </td> <td> <ul style="list-style-type: none"> Pledged (2022): US\$ 0.87 billion Deposited (2022): US\$ 0.87 billion Approved (2022): NA Disbursed (2022): NA </td> </tr> </tbody> </table>	FCPF Readiness Fund	FCPF Carbon Fund	<ul style="list-style-type: none"> Pledged (2022): US\$ 0.46 billion Deposited (2022): US\$ 0.46 billion Approved (2022): US\$ 0.31 billion Disbursed (2022): US\$ 0.27 billion 	<ul style="list-style-type: none"> Pledged (2022): US\$ 0.87 billion Deposited (2022): US\$ 0.87 billion Approved (2022): NA Disbursed (2022): NA
FCPF Readiness Fund	FCPF Carbon Fund				
<ul style="list-style-type: none"> Pledged (2022): US\$ 0.46 billion Deposited (2022): US\$ 0.46 billion Approved (2022): US\$ 0.31 billion Disbursed (2022): US\$ 0.27 billion 	<ul style="list-style-type: none"> Pledged (2022): US\$ 0.87 billion Deposited (2022): US\$ 0.87 billion Approved (2022): NA Disbursed (2022): NA 				
Designated entities	<ul style="list-style-type: none"> Nepal: REDD Implementation Centre, MoFE 				
Process of application	<ul style="list-style-type: none"> FCPF has two separate but complementary funding mechanisms: the Readiness Fund and the Carbon Fund. The implementing entities include national government agencies and the International Bank for Reconstruction and Development (IBRD). The World Bank, the Inter-American Development Bank (IADB) and UNDP are delivery partners under the Readiness Fund and responsible for providing REDD+ readiness support to distinct countries. To participate in the Readiness Fund, an eligible REDD country submits a Readiness Preparation Proposal Idea Note to the facility management team. Upon approval, the eligible REDD country enters into a REDD Country Participation Agreement with the Trustee of the Readiness Fund. The Trustee of the Readiness Fund may enter into one or more grant agreements to fund a readiness preparation proposal. More information can be accessed here.¹⁰¹ A few countries that have successfully participated in the Readiness Fund may be selected, on a voluntary basis, to participate in the Carbon Fund. The detailed guidance is available here.¹⁰² 				
Sectors	Mitigation <ul style="list-style-type: none"> Forest and biodiversity 				

Fund: Nordic Development Fund (NDF)¹⁰³	
Priority countries	Bangladesh, Nepal
Funding period	<ul style="list-style-type: none"> From 2009–indefinite
Disbursement mechanism	<ul style="list-style-type: none"> Grants Concessional loan Equity Co-financing
Finance (US\$ billion)	<ul style="list-style-type: none"> Total funds (2020): US\$ 0.48 billion Disbursed (2020): US\$ 0.006 billion
Designated entities	<ul style="list-style-type: none"> Bangladesh: MoF Nepal: MoFSC; Ministry of Agriculture and Livestock Development
Process of application	<ul style="list-style-type: none"> At least 50% funds are directed towards adaptation NDF financing is provided mainly for technical assistance and for climate investments. Projects are identified by partner countries according to national priorities. The NDF also gathers project information and ideas through partnering with MDBs as well as Nordic companies, organisations and networks. All projects are screened against core project criteria: climate relevance and economic viability. The funding varies depending on the scope of the project or programme and usually ranges between EUR 2 million (US\$ 2.10 million) and EUR 5 million (US\$ 5.26 million).
Sectors	<p>Cross-cutting</p> <ul style="list-style-type: none"> Ecosystem adaptation, energy efficiency, forestry and land use, renewable energy, transportation, waste management, oceans and coastal resources, disaster risk reduction, health, jobs and livelihoods, poverty.
Fund: Nordic Climate Facility (NCF)¹⁰⁴	
Priority countries	Bangladesh, Nepal
Funding period	<ul style="list-style-type: none"> From 2009–present
Disbursement mechanism	<ul style="list-style-type: none"> Grants
Finance (US\$ billion)	<ul style="list-style-type: none"> Pledged (2020): US\$ 0.07 billion Disbursed (2019): US\$ 0.03 billion
Designated entities	<ul style="list-style-type: none"> Eligible applicants must be registered legal entities and can include for-profit companies and organisations; non-profit organisations and social enterprises; civil society organisations and academia

Process of application	<ul style="list-style-type: none"> • Calls for proposals are launched for innovative climate change projects in developing countries. • Projects should be implemented through partnerships between Nordic and local partners. • NCF follows a two-stage application process where the first stage involves preparation and submission of the concept note as per the given guidelines. • The funding varies depending on the scope of the project or programme and usually ranges between EUR 250,000 (US\$ 0.26 million) and EUR 500,000 (US\$ 0.52 million). • Once selected, the second stage involves submission of the detailed proposal. More information can be accessed here.¹⁰⁵
-------------------------------	---

Sectors	<p>Cross-cutting</p> <ul style="list-style-type: none"> • Agriculture and allied activities, coastal zone management, forest and biodiversity, water resources.
----------------	---

Fund: Global Climate Change Alliance (GCCA)¹⁰⁶

Priority countries	Bangladesh, Nepal
---------------------------	-------------------

Funding period	<ul style="list-style-type: none"> • GCCA: 2008–2015 • GCCA+: From 2015
-----------------------	---

Disbursement mechanism	<ul style="list-style-type: none"> • Grants; with co-financing required
-------------------------------	--

Finance (US\$ billion)	<ul style="list-style-type: none"> • Pledged (2022): US\$ 1.65 billion • Deposited (2022): US\$ 1.65 billion • Approved (2022): US\$ 0.89 billion • Disbursed (2022): US\$ 0.54 billion
-------------------------------	---

Designated entities	<ul style="list-style-type: none"> • Bangladesh: MoEFCC • Nepal: Ministry of Science, Technology and Environment (MoSTE)
----------------------------	--

Process of application	<ul style="list-style-type: none"> • Governments willing to engage in the programme should formally express their interest through the European Union (EU) Delegation to their country. • The EU Delegation checks if the partner country meets the selection criteria for GCCA funding and whether funds are available. • In parallel, a dialogue can initiate on possible areas of intervention and priorities. • Should no funding be available, countries may be put on a ‘waiting list’ until new funding becomes available. More information can be accessed here.¹⁰⁷
-------------------------------	--

Sectors	<p>Cross-cutting</p> <ul style="list-style-type: none"> • Oceans and coastal resources, disaster risk reduction, gender, jobs and livelihoods, poverty.
----------------	---

Fund: Climate Change Fund (CCF)¹⁰⁸

Priority countries	Bangladesh, India, Nepal
---------------------------	--------------------------

Funding period	<ul style="list-style-type: none"> • 2008–present
-----------------------	--

Disbursement mechanism	<ul style="list-style-type: none"> • Grants • Technical assistance • Direct charge
-------------------------------	---

Finance (US\$ billion)	<ul style="list-style-type: none"> • Pledged (2021): US\$ 0.09 billion • Approved (2021): US\$ 0.07 billion
Designated entities	<ul style="list-style-type: none"> • Bangladesh: MoEFCC • India: MoEFCC • Nepal: MoSTE
Process of application	<ul style="list-style-type: none"> • Project proposals are submitted by Asian Development Bank (ADB) user departments to the climate change steering committee through the CCF Secretariat. • Project proposals are reviewed by the working groups (i.e., clean energy, adaptation and land use) who recommend allocations. • Climate change steering committee finally approves the fund allocations to projects. • In general, applications are reviewed in six batches and are due on 31 January, 31 March, 31 May, 31 July, 30 September and 30 November.
Sectors	<p>Cross-cutting</p> <ul style="list-style-type: none"> • Forestry and land use, renewable energy, transportation, disaster risk reduction, low-carbon development.
Fund: <u>Global Facility for Disaster Reduction and Recovery (GFDRR)</u>¹⁰⁹	
Priority countries	Bangladesh, India, Nepal
Funding period	<ul style="list-style-type: none"> • 2006–present
Disbursement mechanism	<ul style="list-style-type: none"> • Grants • Technical assistance
Finance (US\$ billion)	<ul style="list-style-type: none"> • Provided more than US\$ 0.75 billion since its inception
Designated entities	<ul style="list-style-type: none"> • Bangladesh: Economic Relations Division, MoF • India: Ministry of Home Affairs (MoHA) • Nepal: MoF
Process of application	<ul style="list-style-type: none"> • GFDRR allocates resources through a demand-driven approach based on strategic objectives and the application of grant allocation criteria as defined by the consultative group.
Sectors	<p>Adaptation</p> <ul style="list-style-type: none"> • Industry and infrastructure, urban infrastructure, nature-based solution, oceans and coastal resources, disaster risk reduction.
Fund: <u>Public-Private Infrastructure Advisory Facility (PPIAF)</u>¹¹⁰	
Priority countries	India, Nepal
Funding period	<ul style="list-style-type: none"> • 1999–present
Disbursement mechanism	<ul style="list-style-type: none"> • Grant • Technical assistance
Finance (US\$ billion)	<ul style="list-style-type: none"> • Invested US\$ 0.35 billion since its inception (2022)

Designated entities	<ul style="list-style-type: none"> • Bangladesh: Economic Relations Division, MoF • India: Department of Economic Affairs, MoF • Nepal: MoF
Process of application	<ul style="list-style-type: none"> • PPIAF accepts grant proposals that are in line with its mandate to support governments in creating and strengthening a sound, enabling environment for private participation in infrastructure. • Assistance grants can fall under technical assistance or production of knowledge materials. • More information on application procedure can be accessed here.
Sectors	<p>Cross-cutting</p> <ul style="list-style-type: none"> • Digital development, transport, water and sanitation, energy.
Fund: Global Environment Facility (GEF) – Small Grants Programme (SGP)¹¹¹	
Priority countries	India, Nepal
Funding period	<ul style="list-style-type: none"> • 1992–present
Disbursement mechanism	<ul style="list-style-type: none"> • Grants • Co-financing
Finance (US\$ billion)	<ul style="list-style-type: none"> • Provided over US\$ 0.72 million of GEF and other donor funds since its inception (2022). • Also, mobilised US\$ \$0.87 billion as co-finance
Designated entities	<ul style="list-style-type: none"> • India: UNDP in partnership with MoEFCC • Nepal: UNDP in partnership with the MoFE
Process of application	<ul style="list-style-type: none"> • Grants are made directly to CBOs and NGOs. • The maximum grant amount per project is US\$ 50,000, with the average grant around US\$ 25,000. In addition, SGP provides a maximum of US\$ 150,000 for strategic projects that allow for scaling up and replication of successful approaches. • SGP complements the large and medium-sized GEF project funding by providing a window for the direct participation of NGOs, local communities and other grassroots organisations. • With assistance from the SGP National Coordinator, the proponent (national level CBOs or NGOs) prepares a brief project concept paper and submits. • If the project is found to be eligible as per the GEF-SGP criteria, the project proponent prepares a detailed project proposal. In some cases, this may be supported by a planning grant. • Approved proposals enter the national SGP work programme. • More information on application procedure can be accessed here.¹¹²
Sectors	<p>Cross-cutting</p> <ul style="list-style-type: none"> • Agriculture, ecosystem adaptation, education, forestry and land use, biodiversity, climate change, disaster risk reduction, health, gender, jobs and livelihoods.

2.2 Bilateral climate finance

Climate finance is also channelled from developed countries through their bilateral (country to country) development assistance because of their long-standing role in delivering aid to developing countries. A number of bilateral financing agencies are currently operational in Bangladesh, India and Nepal, including Agence Française de Development (AFD), the Danish International Development Agency (Danida), the UK Foreign, Commonwealth and Development Office (FCDO, previously Department for International Development (DFID)), the European Union (EU) German Development Bank (KfW), and the Japan International Cooperation Agency (JICA).

Most of the bilateral financial institutions offer significant opportunities for countries to address their climate and development needs and have been long-standing partners with the governments of Bangladesh, India and Nepal in furthering social and economic reforms. Table 6 captures the bilateral climate landscape in Bangladesh, India and Nepal.

The Climate Policy Initiative (2021) estimated that approximately US\$ 35 billion was channelled towards climate actions through governments, ministries and bilateral agencies in 2019–2020, compared to US\$ 23 billion in 2017–2018.¹¹³

It is difficult to track bilateral climate finance flowing in the three countries (Bangladesh, India and Nepal) due to limited information in the public domain, limited systematic tracking and a lack of agreed definitions. Therefore, the compendium does not delve into the detail of bilateral sources.

TABLE 6: Bilateral channels for climate finance in focal countries¹¹⁴

Donor countries	Summary
Germany	<ul style="list-style-type: none"> At the G7 Leaders' Summit (2021), Germany announced an increase in its climate finance from EUR 4 billion (US\$ 4.20 billion) to EUR 6 billion (US\$ 6.30 billion) per year by 2025 at the latest. In 2020, the German government committed EUR 7.83 billion (US\$ 8.23 billion) for supporting climate change mitigation and adaptation measures in developing countries.¹¹⁵ EUR 5.1 billion (US\$ 5.36 billion) was provided from the federal budget. Over 85% of this budget came from the Federal Ministry for Economic Cooperation and Development (BMZ). EUR 2.55 billion (US\$ 2.68 billion) was mobilised in the form of development loans, promotional loans, investments and other financing from capital market funds through KfW Bankengruppe (KfW banking group) and the German Investment and Development Company (DEG). EUR 0.19 billion (US\$ 0.20 billion) was mobilised as revolving credit lines for local (development) banks, investments in structured funds and PPPs. In addition, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supported extensive climate action through the International Climate Initiative (IKI). From 2022, the IKI works under the Federal Ministry of Economic Affairs and Climate Action. As of 2022, IKI has supported more than 800 climate and biodiversity projects in more than 60 countries, with a total funding volume of EUR 5 billion (US\$ 5.26 billion) since 2008.¹¹⁶

Japan

- At COP26, Japan pledged an additional US\$ 10 billion of climate finance, both public and private, bringing its total climate finance commitment to US\$ 70 billion from 2021 to 2025. This also includes the commitment to double adaptation finance to US\$ 14.8 billion.
- As of 2019, the official development assistance (ODA) targeting climate actions totalled US\$ 6.3 billion.¹¹⁷
- At COP 21, Japan announced a new commitment known as Action for Cool Earth 2.0 (ACE2.0) and pledged to provide approximately 1.3 trillion Yen (US\$ 9.55 billion) of public and private climate finance to developing countries by 2020.
- Japan's climate finance comprises public finance ODA, other official flows (OOF) and private finance. ODA includes grant assistance, loans, technical cooperation and contributions to international organisations.
- Japan's Ministry of Foreign Affairs, the Ministry of Finance, and the Ministry of the Environment are the key ministries setting priorities and directing climate finance-related ODA. The ODA programmes are implemented by JICA, a governmental agency that coordinates and implements official development aid in collaboration with other relevant government ministries and agencies.
- OOF is mainly provided by Japan Bank for International Cooperation, a policy-based financial institution, and Nippon Export and Investment Insurance, a governmental agency that provides trade and investment insurance. These institutions mobilise private finance by co-financing and providing trade insurance.
- The bulk of Japan's climate-related ODA is directed to projects in energy (44%) and infrastructure (44%), with the remaining funding directed towards multiple sectors (6%) and water and sanitation (5%). Due partly to Japan's focus on low-carbon infrastructure and energy, most of the ODA (88%) is spent on climate change mitigation projects, while only 12% is spent on adaptation.

Switzerland

- The Swiss Agency for Development and Cooperation (SDC), as part of the Federal Department of Foreign Affairs, seeks to promote sustainable development pathways and is guided by the Swiss International Cooperation Strategy 2021–2024. SDC focuses on cooperation with local actors as key for achieving the UN SDGs. Climate change and the environment is one of the SDC's 11 priority themes.
- The country has committed to spend CHF 400 million (US\$ 414 million) per year by the end of 2024 for supporting climate action in developing countries. Of this amount, 44% will be spent through bilateral cooperation, while 56% will be allocated to multilateral finance flows.¹¹⁸
- Switzerland provided US\$ 332 million between 2015 and 2018 through its climate-related global, regional and bilateral programmes and projects as well as the Swiss Investment Fund for emerging markets. The country also mobilised around US\$ 64.3 million from the private sector, among others.¹¹⁹

United Kingdom (UK)

- At COP 26, the UK announced it would double its internal climate finance of GBP 11.6 billion (US\$ 14.20 billion) over the next five years for developing nations to access clean technology and build green infrastructure. CDC, the UK's development finance institution, has also committed to a 30% climate target, thereby mobilising a further GBP 2 billion (US\$ 2.44 billion) over the next five years.¹²⁰
- The International Climate Finance portfolio is delivered by three UK government departments: FCDO; Department for Business, Energy and Industrial Strategy (BEIS); and Department for Environment, Food and Rural Affairs (Defra). As of 2020, UK had mobilised GBP 4.1 billion (US\$ 5.02 billion) public finance and £2.2 billion (US\$ 2.69 billion) of private finance for supporting climate action.¹²¹

European Union (EU)

- At COP 26, the EU announced a EUR 4 billion (US\$ 4.20 billion) top-up, over the period of 2021–2027 to support climate action in developing countries – around half of this amount will support adaptation initiatives. Climate finance provided and mobilised by the EIB and the Member States will be in addition to the EU's own funding.
- The EU, its Member States and the EIB are, together, the biggest contributors of public climate finance to developing countries. As of 2019, they have mobilised climate finance amounting to EUR 23.2 billion (US\$ 24.41 billion). They are also one of the world's top providers of official development assistance (a total US\$ 19.4 billion in 2020), with climate action being increasingly integrated into the assistance. It is estimated that almost half of the funding is used for mitigation and around 20% for adaptation in developing countries, while the remaining is used for supporting cross-cutting projects. The Commission is also on track to meet its pledge to provide at least EUR 14 billion (US\$ 14.73 billion) (or an average of EUR 2 billion per year (US\$ 2.10 billion/year) to support climate activities in developing countries in the period 2014–2020.¹²²
- The Global Climate Change Alliance+ (GCCA+) is the main channel for the EU to support policy dialogue, and specifically to target climate action in developing countries. From 2014–2020, the grant funding under GCCA+ amounted to EUR 420 million (US\$ 442.01 million). GCCA+ priority areas include mainstreaming climate change into national development strategies, increasing resilience, and supporting the formulation and implementation of adaptation and mitigation strategies.

Denmark

- The Danish International Development Agency (Danida) serves as the development cooperation agency of the Government of Denmark under the Danish Ministry of Foreign Affairs and is committed to supporting the achievement of the UN SDGs in the context of sustainable economic growth.
- Denmark announced an increase in its grant-based climate finance to US\$ 500 million per year for developing countries from 2023.¹²³ At least 60% of this grant-based climate finance will be used for supporting adaptation initiatives. The country is also working towards mobilising public and private finance from other sources, including through the Danish Development Finance Institution (DFI).

France

- At COP 26, France announced it will provide EUR 6 billion (US\$ 6.31 billion) in climate finance per year between 2021 and 2025, with one third dedicated to adaptation. France has also announced that 30% of its bilateral climate finance will also benefit biodiversity.¹²⁴
- The country had committed to increase its financing for climate-related programmes by EUR 2.0 billion (US\$ 2.10 billion) per year between 2015 and 2020, while the French Development Agency (AFD) committed to disburse 50% of its finance to climate-related programming: a target which was successfully met in 2019. AFD disbursed EUR 6.1 billion (US\$ 6.41 billion) to climate-related programmes in 2019.
- The French Development Agency (AFD), a public development agency and a development bank, serves as France's implementing agency.

Canada

- At the G7 Leaders' Summit (2021), Canada announced it would double its international climate finance commitment, to CAD 5.3 billion (US\$ 4.08 billion) over the following five years. The funds will be mobilised to support developing countries to combat climate change and address biodiversity loss around the world.¹²⁵
- At COP26, Canada announced it would increase the proportion of grants from 30% to 40%; allocate a minimum of 40% of funding towards adaptation; and at least 20% of funds would go to projects that support biodiversity and nature-based solutions.
- In 2019, Canada spent 15% of its allocable bilateral ODA on climate finance.
- The International Development Research Centre (IDRC) supports research, tools, and leadership to address development issues. The IDRC disbursed CAD 145 million (US\$ 111.67 million) or 2% of Canada's ODA in FY2019/20.

Netherlands

- At COP 26, the Netherlands announced that it will increase its climate finance to EUR 660 million (US\$ 694.67 million) in public climate finance and mobilise EUR 640 million (US\$ 673.62 million) through private climate finance. Also, the country is committed to continue allocating at least half of its public climate finance to adaptation.
- In 2019, the Netherlands committed US\$ 1.3 billion of its bilateral allocable official development assistance to projects focused on climate change.
- The Dutch Fund for Climate and Development (DCFC), managed by the Dutch development bank FMO, SNV Netherlands, and Climate Fund Managers on behalf of the Dutch Ministry of Foreign Affairs, is responsible for managing the climate portfolio.

Norway

- In 2021, Norway announced that it would double its total climate finance to US\$ 1.6 billion by 2026 to support climate actions in low- and middle-income countries. In 2019, of the total bilateral allocable ODA amounting to US\$ 3.3 billion, Norway spent US\$ 488 million on climate projects.
- Norfund, Norway's development finance institution and a state-owned investment fund, supports the private sector in developing countries with focus on renewable energy, agribusiness, and financial institutions. It is estimated that by the end of 2020, Norfund was managing investments worth US\$ 3.2 billion, almost half of which are clean energy projects.
- Through the Norwegian International Climate and Forest Initiative (NICFI), the country's largest climate-finance initiative, Norway has also pledged to provide US\$ 330 million per year to support emissions reduction and climate adaptation. Norad manages NICFI funds on behalf of the Ministry of Climate and Environment.

Sweden

- In 2021, Sweden announced it would double its annual public climate finance to developing countries to US\$ 1.64 billion by 2025. The country also committed to continue providing around 50% of its bilateral climate finance for adaptation initiatives in developing countries.¹²⁶
- In 2019, Sweden committed US\$ 694 million of its bilateral allocable ODA to climate actions.
- The Swedish International Development Agency (SIDA) is primarily responsible for implementing climate-targeted projects while the Swedish Environmental Protection Agency maintains international cooperation with select countries and organisations.

United States of America (USA)

- The USA announced in 2021 to double its annual public climate finance to developing countries to around US\$ 11.4 billion by 2024, including around US\$ 3 billion to support adaptation initiatives.¹²⁷ In 2019, the US committed a total of US\$ 931 million of ODA for climate actions, which was only 3% of the total bilateral allocable ODA.
- The United States Agency for International Development (USAID) is the US governmental agency for development cooperation and leads implementation.

3. Financing climate action in Bangladesh, India and Nepal

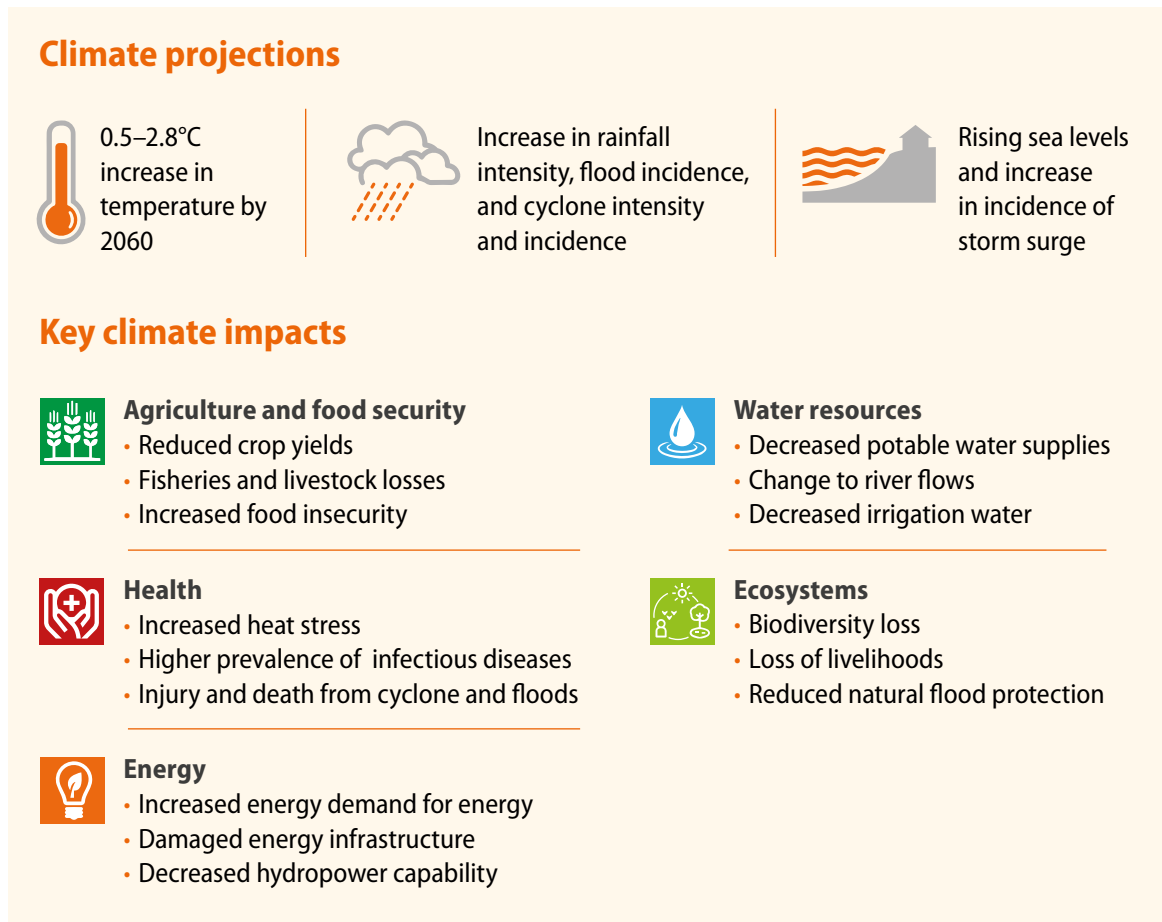
3.1 Bangladesh

COUNTRY PROFILE AND GLOBAL CLIMATE CHANGE COMMITMENTS

Bangladesh is located at the low-lying end of the fragile delta formed by the Ganges, Brahmaputra and Meghna Rivers. The country consists mostly of low-lying, flat land and a network of more than 230 major rivers and their tributaries. Almost 80% of the country’s land consists of floodplains, rendering most of Bangladesh prone to flooding. With a population of about 150 million people spread across an area of 147,570 square kilometres, the country has one of the highest population densities in the world. The country has an average growth rate of 8%, which is above most Asian countries. The Human Development Index (HDI) is 0.614, placing Bangladesh in the medium human development category, positioning it at 135 out of 189 countries and territories.¹²⁸

Often referred to as ‘ground zero for climate change’, Bangladesh is recognised as one of the most climate-vulnerable countries in the world. The topography and geographical location of the country make it highly prone to extreme weather events, including cyclones, floods, salt-water intrusion and storm surges. Along with these geographical characteristics, socio-economic factors such as a strong dependence on agriculture (particularly rice cultivation) and other resource-dependent sectors, high population density, and extreme levels of poverty add to the vulnerability of the country. Figure 10 below briefly summarises some of the key climate impacts in Bangladesh.

FIGURE 10: Climate projections and key climate impacts in Bangladesh¹²⁹



Over the past decade, the direct annual costs from natural disasters have amounted to 0.5% to 1% of the country's GDP in terms of damage to infrastructure and livelihoods and losses from forgone production. Bangladesh's Intended Nationally Determined Contribution (INDC, 2015) highlights that climate change could lead to an annual GDP loss of 2% by 2050 and 9.4% by 2100.¹³⁰ The World Bank (2010) estimates that total investments of US\$ 5.51 billion and US\$ 0.11 billion in annual recurrent costs will be needed by 2050 to ensure protection against storm surge risks, including those from climate change.¹³¹

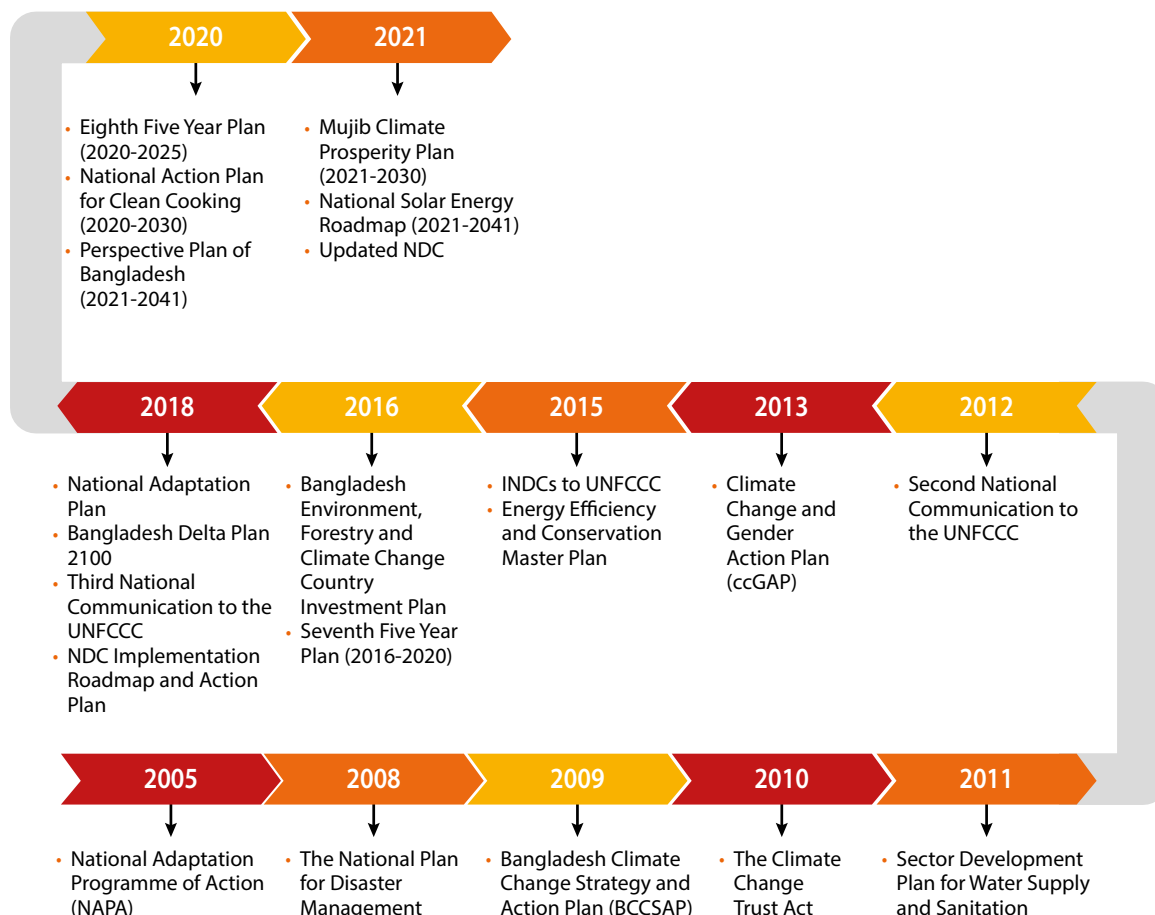
Climate change policies and programmes

The Government of Bangladesh (GoB) has identified urgent and long-term adaptation actions to reduce the vulnerability of its people and risks to national development. The country has responded through a number of policies, programmes and institutional initiatives. Figure 11 below describes the evolution of climate change policies, frameworks and strategies in Bangladesh.



A busy market in the heart of Dhaka city, Bangladesh. © Mamunur Rashid via Shutterstock

FIGURE 11: Timeline of climate change policies, frameworks and strategies in Bangladesh



Bangladesh prepared its first Nationally Determined Contribution (NDC) in 2015, updated the NDC interim-report in December 2020, and submitted its updated NDC in August 2021.

Bangladesh's updated NDC focusses largely on strengthening mitigation actions in energy (power, transport), energy use in industry, residential, commercial, agriculture and brick manufacturing, (Fluorinated gases and fugitive emissions), Industrial Processes and Product Use (IPPU), Agriculture, Forestry and other Land use (AFOLU) and waste sectors. It also provides the latest information on various adaptive measures undertaken in the country. Bangladesh pledged:¹³²

- an unconditional 6.73% reduction in GHG emissions from 2012 levels by 2030 in the energy, agriculture and waste sectors. 95.4% of this emissions reduction will be from the energy sector, while 2.3% and 2.2% will be from AFOLU and waste sectors, respectively.
- a conditional 15.12% reduction in GHG emissions by 2030 in the energy, agriculture and waste sectors, depending on international support through investments, financing, capacity-building and technology transfer.

The updated NDC also provides the latest information on various adaptation initiatives undertaken by the country. Bangladesh has also prepared a roadmap towards formulating a comprehensive NAP, with a focus on investing in long-term adaptation and enhancing national capacity for integrating climate change adaptation in planning, budgeting and financial monitoring.

The NAPA was developed in 2005, and the *Bangladesh Climate Change Strategy and Action Plan* (BCCSAP) in 2009, creating a Climate Change Unit and Climate Trust Fund, and designating some high-level committees with specific functions to facilitate adaptation actions. The objective of combating climate change has been integrated into the GoB's *Eighth Five-Year Plan* (2021–25),¹³³ as well as in the *Perspective Plan of Bangladesh (2010–2021): Making Vision 2021 a Reality*.¹³⁴

The government adopted a national Climate Fiscal Framework (CFF) in 2014 to make the public finance system ready for using national and international climate finance in an efficient and effective manner. In 2021, Bangladesh launched the *Mujib Climate Prosperity Plan*¹³⁵ with a strategic investment framework to mobilise finance, especially through international cooperation, for implementing renewable energy and climate-resilience initiatives.¹³⁶

The Ministry of Environment, Forest and Climate Change (MoEFCC) is the coordinating agency at the national level and responsible for mainstreaming climate change policies into different projects and programmes, as well as developing climate change strategies for the country.

The NAPA in the country was developed with the support of GEF and updated in 2009, and it includes 38 adaptation measures. The adaptation priorities from NAPA were embedded in the BCCSAP in 2009. The BCCSAP includes 44 immediate, short-, medium- and long-term programmes for both climate adaptation and low-carbon development based on six pillars:

1. Food security, social protection and health;
2. Comprehensive disaster management;
3. Infrastructure;
4. Research and knowledge management;
5. Mitigation and low-carbon development; and
6. Capacity-building and institutional strengthening.

CLIMATE FINANCE NEEDS

Bangladesh estimates it will require US\$ 32.25 billion over the period 2021–2030 to effectively implement the proposed mitigation activities under the unconditional scenario for the sectors mentioned in the updated NDC (2021). To meet emissions reductions under the conditional scenario over 2021–2030, the amount could go as high as US\$ 143.72 billion. In terms of adaptation costs, the previous NDC (2015) estimated that US\$ 40.81 billion would be required over the period 2015–2030 for implementing identified adaptation measures; however, no costings were provided for adaptation in the updated NDC.

See Table 12 in Section 3.1.5 for government budget allocations for NDC adaptation and mitigation programmes during FY2017–18 to FY2021–22.

The Bangladesh Country Investment Plan for Environment, Forestry and Climate Change (CIP-EFCC 2016–2021)¹³⁷ is a five-year framework for planning and coordination of national and international investments for environment, forestry and climate change (EFCC) sectors in Bangladesh. The CIP-EFCC aims to increase the contribution of the EFCC sectors to the sustainable development of the country, help reduce poverty, improve environmental and human health, and increase resilience to climate change. The CIP-EFCC includes 14 investment programmes under four pillars:

- Pillar 1: Sustainable development and management of natural resources;
- Pillar 2: Environmental pollution reduction and control;
- Pillar 3: Adaptation and resilience to, and mitigation of, climate change; and
- Pillar 4: Environmental governance, gender and human and institutional capacity development.

The total cost (at 2016 price) of implementing the CIP-EFCC is estimated to be BDT 98,108 crore (US\$ 11.7 billion). Approximately US\$ 4.7 billion of EFCC programmes were identified to be implemented through the annual development plans of the national government, with an investment gap of around US\$ 7 billion for internal and external development partners to address over the period 2016–2021.¹³⁸ At the end of the period (2021) almost 99.91% of the planned amount, i.e., BDT 98,021.64 crore (US\$ 10.54 billion), had been allocated for carrying out the programmes of the CIP-EFCC. See Table 12 in Section 3.1.5 for the latest domestic budget allocations for programmes under the CIP-EFCC.

The GoB, in cooperation with the Government of the Netherlands, formulated the Bangladesh Delta Plan 2100 (BDP 2100).¹³⁹ BDP 2100 is a strategic and comprehensive planning document that covers 50–100 years – the longest period in a national planning document to date – and identifies sectors for investments to reduce climate risks and environmental losses in the delta region. The current investment plan for BDP 2100's first phase for the next 10 years consists of 65 infrastructure projects and 15 institutional and knowledge-development projects in six hotspots across the country. The total capital investment cost for BDP 2100 is estimated to be US\$ 37 billion, i.e., approximately BDT 343,839 crore.



A row of stilt houses in Bangladesh to help face the yearly devastation from the floods. © StevenK via Shutterstock

THE CLIMATE FINANCE LANDSCAPE IN BANGLADESH: SOURCES AND INSTRUMENTS

The climate finance landscape in Bangladesh includes a wide range of sources, intermediaries, instruments and planning systems that play a role in mobilising and channelling funds to support investments in low-carbon, climate-resilient development.

Table 7 below briefly describes the various sources of climate finance and instruments used in Bangladesh.

TABLE 7: Climate finance sources and instruments in Bangladesh

Sources	Category	Institution/mechanism	Instruments
Domestic	Public	National budget, programmes, schemes Bangladesh Climate Change Trust Fund (BCCTF)	Budgetary expenditure Grants
	Private	Green banking through central bank, commercial banks	Concessional loans Re-financing loans
International	Public	Multilateral and bilateral	Grants, loans, equity
	Private	Philanthropy Foreign Direct Investment	Equity, grants

INTERNATIONAL CLIMATE FINANCE SOURCES IN BANGLADESH

As much as 75% of financial resources spent on climate change in the country originates directly from the government, while the rest is provided by international development partners.

Bangladesh has been successful in mobilising both multilateral and bilateral international climate finance for implementing climate actions. The GoB accesses a number of major international funds: the GEF, LDCF, ASAP, Global Climate Change Alliance (GCCA), CIF, UN REDD and the GCF.

The GEF has funded 43 projects in Bangladesh, with US\$ 160 million as grants and US\$1.03 billion as additional co-financing by the government and private sector.¹⁴⁰ The country used these funds to combat desertification in the drought-prone part of the country and support an ADB-funded sustainable urban transport project. The GEF is managing the UNFCCC funds, including the LDCF, SCCF and the AF.

Bangladesh accesses funds through three programmes – the PPCR, SREP and FIP under the CIF. Presently, nine projects are being supported through the CIF in Bangladesh.

- Bangladesh accessed US\$ 110 million through the PPCR in 2010. Of this amount, 45% was provided as a grant (US\$ 50 million) and 55% was provided as highly concessional loans (US\$ 60 million)¹⁴¹ towards improving climate-resilient agriculture and food security; strengthening the security and reliability of fresh water supply, sanitation, and infrastructure; and enhancing the resilience of coastal communities and infrastructure in the country.

- Bangladesh accessed US\$ 75 million in 2015 for scaling up renewable energy in the country through the SREP.¹⁴² Up to US\$ 35.75 million (47.7%) of these funds were provided as grants, while US\$ 41.25 million were in the form of concessional loans.
- Bangladesh was selected among 15 countries that will receive funds from the FIP. With the support of the World Bank, the country is preparing an investment plan with a list of projects for consideration under the FIP.

Bangladesh has also accessed funds through the GCF and received US\$ 351.1 million as a grant for five projects with a total project value of US\$ 517.3 million. The rest of the project cost is co-financed by the country's public and private sectors.¹⁴³

Apart from the above-mentioned funds, some of the multilateral and bilateral development assistance agencies active in Bangladesh include the World Bank and ADB, UN agencies such as UNDP, UNEP and FCDO, the USAID, Swedish International Development Agency (SIDA), and Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ), Germany, among others.

Table 8 below provides an overview of international climate finance flows in Bangladesh. The table includes the status of various projects, budget allocated, and the funding mechanism under different climate funds. Considering the sheer volume of information available, the table only includes projects that are presently active or were closed in the last five years.

TABLE 8: International climate finance sources in Bangladesh (2010-to date)

Fund: Green Climate Fund (GCF)¹⁴⁴	
Name of programme/scheme	<u>Promoting private sector investment through large-scale adoption of energy saving technologies and equipment for textile and readymade garment (RMG) sectors of Bangladesh</u> ¹⁴⁵
Year & status	<ul style="list-style-type: none"> • 2020–2032 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Infrastructure Development Company Limited (IDCOL) and Sustainable Renewable Energy Development Authority (SREDA), GoB
Budget outlays (US\$ millions)	Total project costs: US\$ 340.5 million <ul style="list-style-type: none"> • GCF: US\$ 250 million as loan and US\$ 6.48 million as grant • Co-financing: US\$ 84.02 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, loan, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project seeks to reduce 14.5 million tonnes of emissions by supporting the textile and RMG sector to make use of investment opportunities to adopt energy saving technologies.
Fund: Green Climate Fund (GCF)¹⁴⁴	
Name of programme/scheme	<u>Extended Community Climate Change Project</u> ¹⁴⁶
Year & status	<ul style="list-style-type: none"> • 2019–2024 • Ongoing
Implementing partner/donor	PKSF
Budget outlays (US\$ millions)	Total project costs: US\$ 13.33 million <ul style="list-style-type: none"> • GCF: US\$ 9.68 million as grant • Co-financing: US\$3.64 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing

Focus areas	Adaptation <ul style="list-style-type: none"> The project aims to impact more than 190,000 beneficiaries, especially women, and enhance their adaptive capacities.
Name of programme/scheme	Global clean cooking programme: Bangladesh ¹⁴⁷
Year & status	<ul style="list-style-type: none"> 2018–2023 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> IDCOL
Budget outlays (US\$ millions)	Total project costs: US\$ 40 million <ul style="list-style-type: none"> GCF: US\$ 20 million as grant Co-financing: US\$ 20 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Cross-cutting <ul style="list-style-type: none"> The project aims to reduce GHG emissions, solid fuel used for cooking, and household air pollution by creating a sustainable market for higher efficiency cook-stoves.
Name of programme/scheme	Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change-induced salinity ¹⁴⁸
Year & status	<ul style="list-style-type: none"> 2018–2024 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> Ministry of Women and Children Affairs (MoWCA), UNDP
Budget outlays (US\$ millions)	Total project costs: US\$ 33 million <ul style="list-style-type: none"> GCF: US\$ 25 million as grant Co-financing: US\$ 8 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project aims to enhance the adaptive capacities of target communities, especially women, to address climate change risks affecting livelihoods and drinking water security.
Name of programme/scheme	Climate-resilient infrastructure mainstreaming ¹⁴⁹
Year & status	<ul style="list-style-type: none"> 2015–2024 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> Local Government Engineering Department (LGED), German Development Bank (KfW)
Budget outlays (US\$ millions)	Total project costs: US\$ 81million <ul style="list-style-type: none"> GCF: US\$ 40 million as grant Co-financing: US\$ 41million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project integrates climate change adaptation systematically into decision-making for infrastructure planning, supervision and maintenance of the LGED.

Fund: Adaptation for Smallholder Agriculture Programme (ASAP)	
Name of programme/scheme	Rural Microenterprise Transformation Project¹⁵⁰
Year & status	<ul style="list-style-type: none"> • 2019–2025 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • PKSF; International Fund for Agricultural Development (IFAD)
Budget outlays (US\$ millions)	Total costs: US\$ 200 million <ul style="list-style-type: none"> • IFAD: US\$ 80 million as loan and US\$ 1 million as grant • Co-financing: US\$ 118.12 million
Disbursement mechanism	<ul style="list-style-type: none"> • Concessional loan, grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to increase the income, food security and nutrition of marginal and small farmers and micro-entrepreneurs across selected value chains
Name of programme/scheme	Smallholder Agricultural Competitiveness Project¹⁵¹
Year & status	<ul style="list-style-type: none"> • 2018–2024 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Ministry of Agriculture (MoA); IFAD
Budget outlays (US\$ millions)	Total costs: US\$ 110.89 million <ul style="list-style-type: none"> • IFAD: US\$ 64.5 million as loan and US\$ 2 million as grant • Co-financing: US\$ 44.39 million
Disbursement mechanism	<ul style="list-style-type: none"> • Concessional loan, grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to increase incomes, food and nutrition security of smallholder farmers by supporting them to be more responsive and competitive in producing diverse, high-value crops and marketing fresh and processed agricultural products. The project will also provide technical training and access to finance.
Name of programme/scheme	Promoting Resilience of Vulnerable through Access to Infrastructure, Improved Skills and Information¹⁵²
Year & status	<ul style="list-style-type: none"> • 2017–2026 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • LGED; IFAD
Budget outlays (US\$ millions)	Total project costs: US\$ 92.37 million <ul style="list-style-type: none"> • IFAD: US\$ 63.25 million as loan and US\$ 1.25 million as grant • Co-financing: US\$ 27.87 million
Disbursement mechanism	<ul style="list-style-type: none"> • Concessional loan, grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project will improve the resilience of the targeted community in a flood-prone and extremely poor area through better physical infrastructure, more diverse income streams and better decision-making based on robust flood information.

Name of programme/scheme	<u>National Agricultural Technology Programme: Phase II Project</u> ¹⁵³
Year & status	<ul style="list-style-type: none"> • 2015–2023 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • MoA; IFAD; World Bank; USAID
Budget outlays (US\$ millions)	Total project costs: US\$ 220.4 million <ul style="list-style-type: none"> • IFAD: US\$ 23.8 million as loan • Co-financing: US\$ 196.6 million
Disbursement mechanism	<ul style="list-style-type: none"> • Concessional loan, grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project seeks to increase income and reduce extreme poverty and hunger by improving agricultural technology, fisheries and livestock sector through climate-smart technologies and improved market linkages.
Name of programme/scheme	<u>Promoting Agricultural Commercialisation and Enterprises Project</u> ¹⁵⁴
Year & status	<ul style="list-style-type: none"> • 2014–2022 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • PKSF; IFAD
Budget outlays (US\$ millions)	Total project costs: US\$ 92.85 million <ul style="list-style-type: none"> • IFAD: US\$ 40 million as loan • Co-financing: US\$ 52.85 million
Disbursement mechanism	<ul style="list-style-type: none"> • Concessional loan, grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to enhance the livelihoods of rural community by enhancing profitable business opportunities for microentrepreneurs; value chain development; technology and product adaptation.
Name of programme/scheme	<u>Haor Infrastructure and Livelihood Improvement Project: Climate Adaptation and Livelihood Protection</u> ¹⁵⁵
Year & status	<ul style="list-style-type: none"> • 2011–2022 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • LGED, IFAD, Spanish Trust Fund
Budget outlays (US\$ millions)	Total project costs: US\$ 133.31 million <ul style="list-style-type: none"> • IFAD: US\$ 55 million as loan and US\$ 1 million as grant • ASAP Trust Fund: US\$ 15.04 million • Co-financing: US\$ 62.17 million
Disbursement mechanism	<ul style="list-style-type: none"> • Concessional loan, loan, grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project contributes to the reduction of poverty in the Haor Basin by improving the living standards of the community and reducing the vulnerability of the poor through improved road infrastructure, enhanced local capacity and expanded access to natural resources, technology and markets. The project aims to secure employment and support women's income-generating activities.

Name of programme/scheme	<u>Char Development and Settlement Project IV</u> ¹⁵⁶
Year & status	<ul style="list-style-type: none"> • 2010–2022 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Bangladesh Water Development Board (Ministry of Water Resources); IFAD; The Netherlands
Budget outlays (US\$ millions)	Total project costs: US\$ 139.15 million <ul style="list-style-type: none"> • IFAD: US\$ 67.3 million as loan • Co-financing: US\$ 35.27 million
Disbursement mechanism	<ul style="list-style-type: none"> • Concessional loan, grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to develop improved and more secure livelihoods for poor people living on newly accreted coastal islands known locally as chars by adopting an integrated approach to coastal zone development.
Fund: Least Developed Countries Fund (LDCF) ¹⁵⁷	
Name of programme/scheme	<u>Building Climate-Resilient Livelihoods in vulnerable landscapes in Bangladesh (BCRL)</u> ¹⁵⁸
Year & status	<ul style="list-style-type: none"> • 2021–2026 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Department of Environment (DoE), MoEFCC and Department of Agricultural Extension (DAE), MoA; FAO
Budget outlays (US\$ millions)	Total project costs: US\$ 56.39 million <ul style="list-style-type: none"> • GEF Grant: US\$ 8.93 million • Co-financing: US\$ 47.46 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant; co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The overarching objective of this project is to improve the resilience of people, communities, and ecosystems to climate change, and improve livelihoods through increased value addition in the agricultural food systems of Bangladesh.
Name of programme/scheme	<u>Integrating Climate Change Adaptation into Sustainable Development Pathways of Bangladesh</u> ¹⁵⁹
Year & status	<ul style="list-style-type: none"> • 2020–2024 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • UNDP, DoE (MOEFCC) and other line agencies such as Planning Commission, Finance Division, LGED, Department of Disaster Management, Department of Agriculture Extension, Bangladesh Haor and Wetland Development, Barind Multipurpose Development Authority
Budget outlays (US\$ millions)	Total project costs: US\$ 20.7 million <ul style="list-style-type: none"> • GEF Grant: US\$ 5.7 million • Co-financing: US\$ 15 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing

Focus areas	Adaptation <ul style="list-style-type: none"> The project aims to support Bangladesh in reducing vulnerability of communities to the adverse impacts of climate change through participative design, community-based management, and diversification of afforestation and reforestation programmes.
Name of programme/scheme	<u>Building Resilience of Health Systems in Asian LDCs to Climate Change</u> ¹⁶⁰
Year & status	<ul style="list-style-type: none"> 2018–2021 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> UNDP, World Health Organisation (WHO)
Budget outlays (US\$ millions)	Total project costs: US\$ 36.06 million <ul style="list-style-type: none"> GEF Grant: US\$ 9 million Co-financing: US\$ 27.06 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project aims to increase the adaptive capacity of national health systems and institutions and subnational level actors to respond to and manage long-term, climate-sensitive health risks.
Name of programme/scheme	<u>Community-based Climate-Resilient Fisheries and Aquaculture Development in Bangladesh</u> ¹⁶¹
Year & status	<ul style="list-style-type: none"> 2016–2020 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> Department of Fisheries (Ministry of Fisheries and Livestock); FAO
Budget outlays (US\$ millions)	Total project costs: US\$ 21.77 million <ul style="list-style-type: none"> GEF Grant: US\$ 5.42 million Co-financing: US\$ 16.35 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project seeks to build resilience and promote adaptation to climate change in the fishery and aquaculture sectors through capacity development and policy reform. The project also aims to increase awareness and knowledge of local communities, and enhance local adaptive capacity through transfer and adoption of site-specific climate-resilient fisheries and aquaculture intervention technologies and approaches, and through wider dissemination of best practices and lessons learned.
Name of programme/scheme	<u>Ecosystem-based Approaches (EbA) to Adaptation in the Drought-prone Barind Tract and Haor “Wetland” Area</u> ¹⁶²
Year & status	<ul style="list-style-type: none"> 2020–2025 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC, UNEP, MoEF
Budget outlays (US\$ millions)	Total project costs: US\$ 60.23 million <ul style="list-style-type: none"> GEF Grant: US\$ 5.20 million Co-financing: US\$ 55.03 million

Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project aims to increase the resilience of local communities living in the Barind Tract and the Haor Area using EbA.
Name of programme/scheme	<u>Integrating Community-based Adaptation into Afforestation and Reforestation Programmes in Bangladesh</u> ¹⁶³
Year & status	<ul style="list-style-type: none"> 2015–2021 Closed
Implementing partner/donor	<ul style="list-style-type: none"> UNDP, MoEFCC, Bangladesh Forest Department
Budget outlays (US\$ millions)	Total project costs: US\$ 52.65 million <ul style="list-style-type: none"> GEF Grant: US\$ 5.65 million Co-financing: US\$ 47 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project reduced the vulnerability of communities in the targeted areas to the adverse impacts of climate change through participative design, community-based management, and diversification of afforestation and reforestation programmes.
Fund: Climate Investment Fund (CIF): Pilot Program for Climate Resilience (PPCR)	
Name of programme/scheme	<u>Coastal Climate-Resilient Infrastructure Project</u> ¹⁶⁴
Year & status	<ul style="list-style-type: none"> 2012–Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> LGED, Rural Development, and Cooperatives, MoEF, ADB
Budget outlays (US\$ millions)	Total project costs: US\$ 150 million <ul style="list-style-type: none"> PPCR: US\$ 20 million as concessional loan and US\$ 10 million as grant Expected co-financing: US\$ 120 million
Disbursement mechanism	<ul style="list-style-type: none"> Concessional loan, grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project seeks to enhance climate resilience of coastal infrastructure in 12 rural coastal districts benefiting the poor and women in particular. The project aims to reduce poverty and raise incomes in the rural coastal districts of the country through fostering rural connectivity (rural roads, bridges, cyclone shelters and markets) in a sustainable and “climate-proof” way. The project will enhance the accessibility of the rural people in the coastal districts to social services, such as health and education, economic opportunities and enhance access to markets and livelihood activity for improved earnings for the rural poor including the poor women.
Name of programme/scheme	<u>Coastal Embankments Improvement Project: Phase I (CEIP-I)</u> ¹⁶⁵
Year & status	<ul style="list-style-type: none"> 2013–2022 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> Bangladesh Water Development Board (BWDB), IBRD
Budget outlays (US\$ millions)	Total project costs: US\$ 400 million <ul style="list-style-type: none"> PPCR: US\$ 25 million as grant Expected co-financing: US\$ 375 million

Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> The project aims to increase the resilience of the entire coastal population to tidal flooding and natural disasters by upgrading the whole embankment system and enhance the capacity of the decision-makers to effectively respond to crisis and emergency.
Name of programme/scheme	Coastal Towns Infrastructure Improvement Project ¹⁶⁶
Year & status	<ul style="list-style-type: none"> 2013–2020 Closed
Implementing partner/donor	<ul style="list-style-type: none"> LGED, Ministry of Local Government, Rural Development and Cooperatives, ADB
Budget outlays (US\$ millions)	<p>Total project costs: US\$ 117.1 million</p> <ul style="list-style-type: none"> PPCR: US\$ 22.5 million as concessional loan; US\$ 7.5 million loan and US\$ 10.4 million as grant
Disbursement mechanism	<ul style="list-style-type: none"> Concessional loan, loan, grant
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> The project strengthened climate resilience and disaster preparedness in eight vulnerable coastal secondary towns of Bangladesh; supported climate-resilient municipal infrastructure; strengthened institutional capacity, local governance and capacity for improved urban planning and service delivery, considering climate change and disaster risks.
Name of programme/scheme	Climate Smart SME Financing ¹⁶⁷
Year & status	<ul style="list-style-type: none"> 2015–2017
Implementing partner/donor	<ul style="list-style-type: none"> Private sector in Bangladesh; International Finance Corporation (IFC)
Budget outlays (US\$ millions)	<p>Total: US\$ 25.2 million</p> <ul style="list-style-type: none"> PPCR: US\$ 10 million as loan Co-financing: US\$ 15.2 million
Disbursement mechanism	<ul style="list-style-type: none"> Loans, equity
Focus areas	<p>Cross cutting: Knowledge, capacity-building</p> <ul style="list-style-type: none"> Increased access to finance (such as risk capital, etc.) for Small- and Medium-sized Enterprises (SMEs), especially those providing climate smart products or services that can increase climate resilience of businesses and poor communities. Strengthened the capacity of selected SMEs to cope with climate change, developed business skills to increase their capacity to grow and compete in the market. Strengthened the institutional capacity to identify climate resilience investment opportunities for SMEs.
Name of programme/scheme	Investment Project 1: “Promoting Climate-Resilient Agriculture and Food Security” ¹⁶⁸
Year & status	<ul style="list-style-type: none"> 2013–2019 Closed
Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC (previously MoEF), IFC

Budget outlays (US\$ millions)	Total project costs: US\$ 3.68 million <ul style="list-style-type: none"> • PPCR: US\$ 3 million as grant • Co-financing: US\$ 0.68 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • Technical advisory programme for farmers, agribusiness companies and financial institutions, which generated demand for investments and subsequently, leveraged private sector contributions. The advisory program developed and piloted interventions that improved resilience of agribusiness companies and their supply chains, improved adaptive capacity of farmers, facilitated access to finance across the agricultural supply chain, and identified aggregated investment opportunities for climate-vulnerable areas. To be followed by second programme proposal for the investment component of the programme.
Name of programme/scheme	<u>Technical Assistance Project 2: “Feasibility Study for a Pilot Programme of Climate-resilient Housing in the Coastal Region”¹⁶⁹</u>
Year & status	<ul style="list-style-type: none"> • 2013–2019 • Closed
Implementing partner/donor	<ul style="list-style-type: none"> • MoEFCC (previously MoEF); IFC
Budget outlays (US\$ millions)	Total project costs: US\$ 0.73 million <ul style="list-style-type: none"> • PPCR: US\$ 0.4 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project conducted a feasibility study to assess the potential for low-cost, climate-resilient housing for low-income communities and piloted a low-cost, climate-resilient housing business model with availability of finance. Business model prepared for private developers and financiers to be able to make a viable case for lower income housing.
Fund: CIF: Scaling Up Renewable Energy Programme (SREP)	
Name of programme/scheme	<u>Implementation support on building energy and environment rating system in Bangladesh and a cool roof programme in Dhaka</u>¹⁷⁰
Year & status	<ul style="list-style-type: none"> • 2020–Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Sustainable and Renewable Energy Development Authority (SREDA), Bangladesh, World Bank
Budget outlays (US\$ millions)	Total project costs: US\$ 0.43 million <ul style="list-style-type: none"> • SREP: US\$ 0.35 million • Co-financing: US\$ 0.08 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • This proposed activity aims to demonstrate an effective and scalable model for stimulating rapid deployment of cool roofs through the design and application of innovative approaches and sustainable business models to address the major barriers to its adoption.

Name of programme/scheme	Grid-connected utility-scale solar PV ¹⁷¹
Year & status	<ul style="list-style-type: none"> • 2019–Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Private sector in Bangladesh, IFC
Budget outlays (US\$ millions)	Total project costs: US\$ 70.74 million <ul style="list-style-type: none"> • SREP: US\$ 15 million as loan and US\$ 0.50 as grant • Co-financing: US\$ 55.24 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, loan and co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project will build on scaling solar model to prepare the enabling environment and engage private financiers through competitive bidding.
Name of programme/scheme	Off-grid solar PV-solar irrigation ¹⁷²
Year & status	<ul style="list-style-type: none"> • 2017–2023 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Bangladesh Rural Electrification Board (BREB), ADB
Budget outlays (US\$ millions)	Total project costs: US\$ 47.39 million <ul style="list-style-type: none"> • SREP: US\$ 22.22 million as grant • Co-financing: US\$ 25.17 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project aims to develop a stable and sustainable power supply that will increase electricity access, enhance energy security, and reduce poverty in the country.
Name of programme/scheme	Scaling Up Renewable Energy Programme ¹⁷³
Year & status	<ul style="list-style-type: none"> • 2017–2024 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Electricity Generation Company of Bangladesh (EGCB); IDCOL; Sustainable and Renewable Energy Development Authority (SREDA), World Bank
Budget outlays (US\$ millions)	Total project costs: US\$ 413.04 <ul style="list-style-type: none"> • SREP: US\$ 26.38 million as loan and US\$ 2.87 as grant • Co-financing: US\$ 383.79
Disbursement mechanism	<ul style="list-style-type: none"> • Concessional loan, grant, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project seeks to scale up renewable energy through energy generation from renewable sources through a combination of investment financing and technical assistance.
Fund: Global Environment Facility (GEF7)	
Name of programme/scheme	Community-based Management of Tanguar Haor Wetland in Bangladesh ¹⁷⁴
Year & status	<ul style="list-style-type: none"> • 2021–2026 • Ongoing

Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC, UNDP
Budget outlays (US\$ millions)	Total project costs: US\$ 21.25 million <ul style="list-style-type: none"> GEF Trust Fund: US\$ 4.05 million as grant Co-financing: US\$ 17.20 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project will promote sustainable use of wetland resources by local communities to conserve globally significant biodiversity, improve ecosystem services and secure local livelihoods in Tanguar Haor.
Name of programme/scheme	<u>Reducing uses and releases of chemicals of concern, including Persistent Organic Pollutants (POPs), in the textiles sector</u> ¹⁷⁵
Year & status	<ul style="list-style-type: none"> 2020–2025 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC, UNEP
Budget outlays (US\$ millions)	Total project: US\$ 26.91 million <ul style="list-style-type: none"> GEF Trust Fund: US\$ 8.85 million as grant Co-financing: US\$ 18.06 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> The regional project will support significant and documented reductions in use, releases and exposure to chemicals of concern (CoCs) including POPs in the textiles sector in selected countries including Bangladesh.
Fund: Global Environment Facility (GEF6)	
Name of programme/scheme	<u>Bangladesh: First Biennial Update Report (BUR1) to the UNFCCC</u> ¹⁷⁶
Year & status	<ul style="list-style-type: none"> 2017–2019 Closed
Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC, UNDP
Budget outlays (US\$ millions)	Total project costs: US\$ 0.48 million <ul style="list-style-type: none"> GEF Trust Fund: US\$ 0.35 million Co-financing: US\$ 0.13 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Cross-cutting: Knowledge, capacity-building <ul style="list-style-type: none"> The project assisted Bangladesh in the preparation of its First Biennial Update Report (BUR1) for the fulfilment of the obligations under the UNFCCC.
Name of programme/scheme	<u>Implementing Ecosystem-based Management in Ecologically Critical Areas in Bangladesh</u> ¹⁷⁷
Year & status	<ul style="list-style-type: none"> 2020–2026 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC, UNDP

Budget outlays (US\$ millions)	Total project costs: US\$ 13.54 million <ul style="list-style-type: none"> • GEF Trust Fund: US\$ 3.04 million • Co-financing: US\$ 10.5 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project will apply an ecosystem-based framework for managing ecologically critical areas in Bangladesh to enhance the conservation of globally significant biodiversity and support local livelihoods.
Name of programme/scheme	<u>Sustainable Management of the Bay of Bengal Large Marine Ecosystem Programme</u> ¹⁷⁸
Year & status	<ul style="list-style-type: none"> • 2018–2023 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Ministry of Fisheries and Agriculture, MoEFCC, FAO, ADB
Budget outlays (US\$ millions)	Total project costs: US\$ 179.26 million <ul style="list-style-type: none"> • GEF Trust Fund: US\$ 14.26 million • Co-financing: US\$ 165 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The regional project contributes to sustainable management of fisheries, marine living resources, and their habitats in the Bay of Bengal region for the benefit of coastal states and communities in targeted countries including Bangladesh.
Name of programme/scheme	<u>Promoting Low-carbon Urban Development in Bangladesh</u> ¹⁷⁹
Year & status	<ul style="list-style-type: none"> • 2020–2025 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • MPEMR, Sustainable and Renewable Energy Development Authority (SREDA), MoEFCC, UNDP
Budget outlays (US\$ millions)	Total project costs: US\$ 69.56 million <ul style="list-style-type: none"> • GEF Trust Fund: US\$ 3.76 million • Co-financing: US\$ 65.80 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project will reduce GHG emissions by enabling investments in renewable energy, energy-efficiency, and waste-to-energy applications to support urban development in Bangladesh.
Fund: Global Environment Facility (GEF 5)	
Name of programme/scheme	<u>Establishing national land use and land degradation profile toward mainstreaming sustainable land management practices in sector policies</u> ¹⁸⁰
Year & status	<ul style="list-style-type: none"> • 2016–2021 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • MoEFCC, UN Environment

Budget outlays (US\$ millions)	Total project costs: US\$ 4.01 million <ul style="list-style-type: none"> • GEF Trust Fund: 0.73 million as grant • Co-financing: US\$ 3.28 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to establish knowledge base and enabling policy and institutional environment for sustainable land management consideration in the country development agenda.
Name of programme/scheme	Third National Communication to the UNFCCC ¹⁸¹
Year & status	<ul style="list-style-type: none"> • 2012–2017 • Closed
Implementing partner/donor	<ul style="list-style-type: none"> • MoEFCC, UNDP
Budget outlays (US\$ millions)	Total project costs: US\$ 0.45 million <ul style="list-style-type: none"> • GEF Trust Fund: US\$ 0.45 as grant
Disbursement mechanism	<ul style="list-style-type: none"> • Grant
Focus areas	Cross cutting: Knowledge and capacity-building <ul style="list-style-type: none"> • The project assisted Bangladesh in preparation of its Third National Communication for the implementation of the obligations under the UNFCCC.
Name of programme/scheme	Expanding the Protected Area System to Incorporate Important Aquatic Ecosystems ¹⁸²
Year & status	<ul style="list-style-type: none"> • 2014–2020 • Closed
Implementing partner/donor	<ul style="list-style-type: none"> • Bangladesh Forest Department (MoEFCC), UNDP
Budget outlays (US\$ millions)	Total project costs: US\$ 10.21 million <ul style="list-style-type: none"> • GEF Trust Fund: US\$ 1.62 million • Co-financing: US\$ 8.5 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation: Biodiversity <ul style="list-style-type: none"> • The project built the capacity of implementing agencies to effectively increase and manage new protected areas to conserve globally threatened aquatic diversity while still meeting the livelihood needs of local communities.
Name of programme/scheme	ASTUD: Greater Dhaka Sustainable Urban Transport Corridor Project ¹⁸³
Year & status	<ul style="list-style-type: none"> • 2012–2021 • Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> • Local Government Engineering Department (LGED), Roads and Railways Division under the Ministry of Road Transport and Bridges
Budget outlays (US\$ millions)	Total project costs: US\$ 255.03 million <ul style="list-style-type: none"> • GEF Trust Fund: US\$ 4.63 million • Co-financing: US\$ 250.40 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing

Focus areas	Mitigation <ul style="list-style-type: none"> The project contributed towards the sustainable urban transport system, within the Gazipur City Corporation and Dhaka North City Corporation through the delivery of a Bus Rapid Transit (BRT) corridor. The project provided a holistic solution for integrated urban mobility, 'first of its kind' as no modern mass transit system existed in Bangladesh at the time.
Name of programme/scheme	<u>Decision support for mainstreaming and scaling up of sustainable land management</u> ¹⁸⁴
Year & status	<ul style="list-style-type: none"> 2014–2018 Closed
Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC, FAO, Swiss Agency for Development and Cooperation
Budget outlays (US\$ millions)	Total project costs: US\$ 44.21 million <ul style="list-style-type: none"> GEF Trust Fund: US\$ 6.11 million Co-financing: US\$ 38.09 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The regional project contributed towards combating Desertification Land Degradation and Drought (DLDD) through scaling up sustainable land management best practices through evidence-based and informed decision-making.
Name of programme/scheme	<u>Development of sustainable renewable energy power generation</u> ¹⁸⁵
Year & status	<ul style="list-style-type: none"> 2013–2020 Closed
Implementing partner/donor	<ul style="list-style-type: none"> Sustainable and Renewable Energy Development Authority (SREDA), Ministry of Power, Energy and Mineral Resources (MoPEMR), UNDP
Budget outlays (US\$ millions)	Total project costs: US\$ 53.67 million <ul style="list-style-type: none"> GEF Trust Fund: US\$ 4.07 million Co-financing: US\$ 49.6 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> The project reduced the annual growth rate of GHG emissions from fossil fuel-based power generation by exploring Bangladesh's renewable energy resources for electricity generation.
Fund: Global Climate Change Alliance (GCCA+)	
Name of programme/scheme	<u>Support for enhancing communities' resilience to climate change and related disasters in Bangladesh</u> ¹⁸⁶
Year & status	<ul style="list-style-type: none"> 2020–2023 Ongoing
Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC
Budget outlays (US\$ millions)	Total project costs: US\$ 9.07 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant

Focus areas	Adaptation <ul style="list-style-type: none"> The project aims to establish improved and inclusive local level planning and a strengthened financing mechanism for community-based climate change adaptation solutions through local governments.
Name of programme/scheme	Bangladesh Climate Change Resilience Fund (BCCRF) ¹⁸⁷
Year & status	<ul style="list-style-type: none"> 2011–2017 Closed
Implementing partner/donor	<ul style="list-style-type: none"> World Bank, MoEF
Budget outlays (US\$ millions)	Total budget: US\$ 13.90 million <ul style="list-style-type: none"> GCCA+ Funding: US\$ 4.82 million Co-financing: US\$ 9.08 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project supported the national government with the implementation of the Bangladesh Climate Change Strategy and Action Plan. It protected and improved the lives of 10 million climate-vulnerable people in Bangladesh by 2017 through climate change adaptation, mitigation and disaster risk reduction measures.
Fund: United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation (UN REDD)	
Name of programme/scheme	Bangladesh National Programme ¹⁸⁸
Year & status	<ul style="list-style-type: none"> 2015–2019 Closed
Implementing partner/donor	<ul style="list-style-type: none"> MoEFCC, UNDP
Budget outlays (US\$ millions)	Total project cost: US\$ 1.39 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant
Focus areas	Mitigation <ul style="list-style-type: none"> The UN-REDD National Programme supported the GoB in initiating the implementation of its REDD+ Readiness Roadmap by establishing necessary REDD+ management processes, identifying strategic readiness options for completing its National REDD+ strategy, and developing the capacities required to begin implementation of REDD+.

DOMESTIC CLIMATE FINANCE SOURCES

Considering the uncertainties and inadequacies of international financial support, the GoB has undertaken several measures to finance climate actions domestically. This includes adopting a Climate Fiscal Framework in 2014 and updating it in 2019 to ensure that the country's public financial management systems include climate change, promoting green financing, fostering green banking and establishing dedicated funds. The Bangladesh Climate Change Trust Fund (BCCTF) was created in 2009 to finance projects to implement the BCCSAP. The Bangladesh Climate Change Resilience Fund (BCCRF), a multi-donor trust fund established in 2010 by the GoB, World Bank and other development partners, channelled US\$ 170 million as a grant for supporting climate resilience.

Presently, the GoB spends nearly US\$ 1 billion per year on climate adaptation, which is around 6–7% of its annual budget. Out of the total budget allocation to selected 25 ministries and divisions, 7.26% was climate-relevant in the financial year 2021–22. This declined in comparison to the previous year’s allocation (2020–21) of 7.48%, as significant funds were diverted for preparedness and mitigation measures for the Covid-19 pandemic and economic recovery.

Over the last six years (2016–2017 to 2021–22), the budget allocation for climate activities increased from BDT 18,929.43 crore (US\$ 2.03 billion) to BDT 25,124.98 crore (US\$ 2.70 billion), which is almost 0.73% of the GDP of the country.¹⁸⁹ The climate-relevant allocation, as defined and identified by the government, increased 1.33 times from the financial year 2017–18 to the financial year 2021–22. Figure 12 below shows the trend of climate-relevant budget allocation and expenditure in selected ministries and divisions over the last five financial years (2016–17 to 2021–22).

FIGURE 12: Trend of climate-relevant allocation and expenditure in selected ministry/division budgets¹⁹⁰

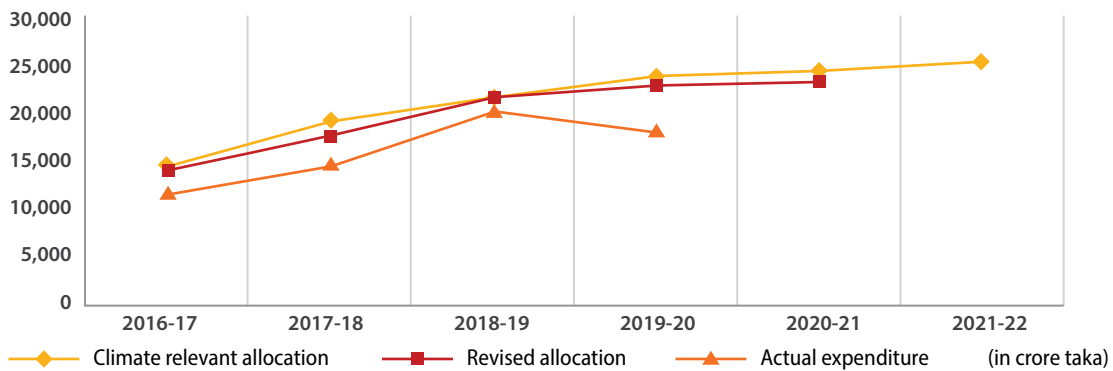
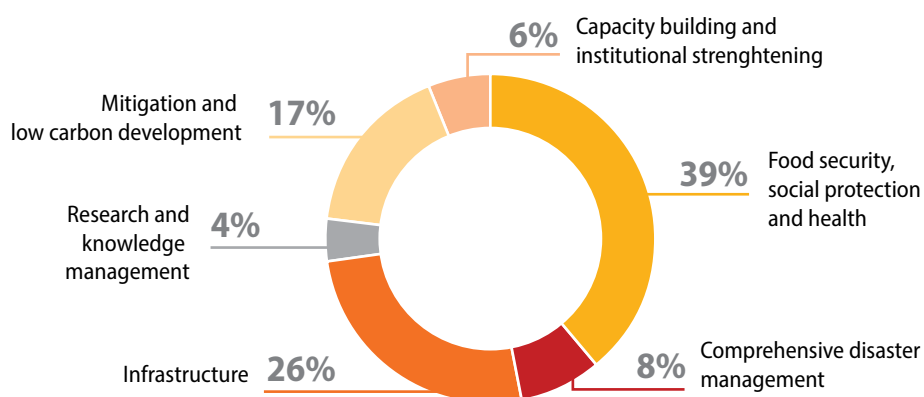


Figure 13 below indicates the climate-relevant allocation as percentage of the budget of selected 25 ministries/ divisions according to the BCCSAP thematic areas in 2021–22.

FIGURE 13: Climate-relevant allocation (%) across BCCSAP thematic areas in FY2021–22¹⁹¹



When the national government established the BCCTF in 2009 from its own revenue, it enacted the Climate Change Trust Act 2010 to designate the BCCTF as a legal identity. The BCCTF had received a total allocation of BDT 3,752 crore (US\$ 403.74 million) by 2020–21. To date, 789 projects have been approved under the BCCTF, of which 728 projects were implemented by government ministries and/or divisions. The remaining 61 projects were implemented by different NGOs under the supervision of the Palli Karma Sahayak Foundation (PKSF). Figure 14 below provides an assessment of percentage of funds allocated to the six thematic areas of the BCCSAP from the BCCTF.

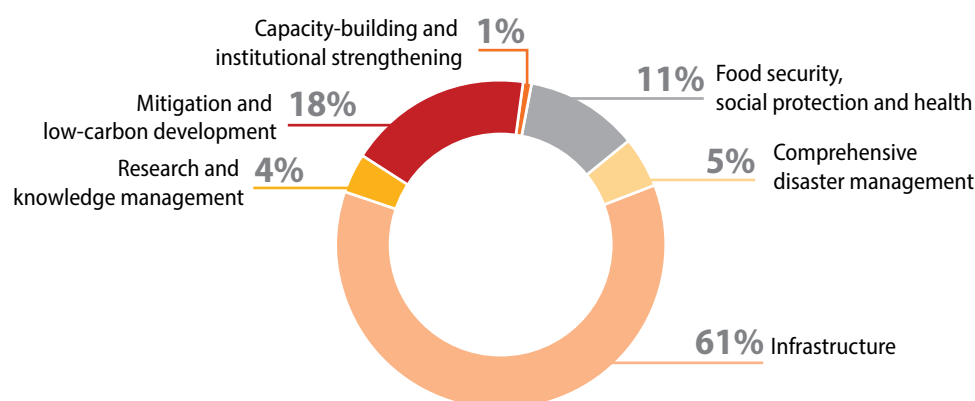
FIGURE 14: BCCTF allocations to the BCCSAP themes¹⁹²

Table 9 below collates information on the domestic climate finance allocated to different projects and programmes, such as the BCCTF, BDP 2100 and the BCCRF.

TABLE 9: Climate finance from domestic sources in Bangladesh

Name of funds/ programme	Bangladesh Climate Change Trust Fund (BCCTF)¹⁹³
Year & status	2009–ongoing
Ministries/ departments	MoEFCC, Department of Environment
Budget outlays	BDT 3,752 crore (US\$ 0.40 billion) up to the Financial Year (FY) 2020-21
Focus areas	BCCTF has identified six thematic adaptation and mitigation areas: (a) food security, social protection and health, (b) comprehensive disaster management, (c) infrastructure, (d) research and knowledge management, (e) mitigation and low-carbon development, and (f) capacity-building and institutional strengthening.
Name of funds/ programme	Bangladesh Delta Plan (BDP 2100)
Year & status	2018–ongoing
Ministries/ departments	General Economics Division (GED), Bangladesh Planning Commission
Budget outlays	US\$ 37 billion by 2030 (estimated cost for overall implementation). GCF will contribute US\$ 2 billion yearly to implement climate change projects.
Focus areas	A total of 80 projects have been selected for implementation under the investment plan in the first phase at a cost of US\$ 37 billion. Of them, 65 would be infrastructure projects while 15 others would aim to enhance institutional capacity, efficiency and research.
Name of funds/ programme	Bangladesh Climate Change Resilience Fund (BCCRF)¹⁹⁴
Year & status	2010–2017
Ministries/ departments	The Secretariat was based in MoEFCC and administered by a government-designated implementing agency, PKSF
Budget outlays	US\$ 71.13 million had been disbursed up to December 2016. There was no fund disbursement after 2016.
Focus areas	BCCRF was formulated to support implementation of BCCSAP.

As mentioned in section 3.1.2 'Climate finance needs', the implementation of the CIP-EFCC for the period 2016–21 was estimated to be BDT 98,108 crore (US\$ 11.7 billion), or BDT 19,622 crore (US\$ 2.28 billion) annually.¹⁹⁵ Over the course of five years (2016–2021) almost 99.91% of the planned amount, i.e., BDT 98,021.64 crore (US\$ 10.54 billion), has been allocated for carrying out the programmes of the CIP.

Table 10 outlines the overall budget allocations for programmes, spread across the four pillars of the CIP-EFCC, over the course of five years (2016–2021). The CIP-EFCC is considered a 'living document', accommodating the changing economic, social and environmental situation of the country. The amount allocated under the four pillars of the CIP has, thus, been raised compared to initial estimates of 2015, due to new developments, updated policies and/or revised requirements in the country.

TABLE 10: Budget allocation for the CIP-EFCC over the course of five years (2016–21) in Bangladesh¹⁹⁶

Pillar 1: Sustainable development and management of natural resources	
Aim	To promote sustainable management and use of natural resources such as land, surface water, groundwater, forests and biodiversity for the enhanced provision of ecosystem services.
Programmes	Sustainable forest management and enhanced socio-economic benefits from forests
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 7,434 crore (US\$ 0.79 billion) Total allocations (2016–2021): BDT 9,570 crore (US\$ 1.02 billion)
Focus areas	The programme aims to improve forest management and increase the socioeconomic benefits from forests through employment creation, income generation, and the increased provision of carbon sequestration and water, soil and biodiversity conservation.
Programmes	Biodiversity conservation
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 4,523 crore (US\$ 0.48 billion) Total allocations (2016–2021): BDT 1,251 crore (US\$ 0.13 billion)
Focus areas	The programme aims to conserve and restore the country's biodiversity with active community participation. It seeks to develop and enhance the conservation of protected areas through government–community co-management, improve monitoring, conserve and manage endangered species and support integrated resources management in the Sundarbans.
Programmes	Sustainable management of wetlands, rivers and marine ecosystem
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 5,822 crore (US\$ 0.62 billion) Total allocations (2016–21): BDT 23,455 crore (US\$ 2.52 billion)
Focus areas	The programme aims to ensure the sustainable management of wetlands and other water bodies in Bangladesh. It supports the implementation and scaling up of the Master Plan for the Haor and flood-prone areas; promote sustainable fisheries and fishing habitat management in inland and marine ecosystems.
Programmes	Soil and groundwater management
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 2,885 crore (US\$ 0.31 billion) Total allocations (2016–21): BDT 9,304 crore (US\$ 1 billion)

Focus areas	The programme aims to effectively manage land and water resources and enhance their capacity to sustain agricultural production, improve groundwater conservation, conserve biodiversity, regulate water and nutrient cycles, sequester carbon, and provide livelihoods.
Pillar 2: Environmental pollution reduction and control	
Aim	To reduce pollution and restore polluted and degraded ecosystems for enhancing ecosystem services.
Programmes	Reduced industrial pollution
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 5,473 crore (US\$ 0.58 billion) No specific allocations made
Focus areas	The programme aims to reduce water and air pollution from industrial sources, including those from the ship-breaking sector, through the adoption of cleaner and improved technology and the effective implementation of relevant regulations. Also, seeks to prevent, reduce and mitigate damage to natural ecosystems due to oil spills, ship-breaking and drilling
Programmes	Reduced municipal and household pollution
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 24,101 crore (US\$ 2.59 billion) No specific allocations made
Focus areas	The programme seeks to improve the collection, management and treatment of solid waste (including household and medical waste) at the municipal and cross-municipal levels; improve the supply of safe drinking water to semi-urban and rural communities; increase the collection and treatment of sewerage and drainage water and improve sanitation at the community level.
Programmes	Reduced pollution from agriculture and others
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 1,668 crore (US\$ 0.17 billion) No specific allocations made
Focus areas	The programme aims to minimise pollution from fertilisers and pesticides.
Pillar 3: Adaptation and resilience to, and mitigate of, climate change	
Aim	To ensure that the CIP is fully aligned with the country's existing climate-change plans and programmes, such as the BCCSAP and the needs for cross-sectoral investments related to climate change is addressed.
Programmes	Disaster risk reduction
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 13,899 crore (US\$ 1.49 billion) Total allocations made (2016–2021): BDT 25,411 crore (US\$ 2.73 billion)
Focus areas	The programme aims to reduce the disaster risks by strengthening early-warning systems, climate-resilient infrastructure and effective management of the risks of losses of income and property.
Programmes	Sustainable infrastructure development
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 18,500 crore (US\$ 1.99 billion) Total allocations made (2016–2021): BDT 14,984 crore (US\$ 1.61 billion)
Focus areas	The programme aims to strengthen coastal and inland embankments and other waterworks, develop climate-proof water management systems, and develop irrigation schemes to increase resilience to extended droughts.

Programmes	Mitigation and low-carbon development
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 6,579 crore (US\$ 0.70 billion) Total allocations made (2016–21): BDT 14,210 crore (US\$ 1.52 billion)
Focus areas	The programme is in line with the NDC and the BCCSAP and seeks to support climate-smart technologies for industry and power generation and promote low-cost public transport models and low-emission vehicles.
Programmes	Increased resilience at community level
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 2,113 crore (US\$ 0.22 billion) Total allocations made (2016–21): BDT 16,984 crore (US\$ 1.82 billion)
Focus areas	The programme aims to enhance resilience of the community through community-based and ecosystem-based adaptation and further scaling up local innovations.
Pillar 4: Environmental governance, gender, and human and institutional capacity development	
Aim	To improve environmental governance through improvements in the legal and regulatory frameworks, and making greater use of market-based instruments and incentives.
Programmes	Improved legislative, regulatory and policy framework
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 693 crore (US\$ 0.07 billion) Total allocations made (2016–21): BDT 786 crore (US\$ 0.08 billion)
Focus areas	The programme aims to support the government in building a cohesive and congenial policy and legislative environment suitable for the conservation and protection of natural resources (e.g., protected areas, ecologically critical areas and wetlands) in sync with national and international targets.
Programmes	Improved stakeholder participation and gender equity in Environment, Forestry and Climate Change (EFCC) sectors
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 3,498 crore (US\$ 0.37 billion) Total allocations made (2016–21): BDT 2,180 crore (US\$ 0.23 billion)
Focus areas	The programme aims to develop and strengthen mechanisms for stakeholder participation in environment, forestry and climate change policy development and implementation, encourage gender equity and empowerment and increase the inclusion of minorities and other rural groups to ensure that all people have access to the benefits of ecosystem services and are well-informed about sustainable natural resource management.
Programmes	Improved organisational capacity and process for evidence-based decision-making
Budget outlays (in BDT crore)	<ul style="list-style-type: none"> Total estimated funds (2016–21): BDT 915 crore (US\$ 0.09 billion) Total allocations made (2016–21): BDT 3,728 crore (US\$ 0.40 billion)
Focus areas	The programme aims to develop and institutionalise a comprehensive database and information management system and to increase the knowledge and operational capacities of people within the relevant organisations. It supports the development of systems for data collection, use and dissemination as an aid for improving budget planning, implementation, monitoring and evaluation; supports EFCC training and establish a centre for knowledge management.

Table 11 highlights the investment needed to implement adaptation programmes under the NDC (2015), i.e., BDT 3,52,800 crore (US\$ 37.96 billion) from 2015–2030, and approximately BDT 23,520 crore (US\$ 2.53 billion) annually. Similarly, to implement mitigation actions under the previous NDC estimates, BDT 2,26,800 crore (US\$ 24.40 billion) is estimated to be needed over the period 2015–2030.

The total investment estimated for undertaking adaptation actions over 2015–2030 amounts to BDT 352,800 crore (US\$ 37.96 billion); out of which only 35% – BDT 123,158 crore (US\$ 13.25 billion) – has been allocated since 2015. The GoB needs to allocate the remaining 65% – BDT 229,642 crore (US\$ 24.71 billion) – over the next eight years to be able to implement all the identified adaptation measures critical to increase the country's resilience. The total investment estimated for implementing all mitigation actions under the NDC over 2011–2030 amounts to BDT 226,800 crore (US\$ 24.40 billion). Since 2014–15, the GoB has allocated BDT 12,097 crore (US\$ 1.30 billion) across various climate mitigation programmes, which is hardly 5%, thereby leaving a significant gap of BDT 214,703 crore (US\$ 23.10 billion).

TABLE 11: Budget allocated in the last seven years (2015–2022) for adaptation and mitigation actions identified under the previous NDC (2015)¹⁹⁷

1. Budget allocations for adaptation actions identified under previous NDC (2015)	
Programmes	Food security and livelihood and health protection (including water security)
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015-30): BDT 67,200 crore (US\$ 7.23 billion) Total allocations made (2015-2022): BDT 29,071 crore (US\$ 3.12 billion)
Programmes	Comprehensive disaster management
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015-30): BDT 84,000 crore (US\$ 9.03 billion) Total allocations made (2015-2022): BDT 28,972 crore (US\$ 3.11 billion)
Programmes	Salinity intrusion and coastal protection
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015-30): BDT 25,200 crore (US\$ 2.933 billion) Total allocations made (2015-2022): BDT 9,244 crore (US\$ 1.07 billion)
Programmes	River flood and erosion protection
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015–30): BDT 50,400 crore (US\$ 5.42 billion) Total allocations made (2015–2022): BDT 5,330 crore (US\$ 0.57 billion)
Programmes	Building climate-resilient infrastructure
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015–30): BDT 42,000 crore (US\$ 4.51 billion) Total allocations made (2015–2022): BDT 5,787 crore (US\$ 0.62 billion)
Programmes	Rural electrification
Ministries/departments	Sectoral ministries chaired by MoEFCC

Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015–30): BDT 25,200 crore (US\$ 2.71 billion) Total allocations made (2015–2022): BDT 3,794 crore (US\$ 0.40 billion)
Programmes	Urban resilience
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015–30): BDT 25,200 crore (US\$ 2.71 billion) Total allocations made (2015–2022): BDT 14,035 crore (US\$ 1.51 billion)
Programmes	Ecosystem based adaptation (including forestry co-management)
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015–30): BDT 21,000 crore (US\$ 2.25 billion) Total allocations made (2015–2022): BDT 6,639 crore (US\$ 0.71 billion)
Programmes	Community-based conservation of wetlands and coastal areas
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015–30): BDT 8,400 crore (US\$ 0.90 billion) Total allocations made (2015–2022): BDT 8,805 crore (US\$ 0.94 billion)
Programmes	Policy and institutional capacity-building
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total estimated funds (2015–30): BDT 4,200 crore (US\$ 0.45 billion) Total allocations made (2015–2022): BDT 11,481 crore (US\$ 1.23 billion)
2. Budget allocations for mitigation actions identified under NDC (2015)	
Programmes	Implementation of specific low-carbon development related climate policies and strategies
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total allocations made (2014–2022): BDT 67 crore (US\$ 0.007 billion)
Programmes	Improved energy efficiency
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total allocations made (2015–2022): BDT 12,052 crore (US\$ 1.29 billion)
Programmes	Gas exploration and reservoir management
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total allocations made (2015–2022): BDT 659 crore (US\$ 0.07 billion)
Programmes	Development of coal mines and coal fired power station
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total allocations made (2015–2022): BDT 660 crore (US\$ 0.07 billion)
Programmes	Renewable energy development
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	<ul style="list-style-type: none"> Total allocations made (2015–2022): BDT 1,258 crore (US\$ 0.13 billion)

Programmes	Lower emissions from agricultural land
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	• Total allocations made (2015–2022): BDT 9 crore (US\$ 0.0009 billion)
Programmes	Management of urban waste
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	• Total allocations made (2015–2022): BDT 87 crore (US\$ 0.009 billion)
Programmes	Afforestation and reforestation programme
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	• Total allocations made (2015–2022): BDT 734 crore (US\$ 0.07 billion)
Programmes	Rapid expansion of energy saving devices e.g., Compact Fluorescent Lamps (CFLs)
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	• Total allocations made (2015–2022): BDT 67 crore (US\$ 0.007 billion)
Programmes	Energy and water efficiency in built environment
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	• Total allocations made (2015–2022): BDT 481 crore (US\$ 0.05 billion)
Programmes	Improving energy consumption pattern in transport sector and options for mitigation
Ministries/departments	Sectoral ministries chaired by MoEFCC
Budget outlays (in crore BDT)	• Total allocations made (2015–2022): BDT 554 crore (US\$ 0.05 billion)

The updated NDC (2021) also estimates the cost required for mitigation actions across the three sectors over the years (2021–2030) under unconditional and conditional scenarios (as indicated in the Table 12).

TABLE 12: Estimates for mitigation actions identified in the updated NDC (2021)

Sectors	Estimated investment required (in US\$ billions; 2021–2030)	
	Unconditional	Conditional
Energy	30.87	137.45
Agriculture, Forestry and Other Land Use (AFOLU)	0.76	2.50
Waste	0.61	2

PRIVATE FINANCE SOURCES AND OPPORTUNITIES

Bangladesh has been successful in mobilising the private sector to invest in climate projects through incentives and policy measures. The government is attempting to catalyse private sector climate investment through the Bangladesh Investment Development Authority.

The Bangladesh Bank, through green banking policy guidelines, mandates every bank to allocate at least 5% of all loans issued to finance green projects. This includes direct or wholesale lending for projects on renewable energy, enhancing energy efficiency, solid and liquid waste management, among others. The green banking policy also mandates banks and other financial institutions to form a Climate Risk Fund and allocate at least 10% of their Corporate Social Responsibility (CSR) budget to this fund. This can be used either as grants or for financing green projects at concessional interest rates.

Private sector financing for green projects has been promoted by the Bangladesh Bank through concessional refinancing scheme for priority sectors. Under this scheme, commercial banks and financial institutions can obtain loans at lower interest from Bangladesh Bank with interest to customers capped at lower rates. Initially, a revolving fund amounting to BDT 200 crore (approx. US\$ 21.52 million) was set up by the Bank in 2009 to disburse low-interest loans for solar energy, biogas and waste treatment projects.

Over time, the list of eligible green products/initiatives under the scheme expanded to 51, including renewable energy, energy efficiency, alternative energy as well as social categories, such as ensuring the safety and work environment of factories. A total of 37 banks and 22 financial institutions have partnered under the refinancing scheme, with the total amount spent under the scheme amounting to BDT 2,930 crore (US\$ 0.31 billion) between 2014 and 2019.¹⁹⁸ The Bank has also introduced priority lending requirements to rural enterprises and for green finance.

The Bangladesh Bank established the Green Transformation Fund (GTF) in 2016, with a revolving fund of US\$ 200 million to accelerate sustainable growth in export-oriented textile and leather sectors, which is conducive to the transformation of a green economy in the country.¹⁹⁹



A woman growing vegetables in a ring-garden as floodwater rises across agricultural land in Bangladesh. © Rafiqur Rahman Raqu/DfID via Flickr

BOX 3: CAPACITY FOR GREEN FINANCE IN BANGLADESH'S BANKING SECTOR

Although green banking policy guidelines are in place in Bangladesh, the poor capacity of banks and financial institutions to manage green projects has resulted in slow growth of green finance promotion. In most cases, small-scale local green entrepreneurs find it difficult to prove their creditworthiness and, thus, fail to secure funding in the form of either equity or debt. Banks and financial institutions often receive applications for green funds from small-scale enterprises that do not have proper documents. Moreover, high transaction costs cast a shadow on the benefits of green projects. Therefore, despite having a policy guideline to disburse a minimum of 5% of the total loan portfolio to green projects, banks and financial institutions are unable to source enough bankable green project proposals.

Bangladesh is also known for its well-established microfinance industry. At present, the microfinance sphere in the country is dominated by four large microfinance institutions namely: Grameen Bank, Bangladesh Rural Advancement Committee (BRAC), Association for Social Advancement (ASA), and BURO Bangladesh. Microfinance lending in the country contributes to climate adaptation both by providing the poor with a means of livelihood and by financing activities targeted at reducing vulnerability to weather and climate risks, especially in the areas of water management, agriculture and fishery, forestry, health and housing. The priority sectors for microfinance institutions include agriculture, disaster relief and preparedness, water and sanitation, and health. Recently, the Bangladesh Securities and Exchange Commission allowed Sajida Foundation (an NGO) to raise BDT 100 crore (US\$ 10.76 million) through green bonds called a 'Green Zero-Coupon Bond'.²⁰⁰ Sajida Foundation plans to use the funds raised to increase the outreach of its microfinance programme and ensure environmental development.

The Infrastructure Development Company Limited (IDCOL) is a government-owned financial intermediary that promotes foreign and domestic co-funding for decentralised, climate-friendly energy projects. IDCOL has supported the setup of more than three million solar home systems in Bangladesh.

The bond market in the country remains under-developed due to various challenges when investing in and issuing bonds. In 2018, the bond market totalled US\$ 16 billion, or about 6% of GDP. The country is working towards green equity finance through local and foreign investors. Fifteen venture capital firms are currently working on green projects. Some of the examples of private finance for green projects include:

- Partnership for Cleaner Textile (PaCT 2013–2016) launched by the IFC with US\$ 11 million to improve resource efficiency in textile factories. In 2016, IFC also partnered with Levi Strauss & Co. to develop a global programme for environmental sustainability through the PaCT programme.²⁰¹
- IFC supported the BRAC Bank in 2012 to launch the Planet Solutions Loan and partnered with the Industrial Development Leasing Company to support water and energy efficiency improvements for textile manufacturers and technology service providers that are PaCT partners.
- Bangladesh Ventures Fund (2010-2017)²⁰² was launched by the Small Enterprise Assistance Funds and IFC to invest in SMEs in the country, with a focus on renewable energy and energy efficiency. The Fund has invested US\$1 million in SOLARIC Ltd. to support energy access by providing patented micro-inverter-based solar home systems and power backup systems that optimise energy efficiency and facilitate the use of smaller batteries, solar panels and energy-saving appliances. In May 2017, the fund received a follow-on commitment of US\$ 10 million from IFC and the CIF's PPCR.
- Green Delta Insurance Limited (2015)²⁰³ was launched by the IFC to develop index-based insurance products that minimise the impact of crop losses caused by natural disasters, such as drought, heavy rain and cyclones. The project is also supported through the PPCR.
- In 2012, the first venture capital firm, BD Venture, made its initial green investment in Sustainable Power Limited, which specialises in products like solar-powered fans and lights.²⁰⁴

Apart from the above, several foreign venture companies, such as DEFTA Partners, a US-based venture capital firm, and a number of Nordic companies, are interested in investing in green energy and clean technology-related projects in Bangladesh.

3.2 India

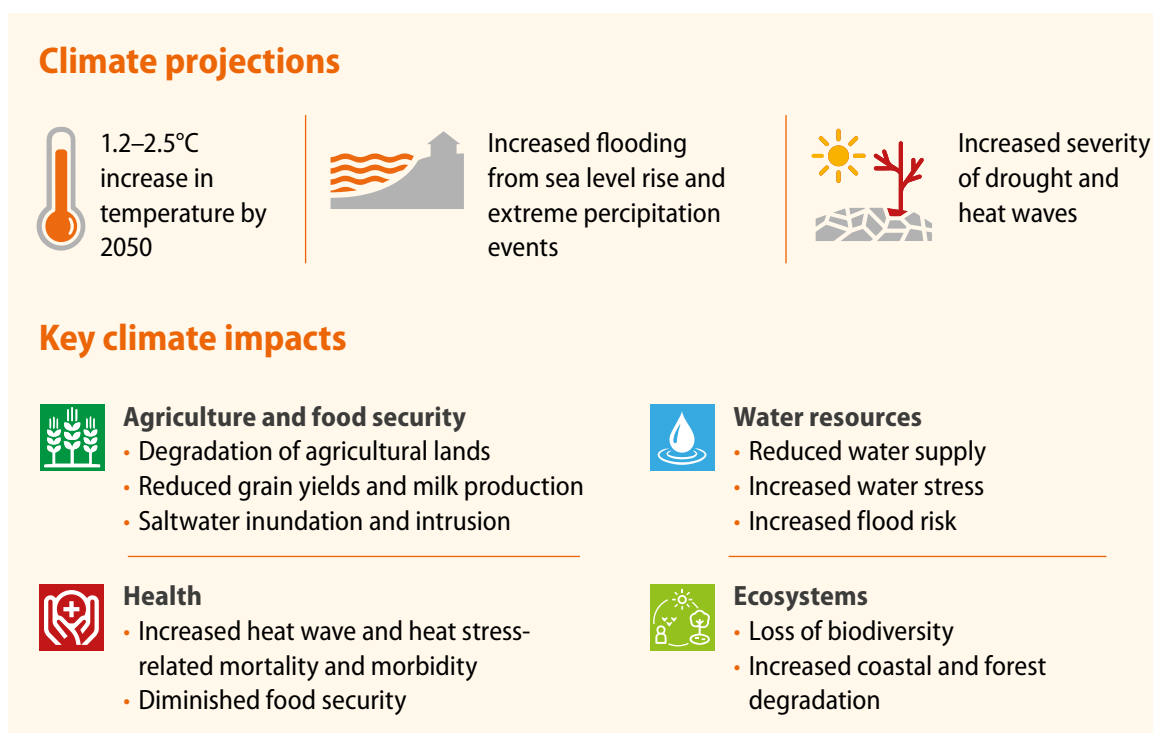
COUNTRY PROFILE AND GLOBAL CLIMATE CHANGE COMMITMENTS

With 1.3 billion people and counting, India accounts for nearly one-fifth of the world's population. The country's population is projected to increase to 1.52 billion by 2036, and 70% of this increase will be in urban areas. With a GDP of US\$ 2.9 trillion in the year 2019–20, India strives to become a US\$5 trillion economy by 2025 while following an inclusive and sustainable growth trajectory.²⁰⁵ India is considered to be a medium development country and has an HDI of 0.645, ranking 131 among 189 in 2020.²⁰⁶

The unique geography of the country along with its vast climatic diversity – 68% being drought-prone, 12% flood-prone and almost 8% exposed to cyclones²⁰⁷ – makes India vulnerable to a range of climate-induced disasters. The economic dependency of a high percentage of the population on climate-sensitive sectors, including agriculture, forests, tourism, animal husbandry and fisheries, exacerbates climate risks. According to the World Bank (2018)²⁰⁸ the average annual temperatures in the country will rise by 1°C to 2°C by 2050, even if preventive measures are taken along the lines of those recommended by the Paris Agreement. However, in the business-as-usual scenario, the average temperatures in India are predicted to increase by 1.5°C to 3°C by 2050. These rising temperatures and erratic rainfall could cost India 2.8% of its GDP by 2050.²⁰⁹

As per the Climate Risk Index 2021, India ranked seventh on the global vulnerability ladder, suffering an economic loss of US\$ 10 billion in 2019 due to climate change impacts alone.²¹⁰ The country also saw 1,800 deaths across 14 states due to floods caused by heavy rains. Moreover, cyclone Fani in 2019 affected almost 28 million people and caused economic losses of US\$ 8.1 billion. India is particularly vulnerable to extreme heat due to low per capita income, social inequality and a heavy reliance on agriculture. It is further estimated that India would lose 5.8% of its working hours due to heat stress by 2050, highly impacting agriculture and the construction sector.²¹¹ Figure 15 below depicts the climate projections and key climate impacts in the country.

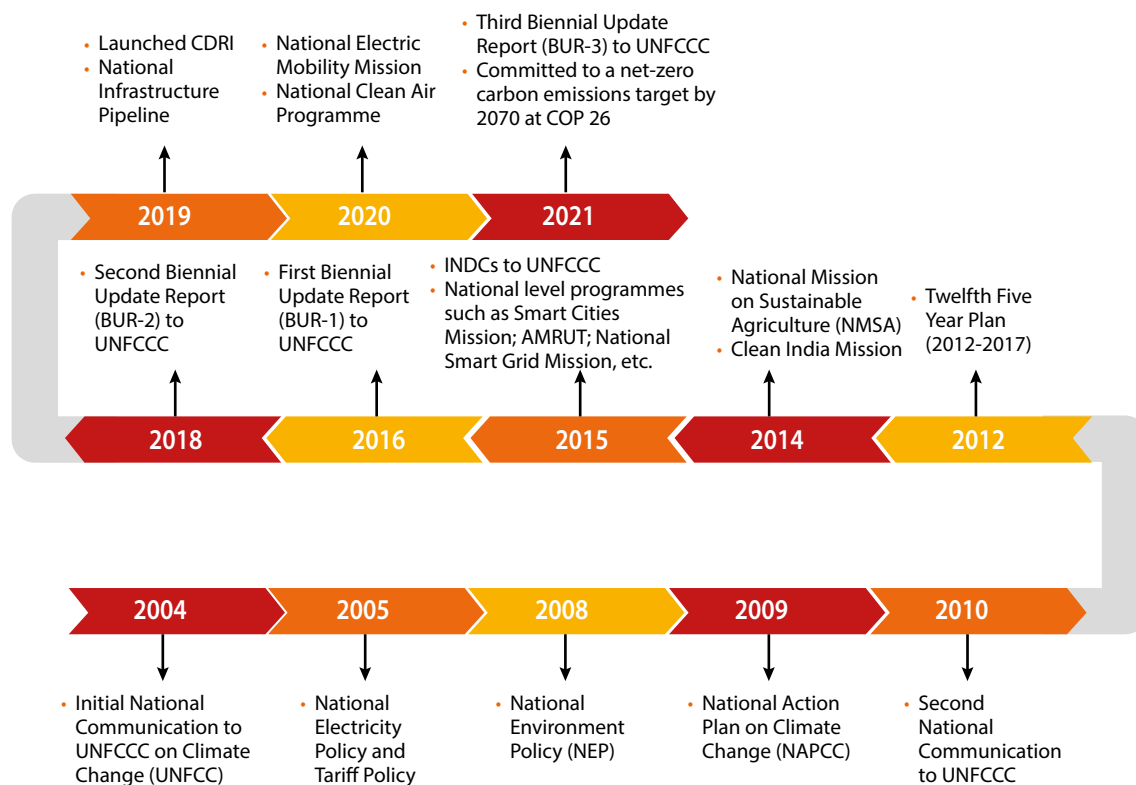
FIGURE 15: Climate projections and key climate impacts in India²¹²



Climate change policies and programmes

Figure 16 below provides the evolution of climate change policies, strategies and frameworks in the country.

FIGURE 16: Climate change policies, strategies and frameworks in India



As a part of the commitment to global climate action, India submitted its first NDC in 2015 with eight targets, of which three are quantitative in nature:

1. To reduce the emissions intensity of its GDP by 33–35% by 2030 from 2005 levels;
2. To achieve about 40% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, with the help of technology transfer programmes and low-cost international finance, including from the GCF; and
3. To create an additional carbon sink of 2.5–3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030.

The country, very recently, submitted its updated NDC in 2022. According to the updated NDC, India now stands committed to reducing emissions intensity of its GDP by 45% by 2030, from the 2005 level, and achieving about 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. To further a healthy and sustainable lifestyle, 'LIFE – Lifestyle for Environment' has been added to India's NDC as a key to combating climate change.

India is steadily progressing towards the NDC targets. By 2020, the country had already reduced the emissions intensity of its GDP by 21% over 2005 levels, thereby meeting its voluntary targets. The percentage of non-fossil fuels in India's electric power installed capacity stood at 36.5% as of March 2019.²¹³ The country has achieved the goal of 175 gigawatts of renewable energy and is seeking to achieve the target of 450 gigawatts by 2030.²¹⁴

There has been a push towards higher shares of renewable energy, including new policies for renewables in rural areas and for electric mobility, as well as towards increasing domestic manufacturing and production. The remaining five targets of the NDC focus on promoting sustainable lifestyles, adopting a climate-friendly and cleaner path of economic development, mobilising climate investments through innovative financing, building technology transfer mechanisms and promoting joint research on technologies, and building capacities to achieve national climate change targets.

At the 26th Conference of Parties (COP26) held in Glasgow (2021), India announced a [net-zero](#)²¹⁵ carbon emissions target by 2070. The immediate goals identified that would push the country towards the net-zero emissions target by 2070 include:²¹⁶

- Reaching a non-fossil fuel energy capacity of 500 gigawatts by 2030;
- Fulfilling 50% energy requirements via renewable energy by 2030;
- Reducing CO₂ emissions by 1 million tonnes by 2030; and
- Reducing carbon intensity below 45% by 2030.

The country's response to climate change is built around the framework of the National Environment Policy (2006), which aims to mainstream environmental concerns into all developmental activities. The National Action Plan on Climate Change (NAPCC) released in 2008 serves as the primary policy document addressing climate change in India. The NAPCC includes eight core "missions" and outlines existing and future policies and programmes to address climate risks through various mitigation and adaptation measures. The eight national missions include:

1. National Solar Mission
2. National Mission for Enhanced Energy Efficiency
3. National Mission on Sustainable Habitat
4. National Water Mission (NWM)
5. National Mission for Sustaining the Himalayan Eco-system
6. National Mission for a Green India
7. National Mission for Sustainable Agriculture
8. National Mission on Strategic Knowledge for Climate Change

In 2014, four new national missions were announced that would focus on wind energy, health, coastal management and waste-to-energy.

To realise these actions at the subnational level, State Action Plans on Climate Change (SAPCCs) have been prepared. Thirty-two states and union territories have already drafted and submitted their SAPCCs, attempting to mainstream climate change concerns into their planning process. Many states are currently revising these plans to align their goals with NDC targets and SDGs.

In addition, the Twelfth Five-Year Plan outlines several climate-related policies and programmes for the country. The Government of India (GoI) has launched a number of schemes for transformation and rejuvenation of urban areas including the Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), and National Heritage City Development and Augmentation Yojana (HRIDAY).

The above policy and programmes are supplemented by other national policies and strategies, such as:

- The National Mission on Sustainable Agriculture (NMSA), which aims at enhancing food security;
- Pradhan Mantri Krishi Sinchai Yojana (2015), which promotes efficient irrigation practices;
- The National Initiative on Climate-resilient Agriculture (NICRA), which aims to enhance climate resilience of Indian agriculture through strategic research and technology demonstration;
- The Energy Conservation Act (2001), which focuses on the conservation and efficient usage of energy;
- The National Policy for Farmers, which promotes sustainable development of agriculture;
- The National Electricity Policy, which aims at universal energy access; and
- The Integrated Energy Policy, which promotes renewable energy usage.

There are still more policies and missions related to biodiversity conservation and coastal management that yield direct and indirect climate benefits.

CLIMATE FINANCE NEEDS

As estimated in India's INDC, the country would need around US\$ 206 billion (at 2014–15 prices) between 2015 and 2030 for implementing adaptation actions in agriculture, forestry, fisheries infrastructure, water resources and ecosystems. There will be additional investments needed for strengthening resilience and disaster management. According to the ADB, approximate adaptation costs in the energy sector alone would be approximately US\$ 7.7 billion in the 2030s.²¹⁷ The report also estimated that at least US\$2.5 trillion (at 2014–15 prices) would be required for implementing India's climate change actions between now and 2030.

A recent study *Investment Sizing India's 2070 Net-Zero Target* by the Council on Energy, Environment and Water assessed the investment required to achieve India's net-zero emissions target of 2070.²¹⁸ The study estimates that India will need approximately US\$ 10 trillion to achieve its 2070 net-zero target. Estimations are made for specific sectors including electricity (generation, integration, transmission, and distribution), hydrogen (production) and vehicles (manufacturing).



A farmer burns the harvested rice fields to prepare the field for next cropping season in India. © AJP via Shutterstock

THE CLIMATE FINANCE LANDSCAPE IN INDIA: SOURCES AND INSTRUMENTS

The overall climate finance flows in the country include domestic sources, such as national budgets and investments from private entities, while international sources comprise a range of multilateral and bilateral donors. Table 13 below gives a brief overview of various sources and types of instruments used for financing climate action in the country

TABLE 13: Climate finance sources and instruments in India

Scale	Category		Instruments	
Domestic	Public	National and subnational budget, programmes, schemes	Budgetary expenditure Grants-in-aid	
		National and subnational government loan	Equity, debt, municipal bonds	
		Municipal government		
		Development finance institutions like NABARD, SIDBI	Debt, equity, guarantee	
	Private	Public sector banks like State Bank of India, Canara Bank, Central Bank of India, etc.		Soft loans, co-financing, green bonds
		Non-Banking Finance Companies (NBFC) like Indian Renewable Energy Development Agency (IREDA) and Power Finance Corporation (PFC)		Debt
		Industries and businesses like Godrej, ITC, Tata, etc.		Equity, debt, grants,
		Private sector banks like ICICI, Axis Bank, HDFC, IDFC		Loans, co-financing, green bonds
International	Public	Multilateral and bilateral	Grants, loan, equity	
	Private	Philanthropy Foreign Direct Investment	Equity, grants, debt, loans	

INTERNATIONAL CLIMATE FINANCE SOURCES IN INDIA

India has successfully accessed climate finance from a range of international sources, including climate-specific facilities like the Clean Technology Fund, the GEF, multilateral organisations like the World Bank and ADB, bilateral donors like Germany and Japan, and the private sector through the CDM. From 2013–2016, India received the highest level of single-country funding (US\$ 725 million) in the world approved by the four multilateral climate funds²¹⁹ in absolute terms.²²⁰

India is both a donor and a recipient of GEF. It had contributed US\$ 6 million to the core fund in the GEF Pilot Phase and has increased its commitment to US\$ 15 million in the four-year investment cycle of GEF-7. Since its inception, the GEF has funded 81 projects in India with grants of US\$ 0.58 billion and raised additional co-financing of US\$ 5.74 billion. India's total funding from the GEF is shown in Table 14.

TABLE 14: India's total funding from the GEF (2000–2022)²²¹

Trust fund	Project type	Number of projects	Total financing (US\$ billion)	Total co-financing (US\$ billion)
GEF	National	81	0.58	5.74
	Global	30	0.77	9.15
	Regional	9	0.05	0.26
SCCF	National	3	0.014	0.12
	Regional	1	0.003	0.005

Since 2017, the GCF has approved four projects totalling US\$ 1.49 billion, of which only US\$ 0.08 billion is in grants and the rest are equity and loans. As of March 2022, US\$ 0.126 billion had been disbursed.

The majority of India's funding has been from the CIF's Clean Technology Fund (CTF) related to four major programmes:

- A renewable energy transmission investment programme in Rajasthan (US\$ 200 million);
- A solar rooftop investment programme (US\$ 175 million);
- A grid-connected rooftop solar programme (US\$ 125 million); and
- A project promoting green growth in Himachal Pradesh (US\$ 100 million).

International public climate finance flows to India bilaterally through bilateral development agencies including USAID, the Canadian International Development Agency (CIDA), IDRC, GIZ, FCDO and the British High Commission, Australian-Aid (Australia), SIDA and AFD. Most of these bilateral development agencies, like GIZ and AFD, seek to align with the central ministries, state governments, NGOs and CSOs to provide technical assistance and implement climate-related projects and programmes in the country.

Some investment is also being channelled to the local level. For example, the AFD and the EU launched the City Investments to Innovate, Integrate and Sustain (CITIIS) programme in 2018 to assist Indian cities in implementing integrated, innovative and sustainable urban infrastructure projects with support from the National Institute of Urban Affairs (NIUA) under the Ministry of Housing and Urban Affairs (MoHUA).

The Indian government has also signed bilateral agreements with various countries, including the EU, China, USA, Netherlands, Norway, Sweden, France, Finland, Canada, Bangladesh, etc., related to cooperation on issues such as clean technologies, waste management, water, renewable energy, energy efficiency and sustainable forestry.

Apart from the above-mentioned sources, PPPs are also emerging as an important mechanism to invest in large-scale low-carbon development projects in the country. For example, the International Solar Alliance (ISA), a treaty-based intergovernmental organisation launched by India and France in 2015, aims to undertake joint efforts to create a global market system to tap the benefits of solar power and promote clean energy applications by mobilising more than US\$ 1 trillion in investment by 2030.²²²

Table 15 gives a high-level overview of international climate funds flowing into the country for climate action.

TABLE 15: International climate finance sources in India (2012 to date)

Fund: Adaptation Fund (AF)²²³	
Name of programme/scheme	<u>Building adaptive capacities of small inland fishers community for climate resilience and livelihood security, Madhya Pradesh</u>²²⁴
Year & status	<ul style="list-style-type: none"> • 2018–2021 • Ongoing
Implementing partners/donor	• NABARD; Towards Action and Learning (TAAL)
Budget outlays (US\$ millions)	Total project cost: US\$ 1.79 million
Disbursement mechanism	• Grant
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to make the fishery sector (captive inland fishery) adaptive to climate variability and enhance the adaptive capacity of the fish farmers to ensure their livelihood security in Madhya Pradesh, India.
Name of programme/scheme	<u>Building adaptive capacities of communities, livelihoods and ecological security in the Kanha-Pench Corridor (KPC) of Madhya Pradesh</u>²²⁵
Year & status	<ul style="list-style-type: none"> • 2017–2022 • Ongoing
Implementing partners/donor	• NABARD; RBS Foundation India; Madhya Pradesh Forest Dept.
Budget outlays (US\$ millions)	Total project costs: US\$ 2.55 million
Disbursement mechanism	• Grant
Focus areas	Adaptation <ul style="list-style-type: none"> • The project promotes a three-pronged approach of institutional building; ecosystem conservation and climate-resistant livelihoods to build the adaptive capacities of the KPC community and landscape by building economic, social and ecological resilience.
Name of programme/scheme	<u>Climate proofing of watershed development projects in the states of Tamil Nadu and Rajasthan</u>²²⁶
Year & status	<ul style="list-style-type: none"> • 2016–2019 • Ongoing
Implementing partners/donor	• NABARD; Multiple executing agencies in two states
Budget outlays (US\$ millions)	Total project cost: US\$ 1.34 million
Disbursement mechanism	• Grant
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to improve the climate resilience and build adaptive capacities of the communities in the rain-fed areas of Tamil Nadu and Rajasthan.
Name of programme/scheme	<u>Climate-smart actions and strategies in north-western Himalayan region for sustainable livelihoods of agriculture-dependent hill communities</u>²²⁷

Year & status	<ul style="list-style-type: none"> • 2016–2020 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • NABARD; BAIF Development Research Foundation
Budget outlays (US\$ millions)	Total project cost: US\$ 0.97 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> • The project aims to improve the adaptive capacity of rural small and marginal farmers including hill women in north-western Himalayan region by introducing a combination of climate-smart farming technologies, along with livelihoods diversification, awareness-raising and capacity-building processes.
Name of programme/scheme	<u>Enhancing adaptive capacity and increasing resilience of small and marginal farmers in Purulia and Bankura Districts of West Bengal</u> ²²⁸
Year & status	<ul style="list-style-type: none"> • 2015–2019 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • NABARD; Development Research Communication and Services Centre (DRCS)
Budget outlays (US\$ millions)	Total project cost: US\$ 2.51 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> • The project aims to develop climate-adaptive and resilient livelihood systems through diversification, technology adoption and natural resource management for rural small and marginal farmers associated with agriculture and allied sectors in West Bengal. It seeks to enhance adaptive capacity of vulnerable farm families in targeted regions by introducing measures to tide over the adverse impacts of climate change on their food and livelihood security.
Name of programme/scheme	<u>Conservation and management of coastal resources as a potential adaptation strategy for sea-level rise</u> ²²⁹
Year & status	<ul style="list-style-type: none"> • 2014 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • NABARD; M. S. Swaminathan Research Foundation (MSSRF)
Budget outlays (US\$ millions)	Total project cost: US\$ 0.68 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> • The project aims to overcome the consequences of salinisation and other impacts of the coastal area due to sea-level rise and seawater inundation due to increased cyclonic storms and storm surges through appropriate adaptation strategies, such as restoring degraded mangroves and demonstrating Integrated Mangrove Fishery Farming System (IMFFS).

Fund: Global Environment Facility (GEF 7)²³⁰	
Name of programme/scheme	<u>Liveable cities in India: Demonstrating sustainable urban planning and development through integrated approaches</u>²³¹
Year & status	<ul style="list-style-type: none"> • 2021-2025 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • UNEP; ADB • Ministry of Housing and Urban Affairs (MoHUA); NIUA; Greater Chennai Corporation (GCC); Pune Smart City Development Corporation Ltd. (PSCDL); Pune Municipal Corporation (PMC); Surat Municipal Corporation (SMC)
Budget outlays (US\$ millions)	Total project cost: US\$ 517.26 million <ul style="list-style-type: none"> • GEF Grant: US\$ 17.21 million • Co-financing: US\$ 499.88 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation and mitigation <ul style="list-style-type: none"> • The project aims to demonstrate low-emission, climate-resilient, nature-based inclusive sustainable urban development in selected cities and support scale-up at the national level.
Name of programme/scheme	<u>Electrifying mobility in cities: Investing in the transformation to electric mobility in India</u>²³²
Year & status	<ul style="list-style-type: none"> • 2021–2025 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • UNEP, ADB • Energy Efficiency Services Ltd. (EESL), National Institution for Transforming India (NITI) Aayog
Budget outlays (US\$ millions)	Total project cost: US\$ 168.21 million <ul style="list-style-type: none"> • GEF grant: US\$ 5.36 million • Co-financing: US\$ 162.78 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project aims to build the capacity and raise awareness, develop policy and standards and support on-field implementation to catalyse investment in technology and new business models in the e-mobility sector in India.
Name of programme/scheme	<u>Transforming agricultural systems and strengthening local economies in high biodiversity areas of India through sustainable landscape management and public-private finance</u>²³³
Year & status	<ul style="list-style-type: none"> • 2021–2026 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • UNEP; International Union for Conservation of Nature (IUCN) • Ministry of Agriculture and Farmers' Welfare (MoAFW); MoEFCC; State government of Andhra Pradesh; State government of Karnataka; other multiple agencies
Budget outlays (US\$ millions)	Total project cost: US\$ 74.98 million <ul style="list-style-type: none"> • GEF grant: US\$ 6.26 million • Co-financing: US\$ 68.59 million

Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> The project aims to reduce land degradation and conserve biodiversity in agricultural landscapes in the states of Andhra Pradesh and Karnataka by promoting sustainable agricultural production and supply chains, reducing pressures on natural resources from competing land uses and increasing resilience in the wider landscape, and public- private finance.
Name of programme/scheme	<u>Capacity-building for establishing an integrated and enhanced transparency framework for climate actions and support measures</u> ²³⁴
Year & status	<ul style="list-style-type: none"> 2021–2026 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> UNDP; MoEFCC
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 4.90 million</p> <ul style="list-style-type: none"> GEF grant: US\$ 3.8 million Co-financing: US\$ 1 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	<p>Cross-cutting</p> <ul style="list-style-type: none"> The project aims to assist India to strengthen and expand its current technical capacities, foster enabling conditions for mainstreaming mitigation concerns into sustainable development strategies, methodologies and tools to enhance transparency, as outlined in Article 13 of the Paris Agreement.
Fund: Global Environment Facility (GEF 6) ²³⁵	
Name of programme/scheme	<u>Cities-IAP: Sustainable cities, integrated approach pilot in India</u> ²³⁶
Year & status	<ul style="list-style-type: none"> 2017–2022 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> United Nations Industrial Development Organisation (UNIDO); MoHUA; Municipal Corporations of Jaipur, Bhopal, Mysore, Vijaywada, Guntur; State Governments of Rajasthan, Madhya Pradesh, Karnataka and Andhra Pradesh
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 126.33 million</p> <ul style="list-style-type: none"> GEF grant: US\$ 12.11 million Co-financing: US\$ 113.95 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant, co-financing
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> The project aims to integrate sustainable strategies in urban planning and management to create a favourable environment for investment in low-carbon urban infrastructure across a range of sectors like transport, energy, buildings, waste, and water infrastructure and service delivery, thus building the resilience of pilot cities.
Name of programme/scheme	<u>Creating and sustaining markets for energy efficiency</u> ²³⁷
Year & status	<ul style="list-style-type: none"> 2017–2022. Ongoing

Implementing partners/donor	<ul style="list-style-type: none"> • ADB, UNEP, Energy Efficiency Services Limited (EESL)
Budget outlays (US\$ millions)	Total project cost: US\$ 453.35 million <ul style="list-style-type: none"> • GEF grant: US\$ 18.85 million • Co-financing: US\$ 434.20 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project aims to reduce GHG emissions by scaling up energy efficient measures and new technology applications. It will leverage debt and expand EESL business in existing domestic and municipal lighting programmes for rapid and large-scale emissions reductions; provide technical assistance and investments to assist EESL in diversifying its business lines into technology and establish a business case for Energy Service Companies (ESCO) and support replication and scaling up of all technologies, to leverage additional investments.
Name of programme/scheme	Grid-Connected Rooftop Solar Programme ²³⁸
Year & status	<ul style="list-style-type: none"> • 2016–2022 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • The World Bank; State Bank of India, Ministry of New and Renewable Energy (MNRE)
Budget outlays (US\$ millions)	Total project cost: US\$ 914.93 million <ul style="list-style-type: none"> • GEF grant: US\$ 22.93 million • Co-financing: 892 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project aims to increase investment in Grid Connected Rooftop PV systems (GRPV) and strengthen the capacity of relevant institutions. This will also contribute to the achievement of Gol's target of 100 GW of solar generation capacity by 2022.
Name of programme/scheme	Green-Ag: Transforming Indian agriculture for global environmental benefits and the conservation of critical biodiversity and forest landscapes ²³⁹
Year & status	<ul style="list-style-type: none"> • 2018–2025 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • Food and Agriculture Organisation; MoA; MoEFCC
Budget outlays (US\$ millions)	Total project cost: US\$ 902.24 million <ul style="list-style-type: none"> • GEF grant: US\$33.55 million • Co-financing: 868.39 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to catalyse transformative change in the agricultural sector of the country to support achievement of national and global environmental benefits and conservation of critical biodiversity and forest landscapes.

Name of programme/scheme	<u>Securing livelihoods, conservation, sustainable use and restoration of high range Himalayan ecosystems (SECURE), Himalayas</u> ²⁴⁰
Year & status	<ul style="list-style-type: none"> • 2017–2024 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • UNDP; MoEFCC
Budget outlays (US\$ millions)	Total project cost: US\$ 72.55 million <ul style="list-style-type: none"> • GEF grant: US\$ 11.54 million • Co-financing: US\$ 60.82 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project aims to promote the sustainable management of alpine pastures and forests in the high range of the Himalayan ecosystems to secure conservation of globally significant wildlife, including endangered snow leopard and their habitats; ensure sustainable livelihoods; and secure community socio-economic benefits.
Fund: Special Climate Change Fund (SCCF)	
Name of programme/scheme	<u>Climate-resilient coastal protection and management</u> ²⁴¹
Year & status	<ul style="list-style-type: none"> • 2014–2019 • Closed
Implementing partners/donor	<ul style="list-style-type: none"> • ADB; Ministry of Water Resources (MoWR); MoEFCC; State Governments of Maharashtra and Karnataka
Budget outlays (US\$ millions)	Total project cost: US\$ 56.15 million <ul style="list-style-type: none"> • GEF grant: US\$ 1.8 million • Co-financing: US\$ 54.33 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project strengthened the resilience of the coast, coastal infrastructure and communities to the adverse impacts of climate change through adaptation guidelines and effective mainstreaming of climate change into coastal protection and management.
Name of programme/scheme	<u>Sustainable livelihoods and adaptation to climate change (SLACC)</u> ²⁴²
Year & status	<ul style="list-style-type: none"> • 2015–2019 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • The World Bank; Ministry of Rural Development
Budget outlays (US\$ millions)	Total project cost: US\$ 60.2 million <ul style="list-style-type: none"> • GEF grant: US\$ 8 million • Co-financing: US\$ 52.2 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant, co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project improved adaptive capacity of the rural poor to climate variability and change affecting farm-based livelihoods, through community-based interventions.

Fund: Clean Technology Fund (CTF)	
Name of programme/scheme	Scaling up demand-side energy efficiency project ²⁴³
Year & status	<ul style="list-style-type: none"> • 2019–2025 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • ADB; Energy Efficiency Services Ltd. (EESL)
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 592 million.</p> <ul style="list-style-type: none"> • CTF: US\$ 46 million as loan and US\$ 1.90 million as grant • Co-financing: US\$ 546 million; out of which ADB loaned US\$250 million and EESL US\$ 296 million
Disbursement mechanism	<ul style="list-style-type: none"> • Loan, grant and co-financing
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> • The project aims to increase the end-use energy efficiency and reduce the emissions intensity of the economy of the project states through installation/deployment of energy efficient technologies such as smart metering, electric vehicles and charging systems, solar photovoltaic (PV) systems and end-user energy efficiency awareness programme.
Name of programme/scheme	Innovations in solar power and hybrid technologies ²⁴⁴
Year & status	<ul style="list-style-type: none"> • 2017–2023 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • IBRD; Solar Energy Corporation of India Limited
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 400 million</p> <ul style="list-style-type: none"> • CTF: US\$ 28 million as loan and US\$ 21.81 million as grant • Co-financing: US\$ 350 million; out of which US\$ 150 million as IBRD loan and US\$ 200 million from SECI
Disbursement mechanism	<ul style="list-style-type: none"> • Loan, grant and co-financing
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> • The project aims to demonstrate large-scale innovative renewable energy technologies in India.
Name of programme/scheme	Solar rooftop investment programme guaranteed by India ²⁴⁵
Year & status	<ul style="list-style-type: none"> • 2016–2022 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • ADB; MNRE
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 1000 million</p> <ul style="list-style-type: none"> • CTF: US\$ 170 million as loan and US\$ 4.75 as grant • Co-financing: US\$ 830 million; out of which ADB loan US\$ 325 million, MNRE US\$ 300 million and others US\$ 200 million
Disbursement mechanism	<ul style="list-style-type: none"> • Loan, grants and co-financing
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> • The project, in parallel with the other solar projects, will help the GoI achieve its new solar targets of 100 GW installed capacity, demonstrate economies of scale in solar generation, increase efficiency while reducing transaction costs and unit costs of solar power, and address pressing environmental concerns including carbon emissions

Name of programme/scheme	Shared infrastructure for solar parks ²⁴⁶
Year & status	<ul style="list-style-type: none"> • 2017–2022 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • IBRD; Indian Renewable Energy Development Agency (IREDA) Limited; MNRE
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 200 million</p> <ul style="list-style-type: none"> • CTF: US\$ 23 million as loan and US\$ 2 million as grant • Co-financing: US\$ 175 million; out of which IBRD loan US\$75 million and IREDA US\$ 100 million
Disbursement mechanism	<ul style="list-style-type: none"> • Loan, grants and co-financing
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> • The proposed project aims to increase solar generation capacity through the establishment of large-scale solar parks in the country.
Name of programme/scheme	Grid-connected rooftop solar programme ²⁴⁷
Year & status	<ul style="list-style-type: none"> • 2016–2021 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • IBRD; MNRE
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 800 million</p> <ul style="list-style-type: none"> • CTF: US\$ 120 million as loan and US\$ 5 million as grant • Co-financing: US\$ 675 million; out of which IBRD loan: US\$ 500 million; GEF US\$ 23 million; MNRE: US\$ 2 million and private and public sector funding US\$ 150 million
Disbursement mechanism	<ul style="list-style-type: none"> • Loan, grants and co-financing
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> • The objective of the GRSP program is to promote GRPV in the country through action on multiple fronts including provision of subsidies, and development of business models, to create an enabling environment for private investment, and undertake consumer awareness.
Name of programme/scheme	Partial risk sharing facility for energy efficiency ²⁴⁸
Year & status	<ul style="list-style-type: none"> • 2015–2022 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • IBRD; Small Industries Development Bank of India (SIDBI)
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 178 million</p> <ul style="list-style-type: none"> • CTF: US\$ 25 million as guarantee • Co-financing: US\$ 135 million from private sector as partial guarantee and others US\$ 18 million
Disbursement mechanism	<ul style="list-style-type: none"> • Guarantee

Focus areas	Mitigation <ul style="list-style-type: none"> The project aims to assist India to achieve energy savings by mobilising commercial finance using risk sharing mechanisms and catalyse ESCO implemented energy efficiency projects by leveraging project funds to encourage private sector investment in energy efficiency projects, and providing complementary technical assistance and capacity-building to relevant stakeholders
Name of programme/scheme	Renewable energy mini-grids and distributed power generation ²⁴⁹
Year & status	<ul style="list-style-type: none"> 2014–2021 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> ADB; MNRE and the Power Grid Corporation of India
Budget outlays (US\$ millions)	Total project cost: US\$ 34.25 million <ul style="list-style-type: none"> CTF: US\$ 30 million as loan and US\$ 4.25 million as grant
Disbursement mechanism	<ul style="list-style-type: none"> Loan and grant
Focus areas	Mitigation <ul style="list-style-type: none"> Under the CTF Dedicated Private Sector Programme, this sub-programme seeks to catalyse growth in access to electricity by addressing primarily financial barriers to private sector led distributed power generation and “mini grid” development from renewable energy in the CTF pilot countries of India, Indonesia and the Philippines.
Fund: Green Climate Fund (GCF) ²⁵⁰	
Name of programme/scheme	Ground water recharge and solar micro-irrigation to ensure food security and enhance resilience in vulnerable tribal areas of Odisha ²⁵¹
Year & status	<ul style="list-style-type: none"> 2016–2023 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> NABARD
Budget outlays (US\$ millions)	Total project cost: US\$ 166.3 million <ul style="list-style-type: none"> GCF Grant: US\$ 34.3 million Co-financing: US\$ 131.94 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project aims to enhance the resilience of vulnerable communities in Odisha through groundwater recharge and solar micro irrigation.
Name of programme/scheme	Green growth equity fund ²⁵²
Year & status	<ul style="list-style-type: none"> 2019–2029 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> FMO-Entrepreneurial Development Bank
Budget outlays (US\$ millions)	Total project cost: US\$ 944.5 million <ul style="list-style-type: none"> GCF Equity: US\$ 132.5 million GCF Grant: US\$ 4.5 million Co-financing: US\$ 807.50 million

Disbursement mechanism	<ul style="list-style-type: none"> Grant, equity, loan and co-financing
Focus areas	<p>Cross-cutting</p> <ul style="list-style-type: none"> The project aims to investing in low-carbon and climate-resilient platforms across the energy value chain, including renewable energy generation, energy efficient technologies, low carbon transport and resource conservation, including water and waste management. The programme will provide equity and grants to accelerate the uptake of Indian green infrastructure projects.
Name of programme/scheme	Line of credit for solar rooftop segment for commercial, industrial and residential housing sectors ²⁵³
Year & status	<ul style="list-style-type: none"> 2017–2024 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> NABARD
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 250 million</p> <ul style="list-style-type: none"> GCF Loan: US\$ 100 million Co-financing: US\$ 150 million
Disbursement mechanism	<ul style="list-style-type: none"> Loan
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> The project aims to enable access to long-term and affordable financing for the construction of 250 MW of rooftop solar capacity in India and thereby reduce emissions. It aims to unlock private sector investment in the rooftop solar market and pave the way toward a sustainable bankable model in India and beyond.
Name of programme/scheme	Enhancing climate resilience of India's coastal communities ²⁵⁴
Year & status	<ul style="list-style-type: none"> 2016–2025 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> UNDP
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 130.3 million</p> <ul style="list-style-type: none"> GCF grant: US\$ 43.4 million Co-financing: US\$ 86.85 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant and co-financing
Focus areas	<p>Cross-cutting</p> <ul style="list-style-type: none"> The project aims to strengthen the climate resilience of coastal communities by protecting and restoring natural ecosystems, such as mangroves and seagrass, which are essential for buffering against storm surges. The project will also support climate-adaptive livelihoods and value chains to increase the climate resilience of the coastal communities. It will be implemented in 24 target ecosystems in 12 coastal districts across the states of Andhra Pradesh, Maharashtra, and Odisha.

DOMESTIC CLIMATE FINANCE SOURCES

Meeting the climate goals contained in India’s initial NDC requires vast amounts of finance, estimated at US\$ 2.5–3 trillion.²⁵⁵ The assessments indicate that only 10% of the financial requirement can be met by international funds.²⁵⁶ Therefore, India is promoting greater domestic mobilisation of resources through climate tagging of budgetary spending, leveraging private sector financing for adaptation, and introducing innovative financing.

The GoI finances climate actions through various channels, including:

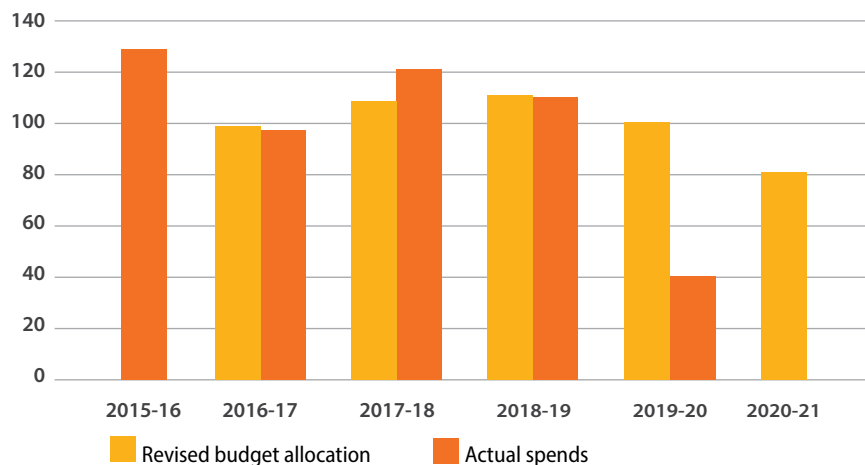
1. Climate funds through the national budget;
2. Direct budgetary allocations; and
3. Mechanisms aimed at leveraging private climate finance.

Climate funds are allocated to support climate actions under the national climate missions as well as outside of these. They include:

- **The National Adaptation Fund for Climate Change (NAFCC):** This national fund was established in 2015 with a budget of Indian Rupees (INR) 350 crore (US\$ 37.66 million) to assist climate-vulnerable states and union territories to meet their adaptation costs. The projects under the fund prioritise building climate resilience in the areas identified under the State Action Plans on Climate Change and the relevant missions under the NAPCC. It also seeks to support preparing and updating climate scenarios, vulnerability and climate impact assessments, as well as strengthening knowledge networks and developing the capacity of various stakeholders on climate adaptation.

The GoI has designated NABARD as the NIE for implementing adaptation projects under the fund. To date, 30 projects worth INR 847.47 crore (US\$ 108.33 million) have been approved under the fund and are at different stages of implementation. Figure 17 below depicts the funds allocated to the NAFCC and highlights the significant decrease over the years. The fund received a robust budget of around INR 110 crore (US\$ 14.06 million) in 2017–18, which gradually decreased to INR 80 crore (US\$ 10.22 million) in 2020–21 and to the current INR 60 crore (US\$ 7.67million) in the 2021–22 budget. The actual expenditure in 2019–20 was a mere INR 33.82 crore (US\$ 4.32 million) out of the INR 100 crore (US\$ 1.27 million) allocated.

FIGURE 17: Allocation of funds to the NAFCC over 2015–2021 in INR crore²⁵⁷



- **Compensatory Afforestation Funds (CAF):** The CAF Act (2016), which came into force from 30 September 2018, established a National Compensatory Afforestation Fund to promote afforestation and regeneration activities as compensation for forest land diverted to non-forest uses. The Act provides for the transfer of 90% of the accumulated funds, while 10% is retained at the national level to monitor and evaluate the projects implemented in the states and union territories utilising these funds. Of the INR 54,685 crore (US\$ 6.99 billion) brought to the central government fund from the ad hoc Compensatory Afforestation Fund Management and Planning Authority (CAMPA), the MoEFCC disbursed over INR 47,436 crore (US\$ 6.06 billion) in 2019 to various states to take up afforestation and conservation activities to achieve NDC objectives.²⁵⁸

The GoI supports a number of adaptation and mitigation actions through the national missions under the NAPCC. These actions are financed through the national budget ('Union Budget') in the form of sectoral funding for various ministries and departments. The Planning Commission estimated it will take approximately US\$ 37.16 billion to meet the targets under the various missions in its Twelfth Five-Year Plan (2012–2017).²⁵⁹ Almost INR 14,014 crore (US\$ 1.79 billion) was spent between 2014–2018 on implementing the NAPCC.²⁶⁰ Table 16 below gives a brief overview of the achievements and budgets allocated under the different missions.

TABLE 16: Budget allocation for the NAPCC in India

Missions under NAPCC	National Solar Mission (NSM) or Jawaharlal Nehru National Solar Mission
Nodal ministry	MNRE
Objectives and progress	<ul style="list-style-type: none"> • Inaugurated in 2010 to increase the share of solar energy through promoting new solar technologies and targets 100 GW of solar PV by 2022. • As of 31st December 2021, solar power capacity of 49.35 GW has been installed in the country.
National government schemes programmes with similar objectives to the mission²⁶¹	Grid interactive renewable power (solar power), off-grid/distributed and decentralised renewable power (solar energy), research development and international cooperation (International Solar Alliance (ISA)), supporting programmes (assistance to ISA), autonomous bodies (National Institute of Solar Energy)
Financial outlay allocated under the Twelfth Five-Year Plan 2012–2017²⁶² (US\$ billion)	US\$ 1.4 billion
Missions under NAPCC	National Mission for Enhanced Energy Efficiency (NMEEE)
Nodal ministry	MoP, Bureau of Energy Efficiency (BEE)
Objectives and progress	<ul style="list-style-type: none"> • Initiated in 2008 • To promote the market for energy efficiency by fostering innovative policies and effective market instruments. • The Perform, Achieve and Trade (PAT) Scheme initiated in March 2012. Implementation of PAT Cycle I (2012-2015); Cycle II (2016–17 to 2018–19) and Cycle III (2017 to 2020) resulted in energy savings of 23.81 million tonnes of oil equivalent (Mtoe). Currently, PAT Cycle IV is under implementation and energy savings of approximately 26 Mtoe are expected.

National government schemes programmes with similar objectives to the mission	Conservation and energy efficiency programmes; Unnat Jyoti by Affordable LEDs for All (UJALA)
Financial outlay allocated under the Twelfth Five-Year Plan 2012–2017 (US\$ billion)	US\$ 0.031 billion
Missions under NAPCC	National Mission on Sustainable Habitat (NMSH)
Nodal ministry	MoHUA
Objectives and progress	<ul style="list-style-type: none"> • Launched in 2010 • To integrate mitigation and adaptation into the urban planning process to promote sustainable cities through improvements in energy efficiency of buildings, management of solid waste and shift to public transport. • Energy Conservation Building Rules 2018 made mandatory for commercial buildings with connected load of 100 KW or above. • 702 km of conventional metro is operational; additional 1,016 km of metro and regional rapid transit system is under construction.
National government schemes programmes with similar objectives to the mission	Atal Mission on Rejuvenation and Urban Transformation (AMRUT), Swachh Bharat Mission (SBM) and Smart Cities Mission
Financial outlay allocated under the Twelfth Five-Year Plan 2012–2017 (US\$ billion)	US\$ 0.15 billion
Missions under NAPCC	National Water Mission (NWM)
Nodal ministry	MoWR
Objectives and progress	<ul style="list-style-type: none"> • Launched in 2009 • To conserve water, minimise wastage and ensure more equitable distribution both across and within states through integrated water resources development and management. • Revised National Water Policy (2012) adopted by National Water Resources Council • Five states have completed the first phase of state specific action plan for water sector. • Created 15,640 ground water observation wells
National government schemes programmes with similar objectives to the mission	NWM under MoWR, National River Conservation Programme, Ground Water Management and Regulation, Irrigation Management Programme, National Ground Water Management Improvement Scheme
Financial outlay allocated under the Twelfth Five-Year Plan 2012–2017 (US\$ billion)	US\$ 14.4 billion, out of which proposals for US\$ 0.03 billion has been approved
Missions under NAPCC	National Mission for Sustaining the Himalayan Ecosystem (NMSHE)
Nodal ministry	Department of Science Technology, Climate Change Programme

Objectives and progress	<ul style="list-style-type: none"> • Launched in 2010 • To facilitate the formulation of appropriate policy measures and action programmes for sustaining and safeguarding the Himalayan glacier and mountain ecosystem. • State climate change centres set up in 12 Himalayan states • State climate change cells established in 11 Himalayan states. • Inter-university consortium of four universities focussed on Himalayan cryosphere and climate change has been formed. • Glacial lake outburst floods R&D studies for vulnerability assessment conducted for Sikkim.
National government schemes programmes with similar objectives to the mission	National Mission on Himalayan Studies under MoEFCC, Polar Science and Cryosphere under MoES
Financial outlay allocated under the Twelfth Five-Year Plan 2012–2017 (US\$ billion)	US\$ 0.27 billion, out of which proposals for US\$ 0.08 billion has been approved
Missions under NAPCC	National Mission for Green India (NMGI)
Nodal ministry	MoEFCC
Objectives and progress	<ul style="list-style-type: none"> • Launched in 2014 • To protect, restore and enhance diminishing forest cover and respond to climate change with a combination of adaptation and mitigation measures. • Afforestation activities taken up over an area of 1,17,757 hectares (ha).
National government schemes programmes with similar objectives to the mission	Green India Mission, National Mission for a Green India, National Afforestation and Eco-Development Board, Intensification of Forest Management
Financial outlay allocated under the Twelfth Five-Year Plan 2012–2017 (US\$ billion)	US\$ 7.4 billion, out of which US\$ 2.1 billion has been approved for implementation
Missions under NAPCC	National Mission for Sustainable Agriculture (NMSA)
Nodal ministry	MoA
Objectives and progress	<ul style="list-style-type: none"> • Launched in 2014 • To promote resilient agriculture through new varieties of crops, new credit and insurance mechanisms, and improving productivity of rain-fed agriculture. • Developed 11,000 ha of degraded land. 1 million ha brought under micro-irrigation to promote water efficiency and created 5.4 million metric tonnes of agricultural storage capacity.
National government schemes programmes with similar objectives to the mission	Rain-fed Area Development and Climate Change, National Mission on Micro-Irrigation, National Project on Management of Soil Health and Fertility (Soil Health Card), National Project on Agro forestry, Paramparagat Krishi Vikas Yojana
Financial outlay allocated under the Twelfth Five-Year Plan 2012–2017 (US\$ billion)	US\$ 17.4 billion, out of which proposals for US\$ 2.1 billion has been approved

Missions under NAPCC	National Mission on Strategic Knowledge for Climate Change (NMSKCC)
Nodal ministry	Department of Science and Technology (DST)
Objectives and progress	<ul style="list-style-type: none"> • Launched in 2014 • To build a dynamic knowledge system that would inform and support national actions for responding to climate change through research and technology development. • The mission has created and strengthened 11 centres of excellence for climate change. • State climate change cells have been established
National government schemes programmes with similar objectives to the mission	Research & Development under MoSTE (Climate Change programme); Centre for Climate Change under Ministry of Earth Sciences (MoES); Climate Change Research (MoES); Ocean Services, Technology, Observations, Resources Modelling and Science (O-STORMS) (MoES); Research & Development in Earth and Atmospheric Sciences (MoES); Atmospheric Processes and Modelling and Services (MoES); Atmospheric Observation System Network; Atmosphere and Climate Research Observing Modelling Systems and Services (ACROSS)
Financial outlay allocated under the Twelfth Five-Year Plan 2012–2017 (US\$ billion)	US\$ 0.40 billion

Although the country does not have dedicated climate-related budget guidelines, various line ministries allocate budget towards implementing climate actions. Out of 56 ministries, 28 ministries were implementing climate-related programmes and schemes at the time of writing. They include the Ministry of New and Renewable Energy (MoNRE), MoEFCC and the MoAFW. The Ministry of Health and Family Welfare (MoHFW), Ministry of Drinking Water and Sanitation (MoDWS), Ministry of Rural Department (MoRD) and MoHUA are also some other important ministries implementing climate-related activities. Box 4 highlights the key climate-related announcements made in the national budget 2021–22.



A woman walks with a pot of drinking water along with her daughter in India. © SkycopierFilms Archives via Shutterstock

BOX 4: KEY CLIMATE-RELATED ACTIVITIES FROM THE UNION BUDGET (NATIONAL BUDGET) 2021–2022

- Allocation of INR 30 crore (US\$ 3.83 billion) to the NAPCC.
- Swachh Bharat and Swasth Bharat (which translates to “Clean India, Healthy India”) to focus on complete faecal sludge management and wastewater treatment, waste management and reduction in single-use plastic, among others. Urban Swachh Bharat Mission 2.0 will be implemented with a total financial allocation of INR 1,41,678 crore (US\$ 18.11 billion) over a period of five years from 2021–2026.
- Allocation of INR 2,217 crore (US\$ 0.28 billion) for 42 urban centres with a million-plus population to tackle air pollution.
- National Hydrogen Mission to be launched in 2021–22 for generating hydrogen from green power sources.
- Voluntary scrapping policy announced, which seeks to phase out unfit vehicles to reduce vehicular pollution, meet climate commitments, improve road safety and fuel efficiency, formalise the informal vehicle scrapping industry and recover low-cost materials for the automotive, steel and electronics industry.
- Announcement of the Deep Ocean Mission with an outlay of INR 4,000 crore (US\$ 0.51 billion) for over five years to ensure deep-sea biodiversity conservation.
- Budget allocation to National Coastal Mission doubled from INR 103 crore (US\$ 13.16 million) in the last fiscal year to INR 200 crore (US\$ 25.56 million) in 2021–22.
- A budget provision of INR 20 crore (US\$ 2.55 million) for the newly-formed statutory body, the Commission for Air Quality Management (CAQM), serving the national capital region and adjoining areas.

Financing climate action in urban areas

The Union Budget 2020–21 had also allocated an amount of INR 4,400 crore (US\$ 0.55 billion) to encourage states to formulate plans to ensure clean air in cities with a population of above a million. This also serves as a push for the National Clean Air Plan (NCAP) and demands meaningful operational and inter-state collaboration.

The GoI has also launched a number of schemes for transforming and rejuvenating urban areas, including the Namami Gange, Smart Cities Mission, AMRUT and HRIDAY. The Namami Gange Programme, launched in 2014 with a budget outlay of INR 20,000 crore (US\$ 2.55 billion), focuses on the twin objectives of pollution abatement, and conservation and rejuvenation of the National River Ganga. The total central outlay for AMRUT was INR 50,000 crore (US\$ 6.39 billion) for five years from 2016–2020. Under the Smart Cities Mission, the national government allocated INR 500 crore (US\$ 63.91 billion) to each city for implementing Smart City projects, and this was matched with a grant of the same amount by the respective state. According to the Economic Survey 2019–20, as much as 5,151 Smart City projects with a cost of INR 2 trillion (approx. US\$ 25.56 billion) are in various stages of implementation among the 100 Smart Cities since the inception of Smart City Mission (see Box 5).²⁶³

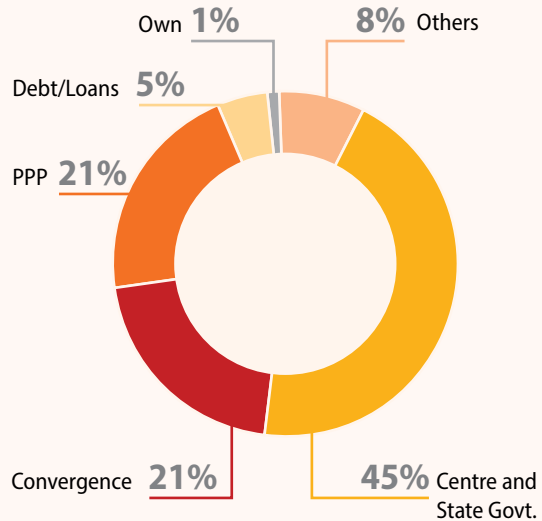
The MoHUA has institutionalised a Climate Centre for Cities within the NIUA²⁶⁴ to strengthen the capacities of cities to implement climate actions. The Climate Smart Cities Assessment Framework launched by the Climate Centre for Cities in 2019 serves as a tool for cities to assess their current climate situation. It also provides a roadmap for the first 100 Smart Cities to adopt and implement relevant climate actions, which will eventually be scaled to 500 cities over the next five years. The Centre will also coordinate with partner organisations working in Indian cities to create synergy across climate actions, foster knowledge exchange, and encourage documentation of best practices and case studies.

BOX 5: FINANCING SMART CITIES IN INDIA

Under the Smart Cities Mission (SCM), an investment of INR 2 trillion (approx. US\$ 25.56 billion) is planned for various projects. The funding sources include central and state governments (45%), various PPPs (21%), debts or loans (5%), cities’ own funds (1%), and funds from other sources (8%). Finance is also expected to be raised through borrowing from bilateral and multilateral sources, such as the World Bank and the ADB. The city’s own revenue will also be used – largely obtained through property, professional, entertainment and advertisement taxes – as well as other taxes along with municipal bonds.

As of May 2021, 5,703 projects worth INR 174,223 crore (approx. US\$ 22.27 billion) had been tendered, out of which 2,473 projects amounting to INR 41,227 crore (approx. US\$ 5.27 billion) had been completed.

Planned source of funds for Smart Cities



Source: Ministry of Housing and Urban Affairs, 2018, Presentation in Smart Cities Mission to Consultative Committee (Urban Development)

Sustainability-focused projects under the SCM include smart water, smart wastewater, smart solar, green open spaces and waterfront development. Some of the key highlights include:²⁶⁵

- Smart water projects worth INR 4,079 crore (US\$ 0.52 billion) have been completed or are in progress across 40 cities.
- Smart wastewater projects worth INR 2,623 crore (US\$ 0.33 billion) have been completed or are in progress across 29 Smart Cities.
- Solar projects worth INR 886 crore (US\$ 0.11 billion) have been completed or are in progress across 49 cities.
- Riverfront development projects worth INR 452 crore (US\$ 0.05 billion) have been completed or are in progress across 15 cities.
- Projects worth INR 7,000 crore (US\$ 0.89 billion) have been proposed for the development of green open spaces.

Further, the SCM also provides an opportunity for the subnational government to explore innovative funding mechanisms, such as value capture in terms of monetising developed land, rentals from sharing urban assets such as utility ducts and city optical fibre networks, and incremental tax levies in areas benefiting from smart interventions, etc.

The government has introduced various market mechanisms as measures to support climate action, such as the Perform, Achieve and Trade (PAT) scheme, Renewable Energy Certificates (RECs), and regulatory regimes, such as Renewable Purchase Obligations (RPOs).

- **Perform, Achieve and Trade (PAT):** This scheme is a flagship programme of Bureau of Energy Efficiency (BEE) under the National Mission for Enhanced Energy Efficiency (NMEEE). It is a regulatory instrument that promotes reduction of energy consumption in energy-intensive industries and is linked with an associated market-based mechanism to enhance cost-effectiveness through certification of excess energy saving, which can then be traded.
- **Renewable Energy Certificates (RECs):** An REC is a market-based instrument that certifies a bearer owns one megawatt-hour (MWh) of electricity generated by a renewable resource. The generated RECs can be traded on approved power exchanges, such as the Indian Energy Exchange (IEX) and Power Exchange India (PXIL), as soon as the renewable energy generator feeds energy into the grid. RECs may be sold, for example, to other polluting entities as a carbon credit to offset their emissions.
- **Renewable Purchase Obligations (RPOs):** RPOs mandate electricity distribution companies to purchase or produce a minimum specified quantity of electricity from renewable energy sources.

There are several other innovative market mechanisms being experimented and piloted in Indian cities to implement climate actions. Box 6 and Box 7 below highlights such examples from the states of Gujarat and Madhya Pradesh.

BOX 6: CAP AND TRADE INITIATIVES IN SURAT, GUJARAT, INDIA

In 2019, Gujarat launched the world's first-ever Emissions Trading Scheme (ETS) for regulating pollution by particulate matter (PM10). The ETS has been designed to provide economic incentives to industries that successfully control their emissions of particulate pollutants. The Gujarat Pollution Control Board (GPCB) has set a cap of 200 tonnes per month on particulate emissions levels and allows industries to buy and sell permits in order to stay below the cap. It is anticipated that ETS will help in reducing particulate emissions by 29% from baseline levels, deliver greater flexibility to industries, enhance industry performance and also provide access to high-quality data. The scheme is implemented in collaboration with GPCB, the Abdul Latif Jameel Poverty Action Lab and the Energy Policy Institute at the University of Chicago.²⁶⁶

BOX 7: VOLUNTARY CARBON STANDARD IN INDORE, MADHYA PRADESH, INDIA²⁶⁷

The Voluntary Carbon Standard (VCS) is another global programme and standard for certification and registration of projects that focus on reduction and removal of GHGs. The credits earned through listing the projects can be monetised in the international carbon market. Indore Municipal Corporation (IMC) became the first municipal corporation in Asia to generate revenue of INR 0.5 crore (US\$ 0.06 million) by selling credits against 0.17 million tonnes of CO₂ under the VCS programme through three of its registered projects – a compost plant with a capacity of 600 tonnes per day, a bio-methanation plant (35 tonnes per day) and a 1.5-MW solar plant.

PRIVATE FINANCE SOURCES AND OPPORTUNITIES

The GoI has been actively exploring strategies to promote private sector finance in the country for supporting both mitigation and adaptation actions. This has included energy generation-based incentives, feed-in tariffs, tax incentives, concessional allotment of public land, and hedging costs of borrowings, among other things.

Private climate finance in the country is being leveraged largely through debt finance, which is usually in the form of local and foreign currency loans. The most common debt instruments in the country are local currency loans supporting almost 70% of the total project costs through conventional term loans. Domestic banks, including both public and private sector banks and Non-Banking Finance Companies (NBFC),²⁶⁸ are the major sources of debt capital in India. In 2017, the SBI and the World Bank announced US\$ 357 million in credit facilities for seven Indian solar companies to develop grid-connected solar rooftop projects with an aggregate capacity of 575 MW.²⁶⁹

Tata Power and the Small Industries Development Bank of India (SIDBI) have come together to design a unique solar financing solution for Micro-, Small- and Medium-sized Enterprise (MSME) customers to switch to rooftop solar without any collateral, at an interest rate of less than 10% per year. This will also be complemented with a quick sanction and disbursement process (sanction within seven days and disbursement in four days). This financing scheme is exclusively for MSME customers of Tata Power for both off-grid and on-grid connections. One such example of private sector financing of climate action is provided in Box 8.



A man drives an electric rickshaw on a hot afternoon in New Delhi, India. © FireFX via Shutterstock

BOX 8: CLIMATE FINANCE FROM TATA CLEANTECH CAPITAL LIMITED²⁷⁰

In 2021, the Japan International Cooperation Agency (JICA) signed a loan agreement for a maximum amount of JPY 10 billion (US\$ 73.37 million) with Tata Cleantech Capital Limited (TCCL), a non-banking financial company. The loan agreement supports TCCL to offer loans to businesses across the country focused on renewable energy generation, e-mobility solutions as well as energy efficiency. In 2019, TCCL also secured a US\$ 100 million line of credit from the GCF to develop a rooftop solar market in India. TCCL is the first private sector climate finance institution to be part of the [Green Bank Network](#),²⁷¹ a global membership organisation formed to foster collaboration and knowledge exchange among green banks, enabling them to share best practices and lessons. TCCL has so far funded the development of 9.8 gigawatts of renewable energy, which has averted annual carbon emissions of 15.1 million tonnes. TCCL has a loan portfolio of US\$ 850 million.

Foreign currency loans are being provided by development banks, export-import banks, and foreign banks like JICA, Export-Import Bank of China and Export-Import Bank of the USA, the Overseas Private Investment Corporation (OPIC) and ADB.

Green bonds are also one of the emerging instruments being adopted by private entities to finance green initiatives in the country. India has become the second-largest market globally for green bonds, with US\$ 10.3 billion worth of transactions in 2019. In 2018, the SBI entered the green market with a US\$ 650 million certified climate bond²⁷² and recently raised another US\$ 100 million in 2020.²⁷³ In 2019, Adani Green raised US\$ 862 million, Greenko raised US\$ 950 million, Azure Power raised US\$ 3,590 million, and ReNew Power raised US\$ 90 million.²⁷⁴

About 84% of the green bond proceeds have been allocated to renewable energy projects, followed by the low-carbon transport sector and water, which accounted for 12.8% and 1.7% of the proceeds, respectively, in 2017.²⁷⁵

India is also working towards promoting green masala bonds through several financial institutions. Masala bonds are Indian rupee-denominated bonds issued in the overseas capital market, enabling Indian entities, both public and private, to borrow money from overseas without taking on any currency risk. It allows the entities to diversify their funding sources and reduce borrowing costs by taking advantage of low interest rate in the overseas market. The first green masala bond was issued in 2015 by IFC, which raised INR 315 crore (US\$ 40.29 million) for private sector investments in renewables. In 2016, HDFC Bank raised INR 3,000 crore (US\$ 0.38 billion) from masala bonds and, thereby, became the first Indian company to issue such bonds, followed by public sector unit NTPC, who issued the first corporate green masala bonds worth INR 2,000 crore (US\$ 0.25 billion).

Private equity and venture capital groups are another major source of funds for renewable energy projects, especially regarding wind and solar power projects. Some of the private equity firms who have invested in India include GIC Singapore and Goldman Sachs.

Private partial risk guarantee facilities are also a source of catalytic climate finance in India; however, with limited presence. Private partial risk guarantee is primarily designed to facilitate private sector development by providing financing partners with guarantees covering well-defined political risks, such as political force majeure, currency inconvertibility, adverse changes in law, and various forms of breach of contract by government and related entities. ADB's US\$ 150 million India Solar Generation Guarantee Capacity introduced in 2012 is one such example where the ADB partnered with L&T Infrastructure Finance (L&T Infra) and Singapore-based Norddeutsche Landesbank to fund solar projects with capacities below 25 MW in India. The World Bank Group's Partial Risk Sharing Programme (PRSP) also provides partial risk and credit guarantee products to support projects taken up by governments and private investors. The World Bank and the GoI signed a US\$ 43 million agreement for the period of 2015–2022 towards the Partial Risk Sharing Facility (PRSF) for energy efficiency project, which will help enterprises and Energy Service Companies (ESCOs) mobilise commercial finance for investments in energy efficiency initiatives.

Apart from the above-mentioned funds, large corporates integrating sustainability in their core businesses are included in the Bombay Stock Exchange's green index, the GREENEX, which was introduced in 2012 and comprises 25 of India's biggest companies. Further, the Companies Act 2013 obliges companies with a certain level of profits to spend 2% of their annual profit on CSR activities. These funds are also being leveraged by corporates for climate change and clean energy initiatives. In 2018, Indian corporates spent INR 8,691 crore (US\$ 1.11 billion) on CSR with almost 13% being diverted to environment-related initiatives. It is estimated that with an estimated corpus of INR 13,624 crore (US\$ 1.74 billion) per year,²⁷⁶ there's a huge opportunity to divest these CSR funds into climate-relevant initiatives.

3.3 Nepal

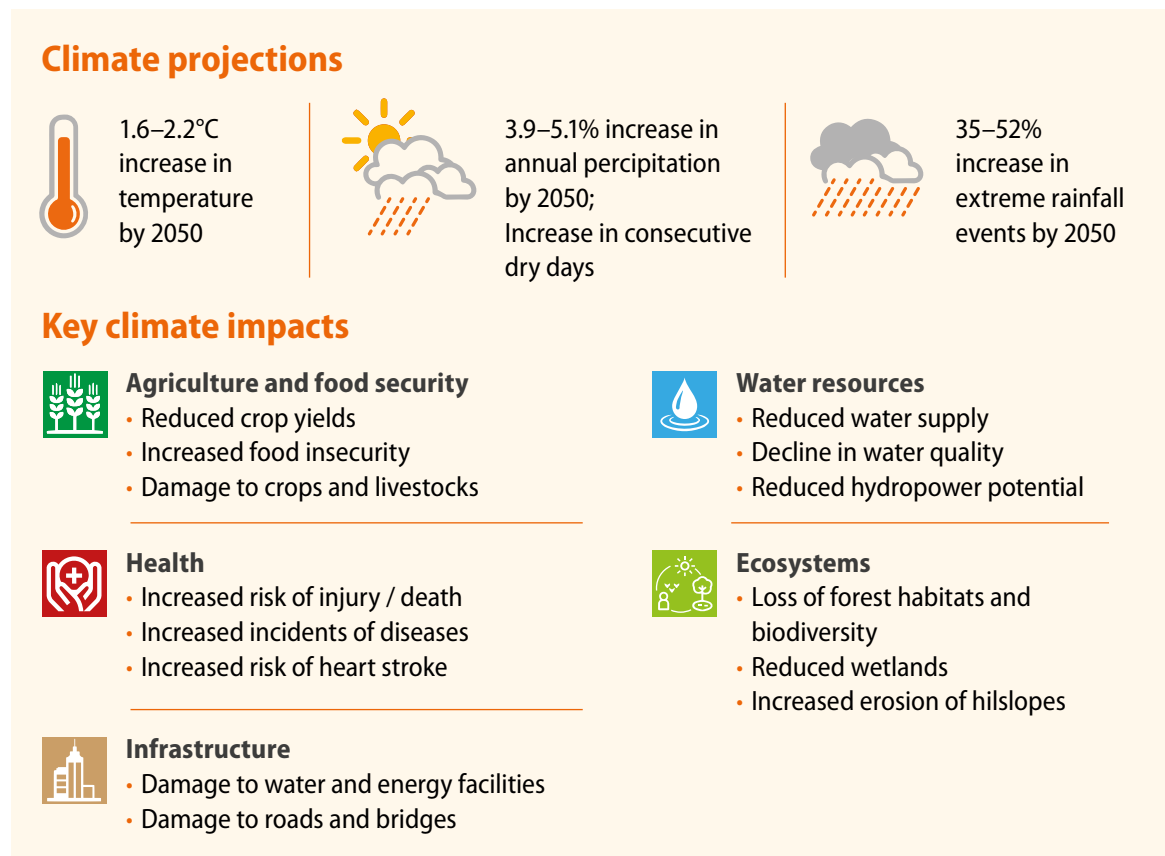
COUNTRY PROFILE AND GLOBAL CLIMATE CHANGE COMMITMENTS

Nepal, a landlocked country, has a population of nearly 29 million people growing at an annual rate of 1.85% per year.²⁷⁷ In 2017, the urban population in Nepal constituted roughly 42% of the total population and is growing at a rate of 3.5% per annum. The HDI of the country for 2019 was 0.602, positioning Nepal as a medium development country, ranked at 142 out of 189 countries.²⁷⁸ Nepal faces many development challenges, including high rates of poverty and inequality, mass migration from rural to urban areas, vulnerability to climate change, and limited capacity of the government to deliver public services across often rugged and inhospitable terrain.

According to the Global Climate Risk Index 2021, Nepal is the 12th most vulnerable country to climate change.²⁷⁹ The country is already exposed to the worst impacts of climate change in the form of higher temperatures accelerating the melting glaciers, more erratic and extreme precipitation leading to flash floods, food insecurity and increasing natural disasters along with the poor adaptive capacity of its population. Flash floods and landslides in 2017 in the country amounted to US\$ 600 million in damages, including destroying over 40,000 houses, disrupting agricultural livelihoods, and damaging critical common infrastructure.^{280 281}

As a country highly dependent on ecosystem services and natural capital, climate change can significantly undermine the future of the country. It is estimated that the country suffers an economic loss of approximately US\$ 0.23–0.31 billion (NPR 28.77–38.77 billion) per year due to climate change.²⁸² Some past studies have also indicated that the direct cost from climate change in key sectors could reach 2% or more of the country’s GDP.²⁸³ This could also increase to 2–3% of GDP, approximately US\$ 62.384 billion, by 2050.²⁸⁴ However, Nepal’s share of global GHG emissions is only 0.027%.²⁸⁵ Figure 18 below presents key climate projections and impacts in Nepal.

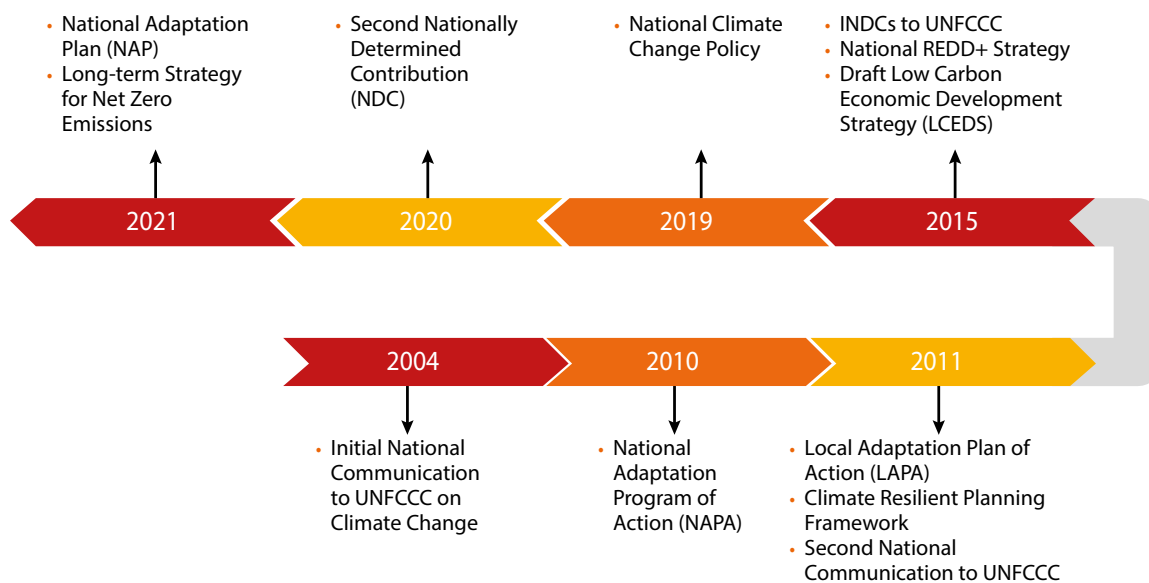
FIGURE 18: Climate projections and key climate impacts in Nepal²⁸⁶



Climate change policies and programmes

The Government of Nepal (GoN) is committed to addressing the challenges imposed by climate change and has adopted national climate policies and strategies on adaptation, low-carbon development, and GHG mitigation. It has also established the institutional architecture to respond to the challenge. The country is a party of the UNFCCC, the Kyoto Protocol and a signatory of the Paris Agreement, that it ratified in 2016. Figure 19 below presents the evolution of climate change policies, frameworks and strategies in Nepal.

FIGURE 19: Climate change policies, frameworks and strategies in Nepal



Nepal has identified both adaptation and mitigation measures and has moved towards formulating, and to various extents implementing, climate change policies, strategies and action plans.

The country submitted its second NDC in 2020, which outlines the country’s ambitious targets for the next decade to reduce emissions and support vulnerable communities to adapt to the impacts of climate change. The country’s second NDC is more ambitious in terms of its sectoral coverage (i.e., energy; industrial processes and product use; agriculture, forestry, and other land use; and waste/sanitation); includes quantitative activity-based and policy targets in key sectors; estimates the cost of mitigative actions and refers to a net-zero target for the first time. The second NDC also identifies adaptation priorities and actions across thematic areas such as agriculture and food security; forests, biodiversity and watershed conservation; energy; health; and disaster risk reduction and management.

In 2019, the GoN revised the existing 2011 Climate Change Policy²⁸⁷ to provide guidance to various levels of government and highlight thematic areas to progress towards a climate-resilient society. The policy seeks to mobilise financial resources from bilateral and multilateral sources and ensure that at least 80% of finance accessed will be used for programme implementation at the local level. The policy also focuses on sourcing funds from the private sector through green bonds, blended finance, results-based financing, carbon offsets and CSR.

In order to assess and prioritise climate change vulnerabilities and identify adaptation measures, Nepal formulated and implemented a NAPA in 2010. In 2011, a Local Adaptation Plan of Action (LAPA) was prepared in response to the needs identified in the NAPA. The LAPA framework

supports integration of adaptation measures into regular local-level planning, mobilises local institutions and community groups to respond effectively with changing climate action, and supports implementation processes.

Programmes are tagged as either highly climate-relevant (more than 60%), climate-relevant (20–60%) or neutral (less than 20%), depending on the expenditure allotted to climate actions. Nepal presented its NAP in October 2021. The NAP aligns with the key principles of the 2030 Agenda for Sustainable Development, including the commitment to ‘leave no one behind’, and aims to achieve these goals in tandem with the aim of transforming into a middle-income country by 2030.

The country also drafted a National Low-Carbon Economic Development Strategy (LECDs) in 2015 to identify key interventions to move towards a low-carbon economy and achieve sustainable development in line with its development strategies.²⁸⁸

CLIMATE FINANCING NEEDS

The cost of achieving Nepal’s NDC conditional mitigation targets is estimated at US\$ 25 billion, while the cost of achieving unconditional NDC targets is estimated at US\$ 3.4 billion.²⁸⁹

It is estimated that the total budget for implementation of priority programmes until 2025 under the National Adaptation Plan (2021–2050) will be around US\$ 47.4 billion.²⁹⁰ The GoN will contribute US\$ 1.5 billion, while external support of US\$ 45.9 billion is required to implement the NAP until 2050. Also, it is estimated that the country will require approximately US\$ 2.1 billion per year for the delivery of adaptation programmes under the medium-term (until 2030).²⁹¹

THE CLIMATE FINANCE LANDSCAPE IN NEPAL: SOURCES AND INSTRUMENTS

The overall climate finance landscape in Nepal includes domestic sources comprising of national budgets and investments from private entities, while international sources include a range of multilateral and bilateral donors. Table 17 below briefly describes the various sources of climate finance and instruments used in Nepal.

TABLE 17: Climate finance landscape in Nepal

Scale	Category	Institution/mechanism	Instruments
Domestic	Public	National budget, programmes, schemes	Budgetary expenditure Grants
	Private	Green banking through central bank, commercial banks	Concessional loans
International	Public	Multilateral and bilateral	Grants, loans, equity
	Private	Philanthropy Foreign Direct Investment	Equity, grants

INTERNATIONAL CLIMATE FINANCE SOURCES IN NEPAL

Although Nepal's share of global GHG emissions is only 0.027%, the average rate of increase of its GHG emissions is currently the highest in South Asia at 8.8%.²⁹² There is, therefore, an urgent need for resources in order to pursue a low-carbon growth pathway, reduce climate change impacts, and meet commitments both at the international and national level.

It is estimated that Nepal will require an additional US\$ 2.4 billion in investment by 2050 to build climate resilience in the three sectors of agriculture, hydroelectricity and water-induced disasters.²⁹³ The annual average investment requirement to address all the SDGs, including those that are climate-related, is estimated to be NPR 2025 billion (US\$ 16.18 billion) for the period 2016–2030, which is 48% of the country's GDP.²⁹⁴

Nepal can tap into a range of public and private finance sources as well as various international sources of climate finance to support low-carbon, climate-resilient development. There are also a multitude of multilateral finance channels accessible through the CIF, such as the SREP for Low-Income Countries, PPCR, LDCF, AF, GEF, Forest Fund and GCF, among others. Bilateral funds mostly come from the UK, USA, Germany and the EU.

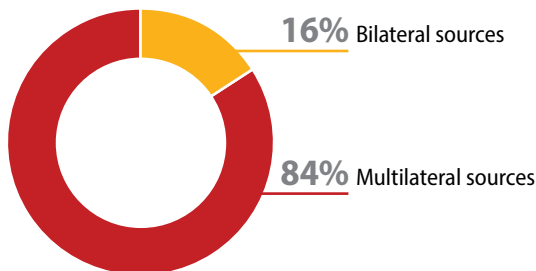
Figure 20 presents an analysis of international climate funds received by Nepal from 2013–2017. The country received international climate funds of around US\$ 1.92 billion through 609 climate-related projects.²⁹⁵ These funds largely came from MDBs including the World Bank, ADB and European Investment Bank (EIB). Of the funds received, slightly more was allocated for adaptation at US\$ 640 million, while US\$ 563 million was allocated for mitigation and US\$ 717 was for cross-cutting projects. For the period 2013–2017, the largest providers of bilateral climate finance included the UK (US\$ 83 million) followed by USA (US\$ 76 million) and Germany (US\$ 48 million).



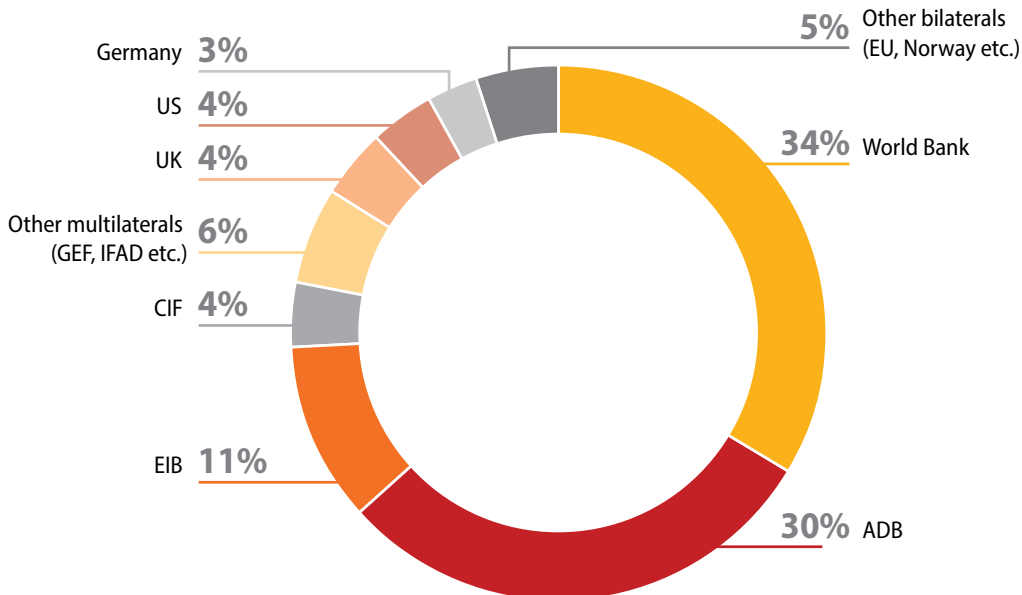
Women labourers in Nepal. © Rumbo a lo desconocido via Shutterstock

FIGURE 20: Analysis of international climate funds received by Nepal from 2013–2017²⁹⁶

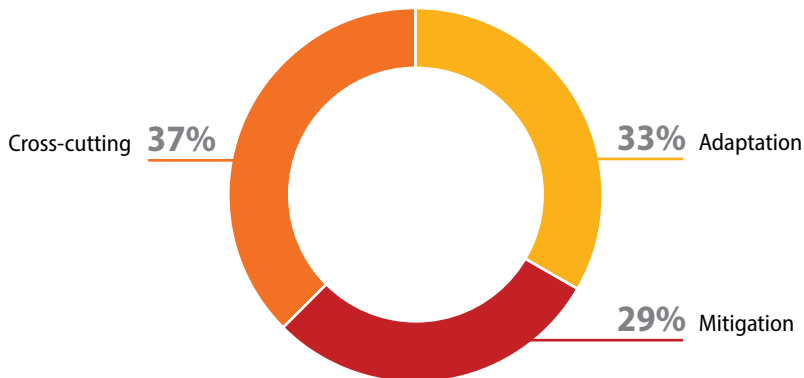
Sources of climate finance in Nepal (2013–2017)



Sources of multilateral and bilateral funds to Nepal (2013-2017)



Budget allocation for climate actions (%)



For international finance, the government largely accepts different kinds of financial instruments, such as grants and concessional (soft) loans depending on the programmes. Table 18 collates all the major projects supported and financed by international funds in Nepal.

TABLE 18: International climate finance sources in Nepal (2012 to date)

Fund: Adaptation Fund (AF)	
Name of programme/scheme	<u>Adapting to climate-induced threats to food production and food security in the Karnali Region</u> ²⁹⁷
Year & status	<ul style="list-style-type: none"> • 2015–2022 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • MoFE, Ministry of Federal Affairs and Local Development (MoFALD), World Food Programme (WFP)
Budget outlays (US\$ millions)	Total project cost: US\$ 9.52 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> • The project aims to increase the adaptive capacity of climate vulnerable and food insecure poor households by improved management of livelihood assets and natural resources in the Karnali mountain districts of Nepal.
Fund: Green Climate Fund (GCF)	
Name of programme/scheme	<u>Building a Resilient Churia Region in Nepal (BRCRN)</u> ²⁹⁸
Year & status	<ul style="list-style-type: none"> • 2020–2027 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • FAO and the MoF
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 47.3 million</p> <ul style="list-style-type: none"> • GCF Grant: US\$ 39.3 million • Co-funding: US\$ 8.04 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant and co-financing
Focus areas	<p>Cross-cutting</p> <ul style="list-style-type: none"> • The project aims to enhance the resilience of ecosystems and vulnerable communities by adopting climate-resilient land-use practices
Name of programme/scheme	<u>Improving climate resilience of vulnerable communities and ecosystems in the Gandaki River Basin, Nepal</u> ²⁹⁹
Year & status	<ul style="list-style-type: none"> • 2020–2026 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • IUCN and the MoF
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 32.7 million</p> <ul style="list-style-type: none"> • GCF Grant: US\$ 27.4 million • Co-funding: US\$ 5.31 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant and co-financing
Focus areas	<p>Cross-cutting</p> <ul style="list-style-type: none"> • The project adopts an ecosystem-centred and community-based approach to address key barriers identified in reducing climate vulnerability. It will also provide technical assistance to increase the capacity of communities to maintain and support climate-resilient ecosystems.

Name of programme/scheme	Mitigating GHG emissions through modern, efficient and climate-friendly clean cooking solutions (CCS) ³⁰⁰
Year & status	<ul style="list-style-type: none"> • 2021–2027 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • Alternative Energy Promotion Centre (AEPIC); Nepal Electricity Authority (NEA)
Budget outlays (US\$ millions)	Total project cost: US\$ 49.2 million <ul style="list-style-type: none"> • GCF Grant: US\$ 21.1 million • Co-funding: US\$ 28.02 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant and co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> • The project will promote the adoption of CCS in Nepal's Terai region through a range of innovative concepts that target both households and local authorities, including bulk tendering via reverse auctioning for cost effectiveness; output-based financing for de-risking of investments; and institutional capacity-building of 150 local governments in the renewable energy sector.
Fund: Climate Investment Fund: Pilot Program for Climate Resilience (PPCR)	
Name of programme/scheme	Building climate resilience of watersheds in mountain eco-regions ³⁰¹
Year & status	<ul style="list-style-type: none"> • 2013–2020 • Closed
Implementing partners/donor	<ul style="list-style-type: none"> • ADB, MoFSC, Department of Soil Conservation and Watershed Management (DSCWMC) and other ministries and agencies
Budget outlays (US\$ millions)	Total project cost: US\$ 28.17 billion <ul style="list-style-type: none"> • PPCR Fund: US\$ 23.54 million as grant • Co-financing: US\$ 4.63 million from Nordic Development Fund
Disbursement mechanism	<ul style="list-style-type: none"> • Grant; co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project provided access to more reliable water resources for domestic purposes and irrigation for communities living in the watersheds of Nepal river systems which were significantly vulnerable to climate change. Access and reliability to water resources was improved through a participatory program of integrated watershed management and included interventions in upland areas to increase surface water storage and groundwater recharge.
Name of programme/scheme	Building resilience to climate-related hazards ³⁰²
Year & status	<ul style="list-style-type: none"> • 2013–2020 • Closed
Implementing partners/donor	<ul style="list-style-type: none"> • The World Bank, Ministry of Environment, Science and Technology (MoEST); Department of Hydrology and Meteorology; Ministry of Agriculture Development
Budget outlays (US\$ millions)	Total project cost: US\$ 31 million <ul style="list-style-type: none"> • PPCR Fund: US\$ 16 million as grant and US\$ 15 million as loan

Disbursement mechanism	<ul style="list-style-type: none"> Grant and loans
Focus areas	<p>Resilience</p> <ul style="list-style-type: none"> The project increased the resilience to climate-related hazards by improving the early-warning system for vulnerable communities countrywide; developed agricultural information management system services to help farmers mitigate climate-related production risks. The project helped to improve decision-making and planning and contributed to building climate resilience for communities at risk.
Name of programme/scheme	<u>Mainstreaming climate change risk management in development</u>
Year & status	<ul style="list-style-type: none"> 2012–2017 Closed
Implementing partners/donor	<ul style="list-style-type: none"> ADB, Ministry of Agricultural Development, MoSTE
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 6.43 million</p> <ul style="list-style-type: none"> PPCR Grant: US\$ 5.15 million Co-financing: US\$ 1.28 million from the Nordic Development Fund)
Disbursement mechanism	<ul style="list-style-type: none"> Grant and co-financing
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> The project developed recommendations for policy and regulatory, institutional, technical, and capacity-building climate change reforms for six sectors (strategic road networks, local and rural roads, irrigation, urban planning, water induced disaster prevention, and water supply and sanitation).
Fund: Climate Investment Fund: Scaling Up Renewable Energy Programme (SREP)	
Name of programme/scheme	<u>Nepal private sector-led mini-grid energy access project</u>
Year & status	<ul style="list-style-type: none"> 2018–2023 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> IBRD, The World Bank, Alternative Energy Promotion Centre (AEPC), Ministry of Finance
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 7.61 million</p> <ul style="list-style-type: none"> SREP Fund: US\$ 5.61 million as grant and US\$ 2 million as loan
Disbursement mechanism	<ul style="list-style-type: none"> Grant and loan
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> The project aims to increase electricity from renewable energy mini-grids in selected areas by mobilising private energy service companies.
Name of programme/scheme	<u>South Asia sub-regional economic cooperation power system expansion project: Rural electrification through renewable energy</u>
Year & status	<ul style="list-style-type: none"> 2014–2022 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> ADB; Ministry of Finance, MoSTE, Nepal Electricity Authority (NEA), Alternative Energy Promotion Center (AEPC)

Budget outlays (US\$ millions)	Total project cost: US\$ 440 million <ul style="list-style-type: none"> SREP Fund: US\$ 31.20 million as grant Co-financing: US\$ 408.8 million, out of which, US\$ 180 million as loan from ADB; US\$ 120 million as loan from European Investment Bank; US\$ 60 million as grant from the Government of Norway; US\$ 60.34 million from the GoN and others.
Disbursement mechanism	<ul style="list-style-type: none"> Grant and co-financing
Focus areas	Mitigation <ul style="list-style-type: none"> The project assists Nepal's energy sector development by facilitating near-term expansion of domestic power transmission capacity, medium and long-term power exchange with India, augmentation and expansion of the distribution networks, and mini-grid based renewable energy access in rural areas

Fund: Climate Investment Fund: Forest Investment Programme (FIP)

Name of programme/scheme	<u>Nepal FIP Investment Plan: Investing in Forests for Prosperity at a Time of Transformation</u> ³⁰³
Year & status	<ul style="list-style-type: none"> 2017– ongoing
Implementing partners/donor	<ul style="list-style-type: none"> World Bank; MoFSC
Budget outlays (US\$ millions)	Total project cost: US\$ 24 million <ul style="list-style-type: none"> FIP: US\$ 6.1 million as grant and US\$ 17.9 million as loan
Disbursement mechanism	<ul style="list-style-type: none"> Grant and loan
Focus areas	Cross-cutting <ul style="list-style-type: none"> The project aims to improve sustainable forest management; increase benefits from forests and contribute to net Greenhouse Gas (GHG) emissions reductions in selected municipalities in Nepal.

Fund: Least Developed Countries Fund (LDCF)

Name of programme/scheme	<u>Catalysing ecosystem restoration for resilient natural capital and rural livelihoods in degraded forests and rangelands of Nepal</u> ³⁰⁴
Year & status	<ul style="list-style-type: none"> 2018–2022 Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> UNEP MoFE; MoFSC; Ministry of Agriculture and Cooperatives (MoAC).
Budget outlays (US\$ millions)	Total project cost: US\$ 16.38 million <ul style="list-style-type: none"> LDCF Grant: US\$ 5.25 million Co-financing: US\$ 11.03 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> The project seeks to increase the capacity of national and local government institutions in Nepal to adapt to climate change by implementing EbA in degraded forests and rangelands in mid-hill and high mountain areas.

Name of programme/scheme	<u>EbA for adaptation for climate-resilient development in the Kathmandu Valley</u>
Year & status	<ul style="list-style-type: none"> • 2017–2023 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • UNEP • Kathmandu Valley Development Authority (KVDA)
Budget outlays (US\$ millions)	Total project cost: US\$ 38.85 million <ul style="list-style-type: none"> • LDCF Grant: US\$ 6.24 million • Co-financing: US\$ 32.46 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project intends to increase the capacity of communities living in the Kathmandu Valley to adapt to the negative effects of climate change using EbA.
Name of programme/scheme	<u>Developing climate-resilient livelihoods in the vulnerable watershed in Nepal</u>
Year & status	<ul style="list-style-type: none"> • 2017–2024 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • UNDP; Department of Soil Conservation and Watershed Management (DSCWM), MoFSC
Budget outlays (US\$ millions)	Total project cost: US\$ 42.94 million <ul style="list-style-type: none"> • LDCF Grant: US\$ 7 million • Co-financing 35.79 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant and co-financing
Focus areas	Adaptation <ul style="list-style-type: none"> • The project intends to develop climate-resilient community livelihoods through integrated watershed management practices.
Fund: United States Agency for International Development (USAID)	
Name of programme/scheme	<u>Hariyo Ban Phase II</u>
Year & status	<ul style="list-style-type: none"> • 2016–2021 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • World Wildlife Fund (WWF), Cooperative for Assistance and Relief Everywhere (CARE), Federation of Community Forestry Users Nepal (FECOFUN), National Trust for Nature Conservation (NTNC)
Budget outlays (US\$ millions)	Total project cost: US\$ 18 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant
Focus areas	Cross-cutting <ul style="list-style-type: none"> • The program aims to increase ecological and community resilience in the GoN-identified biodiverse landscapes – Chitwan-Annapurna Landscape (CHAL) and the Terai Arc Landscape (TAL) – thereby reducing its climate change vulnerability.

Name of programme/scheme	<u>Initiative for Climate Change Adaptation (ICCA)</u>
Year & status	<ul style="list-style-type: none"> • 2012–2017 • Closed
Implementing partners/donor	<ul style="list-style-type: none"> • International Development Enterprise (IDE), Rupantaran and Resource Identification and Management Society Nepal (RIMS-Nepal)
Budget outlays (US\$ millions)	Total project cost: US\$ 2 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> • The project aimed to strengthen the Government of Nepal's (GoN) capacity to develop and implement policies on climate change adaptation. It also helped to diversify and improve the livelihoods and resilience of poor and vulnerable communities through sustainable income generation and enterprise development.
Fund: European Union (EU)	
Name of programme/scheme	<u>Enhanced Action of Inclusive CSOs for Participation in Climate-Resilient Economic Growth (UTHAN)</u>
Year & status	<ul style="list-style-type: none"> • 2020–2022 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • Local Initiative for Biodiversity, Research and Development (LI-BIRD); Dan Church Aid, Nepal National Social Welfare Association (NNSWA), Social Service Center (SOSEC) Nepal
Budget outlays (US\$ millions)	Total project cost: US\$ 4.18 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> • The project aims at promoting inclusive, sustainable and climate-resilient economic growth through meaningful CSOs participation and accountable local governance in Karnali and Sudurpashchim Pradesh (Provinces) of Nepal.
Fund: Norwegian Agency for Development Cooperation (NORAD)	
Name of programme/scheme	<u>Enhancing livelihoods and resilience of marginal and resource poor people of Western Terai and Hills of Nepal (LREP)</u>³⁰⁵
Year & status	<ul style="list-style-type: none"> • 2017–2025 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • Local Initiative for Biodiversity, Research and Development (LI-BIRD); Self Help Initiatives Promotion Center (SHIP) Nepal
Budget outlays (US\$ millions)	<ul style="list-style-type: none"> • N/A
Disbursement mechanism	<ul style="list-style-type: none"> • Grant

Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> The overall goal of the project is to improve food and nutrition security, income and resilience of small and marginal farm families in western terai and hills of Nepal, by improving production and choice of food leading to food and nutrition security, enhancing income and capacity of families to invest in profitable business and buying foods, increasing community capacity to adapt to climate change, and reducing risks of disaster by improving safety and security of the served families and communities.
Fund: GEF Trust Fund and United Nations Development Programme (UNDP)	
Name of programme/scheme	Renewable Energy for Rural Livelihood (RERL) ³⁰⁶
Year & status	<ul style="list-style-type: none"> 2014–2019 Closed
Implementing partners/donor	<ul style="list-style-type: none"> Alternative Energy Promotion Centre (AEPC) of the Ministry of Energy, Water Resources and Irrigation (MoEWRI)
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 59.80 million</p> <ul style="list-style-type: none"> UNDP: US\$ 2 million GEF: US\$ 3 million Co-funding from the GoN: US\$ 30.31 million and others by the private sector, local governments
Disbursement mechanism	<ul style="list-style-type: none"> Grant and co-financing
Focus areas	<p>Mitigation</p> <ul style="list-style-type: none"> The project supported AEPC for scaling up of interventions to promote less-disseminated larger renewable energy systems such as mini hydro, large micro hydro and large solar PV systems.
Fund: DFID, EU, Government of Cyprus and UNDP	
Name of programme/scheme	Nepal Climate Change Support Programme (NCCSP): Phase I ³⁰⁷
Year & status	<ul style="list-style-type: none"> 2013–2019 Closed
Implementing partners/donor	<ul style="list-style-type: none"> Ministry of Forest and Environment Ministry of Federal Affairs and General Administration (MoFAGA)
Budget outlays (US\$ millions)	Total project cost: US\$ 2.67 million
Disbursement mechanism	<ul style="list-style-type: none"> Grant
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> The programme implemented climate-resilient development projects implemented in each of the 14 local governments and improved the resilience of existing infrastructures through provision of maintenance or rehabilitation. It enhanced the capacity of local bodies on climate-resilient development planning, implementation process, fiduciary risk management and social accountability.

Fund: International Fund for Agricultural Development (IFAD)	
Name of programme/scheme	Agriculture Sector Development Programme (ASDP) ³⁰⁸
Year & status	<ul style="list-style-type: none"> • 2017–2024 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • Ministry of Agricultural Development; Swiss Agency for Development and Cooperation (SDC)
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 65.55 million</p> <ul style="list-style-type: none"> • IFAD funds: US\$ 40 million • Co-funding by the GoN: US\$ 11.48 million; Local private sector US\$ 3.49 million; beneficiaries US\$ 6.68 million and other domestic investors US\$ 3.44 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant and co-financing
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> • The project promotes a market-driven approach to increase incomes and improve livelihoods of the community. It aims to facilitate poor farmers' and small producers' access to economic opportunities. It will also improve community infrastructure and services in hill and mountain areas and reduce gender, ethnic and caste-related disparities through greater inclusion of disadvantaged groups in development.
Name of programme/scheme	Adaptation for Smallholders in Hilly Areas (ASHA) ³⁰⁹
Year & status	<ul style="list-style-type: none"> • 2015–2021 • Ongoing
Implementing partners/donor	<ul style="list-style-type: none"> • MoFE
Budget outlays (US\$ millions)	<p>Total project cost: US\$ 37.62 million</p> <ul style="list-style-type: none"> • IFAD Funds: US\$ 25 million • Co-funding by the GoN US\$ 6.64 million and beneficiaries US\$ 5.98 million
Disbursement mechanism	<ul style="list-style-type: none"> • Grant and co-financing
Focus areas	<p>Adaptation</p> <ul style="list-style-type: none"> • The project supports vulnerable smallholders to improve their climate resilience through grants disbursement to communities and households, as well as through climate-centric knowledge dissemination and capacity development.

DOMESTIC CLIMATE FINANCE SOURCES

The GoN endorsed the Climate Change Financing Framework (CCFF) in 2017 and is developing a roadmap to integrate climate actions into the country's budgetary systems and development plans. The aim is to improve accountability and reporting on expenditure as well as enhance climate investment effectiveness.

Even though the national budget 2021–2022 of Nepal focused on controlling the Covid-19 pandemic and economic recovery, the national government has allocated funds for implementing GHG emissions reduction programmes and has set priorities related to climate change in the areas

of water supply, electric vehicles, agriculture, forest and environment, energy, irrigation and river control, housing, building and urban infrastructure, transport, post-earthquake reconstruction and flooding, and local infrastructure.

Out of the total budget of NPR 164,757 crore (US\$ 13.17 billion), only 5.7% (NPR 9,402 crore, approximately US\$ 0.75 billion) is allocated as highly climate-relevant and only about 27.7% (NPR 45,567 crore (approximately US\$ 3.64 billion) as climate-relevant. Therefore, it is estimated that almost 33.37% of Nepal’s budget (around NPR 54,969 crore (US\$ 4.39 billion)) is allocated to climate-relevant activities, as indicated in the Figure 21.³¹⁰

FIGURE 21: Allocation of climate-relevant budget in Nepal in 2021–22



The national budget allocated NPR 10,951 crore (US\$ 0.87 billion) to local governments; out of which almost 3% of the funds are allocated as ‘highly-relevant’, indicating that the projects and programmes will spend more than 60% of the total budget allocation on climate-related activities. The rest of the funds are allocated as ‘relevant’ and indirectly address climate change. This indicates that only 20% of the climate budget allocation is directed at the local level, whereas the climate change policy mandates that at least 80% of climate budget allocation should be directed here. This gap needs to be overcome to ensure the most vulnerable local population groups are positively impacted. Figure 22 below presents the climate-relevant budget allocation at the local level for the year 2021–2022.

FIGURE 22: Climate-relevant budget allocation at the local level (2021–22)

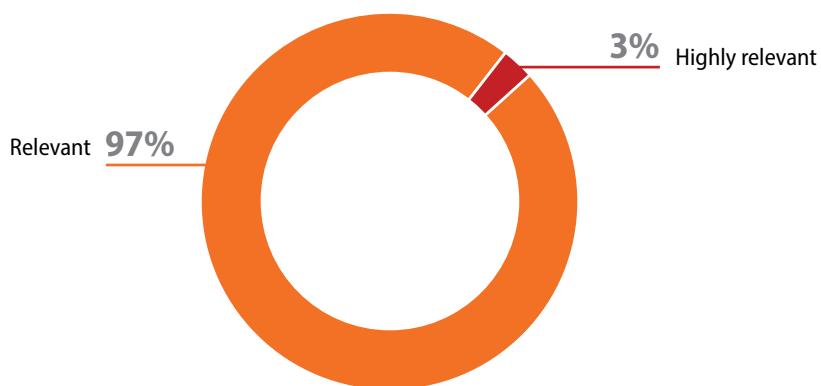


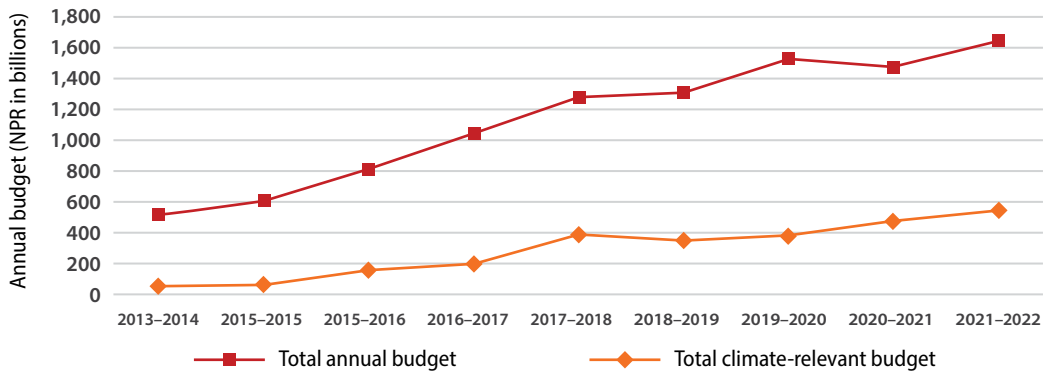
Table 19 below highlights the allocation of climate budget across the levels of governance for the year 2021–2022.

TABLE 19: Allocation of climate-relevant budget across the levels of governance in Nepal (2021–2022)

Climate-relevant budget across the levels of governance in Nepal (in NPR crore)			
	Highly relevant	Relevant	Neutral
National	9,086.72	28,148.58	109,787.81
Provincial	0	678,294	0
Local	315.61	10,636.01	0
Total	9,402.33	45,567.53	109,787.81

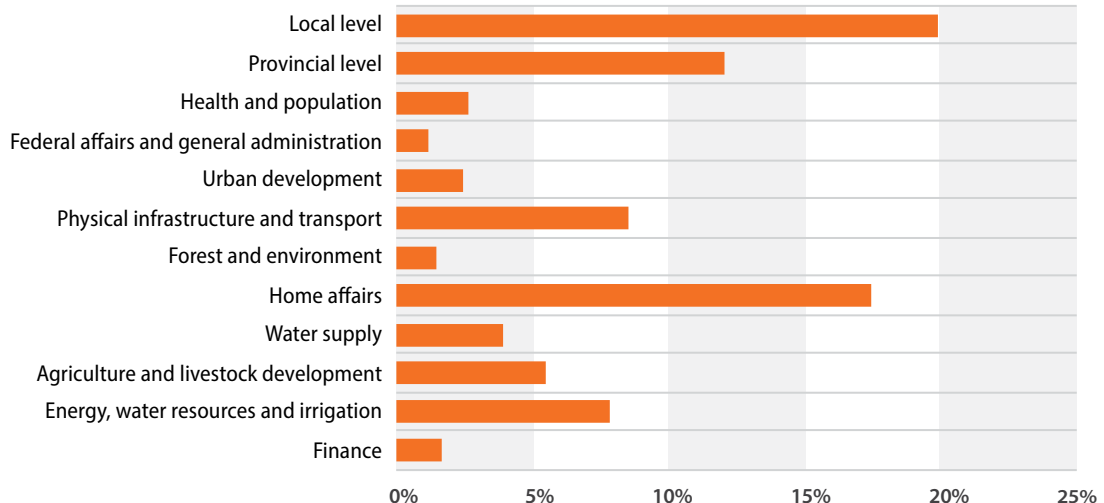
Figure 23 below presents the overall trend of climate-relevant budget allocated in the last seven years (2013–2021).

FIGURE 23: Allocation of climate-relevant budget from 2013–2021 in Nepal³¹¹



Almost 32% of the climate change budget is allocated to local and provincial government. Among the ministries, the Ministry of Home Affairs, the Ministry of Physical Infrastructure and Transportation, and the Ministry of Energy, Water Resources and Irrigation (MoEWRI) have the largest share of the climate change budget, as indicated in the Figure 24 below.

FIGURE 24: Climate change budget allocation (%) of key ministries in Nepal for 2021–2022³¹²



The NAP³¹³ of the GoN launched in October 2021, identifies 64 priority programmes to not only support the country in addressing the climate vulnerabilities and risks in the short- (2025), medium- (2030), and long-term (2050), but also to contribute to the overall national economic and development agenda.

It is estimated that the total budget for implementation of priority programmes until 2025 will be around US\$ 47.4 billion. The GoN will contribute US\$ 1.5 billion, while external support of US\$ 45.9 billion is required to implement the NAP until 2050. Also, it is estimated that the country will require approximately US\$ 2.1 billion per year for the delivery of adaptation programmes under the medium-term.

Table 20 below indicates the priority programmes identified under the NAP, timeframes and budget envisaged.

TABLE 20: Priority programmes identified under the NAP (2021–2050) and envisaged budget³¹⁴

Sector: Agriculture and food security	
Total programmes: 9	Total budget: US\$ 11.2 billion
Priority adaptation programmes	Budget (in billion US\$)
Programme on sustainable agriculture, food and nutrition security, and climate-resilient health and hygiene	2
Commercial animal husbandry for climate-resilient rural livelihoods (753 model demonstration projects)	2
Development of insurance and community- and peasant-friendly climate-induced risk sharing model and expansion in both agriculture and livestock	0.5
Genetic resource conservation programme for climate-resilient agriculture in Nepal	0.5
Enhancing agriculture productivity through building climate-resilient water management systems	1.5
Climate smart transformative collective agriculture promotion in the hills and mountains	2
Integrated soil and nutrient management for resilient agriculture	1.2
Strengthening climate services and agriculture information system	1
National capacity-building of agriculture and livestock institutions and professionals on climate change adaptation research, planning and implementation	0.5
Sector: Forest, biodiversity and watershed conservation	
Total programmes: 11	Total budget: US\$ 8.7 billion
Priority adaptation programmes	Budget (in billion US\$)
Forests fire preparedness, prevention and control (in multi-stakeholder partnerships)	1
Karnali watershed management programme for reducing climate risks and vulnerabilities and promoting irrigation facilities in the downstream	0.5
Integrated sub-watershed management for climate resilience and increased water availability and agricultural productivity	1
Improvement of forest health and restoration of rare, endangered, endemic, and threatened species for building resilient forest	1

Restoration of habitats and strengthening ecological connectivity for wildlife and biodiversity	0.2
Promotion of multiple uses of protected areas and natural heritage, and generation of climate adaptation services by maximising the utility of protected areas	0.5
Control of climate-induced disasters and extension of the network of protected areas for resilient ecosystems	1
Development and strengthening of ponds/lakes in community forests for resilient biodiversity (One Community Forest - One Wetland)	0.5
Wetlands development, conservation and management at the foothills of Chure	1
Integrated green economy and green job promotion programme through sustainable forest management and circular economy in the hills and mountains	1
Upland conservation and climate-resilient livelihoods programme in high mountains	1
Sector: Water resources and energy	
Total programmes: 8	Total budget: US\$ 5.35 billion
Priority adaptation programmes	Budget (in billion US\$)
National capacity-building on policy reform, bridging climate information gaps, promoting climate-informed decision making, and developing climate-smart design and guidelines for water resources infrastructure	0.05
Promoting energy mix system for industrial sustainability and climate-resilient livelihoods	2
Establishing Glacial Lake Outburst Floods (GLOF) risk reduction and Early Warning Systems (EWS) in Glaciated River Basins (Gandaki, Koshi, Karnali)	1
Promoting water pumping technology in water scarce areas (to address water stress for food security in hilly areas)	1
Promoting climate-resilient renewable energy in rural vulnerable settlements and institutions	0.5
Constructing climate-resilient check dams on the rivers of Nepal to sustain life	0.2
Programme on sustainability of run-of-river systems and backing by reservoir systems at feasible locations together with climate change awareness raising and capacity-building of hydropower developers and stakeholders	0.1
Efficient energy and clean technology development and retrofitting to build resilient systems and infrastructure	0.5
Sector: Rural and urban settlements	
Total programmes: 3	Total budget: US\$ 2.85 billion
Priority adaptation programmes	Budget (in billion US\$)
Promoting the circular economy for sustainable urban development (piloting, integration, capacity-building and implementation)	0.35
Developing integrated settlement and urbanisation models for climate risk reduction and supplying climate adaptation services through nature-based solutions and policy reform	2
Updating and promoting climate-resilient building designs, codes, practices and construction technologies and national capacity-building to further implementation	0.5

Sector: Industry, transport and physical infrastructure	
Total programmes: 5	
Total budget: US\$ 3.05 billion	
Priority adaptation programmes	Budget (in billion US\$)
Developing and strengthening capacity, awareness, resources (databases), institutions, technologies and policies for building climate-resilient and environment-friendly industries, transport systems and physical infrastructure	0.2
Diversifying the energy supply for industrial districts	1
Developing and promoting clean energy-based transportation systems through national capacity-building and policy reform	0.5
Developing climate-resilient infrastructure systems for climate risks, hazards and pandemics	0.35
Upgrading, maintaining, and relocating vulnerable industries, physical infrastructure, and transport sector to increase resilience to climate risks	1
Sector: Tourism, natural and cultural heritage	
Total programmes: 8	
Total budget: US\$ 1.13 billion	
Priority adaptation programmes	Budget (in billion US\$)
Climate-resilient tourism for ecological sustainability and economic prosperity	0.05
Climate risk and tourism information system for resilient, safe and sustainable tourism	0.02
Establishment and operation of emergency relief and rescue services in adventure tourism	0.50
Regulatory framework development, awareness raising and capacity-building on climate proofing, protection, retrofitting and use of natural and cultural heritage	0.20
Develop climate-resilient infrastructure and explore and enhance knowledge and capacities for resilient mountain tourism	0.06
Community-based adaptation through eco- and cultural tourism	0.10
Promotion of 'One Local Level One Tourism Destination' and planning for functional climate-resilient tourism destinations (piloting, demonstration and replication. One project in each province.	0.10
Diversifying and promoting alternative destinations and products for climate-resilient tourism businesses	0.10
Sector: Health, drinking water and sanitation	
Total programmes: 7	
Total budget: US\$ 4.75 billion	
Priority adaptation programmes	Budget (in billion US\$)
Capacity-building of health and hygiene service providers (institution and personnel) on climate-resilient health and hygiene service planning and implementation	0.05
Climate change resilience development through capacity-building, innovation, improvement and construction of WASH services and facilities	2
Strengthening of climate sensitive disease surveillance system with emergency preparedness and response	0.5

Health promoting cities: Health, Environment and Life (HEAL)	0.5
Promotion and conservation of water sources along with watershed management for sustainable water supply service	1
Policy reform, strategy development and national level awareness raising on climate-resilient health and WASH programme, planning, operationalisation and sustainability	0.2
Research, innovation and development of climate-resilient measures/technologies for water supply, sanitation and health systems	0.5

Sector: Disaster risk reduction and management

Total programmes: 6

Total budget: US\$ 8.05 billion

Priority adaptation programmes	Budget (in billion US\$)
Building climate resilience by developing and harmonising disaster risk reduction and management and climate change adaptation at federal to local levels through policy reforms (integration of disaster reduction and recovery in local adaptation plans)	1
Strengthening adaptive social protection/ shock responsive practices initiatives for transferring climate risk	2
Maintenance, upgradation and strengthening early warning systems and multi-hazard monitoring to facilitate climate adaptive function of key economic and service sectors	1.5
Development of federal and provincial strategy and action plans on control of climate induced (primarily water borne) disasters in the forest areas of Nepal and phase-wise implementation under the leadership of forest authorities	2.5
Developing a regulatory framework for domestic and industrial fire control and mitigation, as well as an implementation strategy and building national capacities with supply of technology and equipment	1
Promoting a culture of safety and building climate resilience through climate Risk Sensitive Land Use Plan (RSLUP) guideline and standards	0.05

Sector: Gender equality and social inclusion, livelihoods and governance

Total programmes: 4

Total budget: US\$ 0.7 billion

Priority adaptation programmes	Budget (in billion US\$)
Strategy and action plan on restrengthening, establishing and functionalising climate change aware gender focal desks in all state and non-state institutions (including private organisations)	0.10
Building human capital for an inclusive climate and disaster-resilient society through promoting safe and equitable access to disaster reduction response services	0.50
Integrating GESI and climate foresight in social protection and development interventions (piloting and replication)	0.05
Enhancing resilience to climate change through GESI responsive livelihood programmes	0.05

PRIVATE FINANCE SOURCES AND OPPORTUNITIES

Nepal has committed to achieving a carbon-neutral economy by 2050 and aspires to mobilise US\$ 28.4 billion to achieve mitigative targets under the NDC. However, Nepal has realised that its current level of public investment is not sufficient to support its growth aspiration to transition to a middle-income country by 2030, and there is a substantial case for engaging the private sector in helping realise the potential for sustainable economic growth and resilience, especially when they are in line with national goals and objectives, including global commitments.

Presently, the role of private sector in promoting climate actions in the country is scattered and still in its infancy.

The *Guidelines on Environmental and Social Risk Management* (2018) issued by the Nepal Rashtira Bank (NRB) for banks and financial institutions is the guiding force behind Nepal's regulatory-driven green finance. NRB has directed commercial banks to allocate a set proportion of total credit to priority sectors such as agriculture, renewable energy, tourism, etc. As of 2020, commercial banks have been instructed to extend at least 15% of their total credit to the agriculture sector by 2023; and 10% to the energy sector and 15% to SMEs by 2024.

The Nepal Investment Bank and NMB Bank have introduced green finance instruments, such as the Green Double Fixed Deposit and Green Fixed Deposits, to be invested in sustainable-, climate- and environment-friendly projects through Eco-Loans. In addition, NMB bank is collaborating with micro-finance institutions to provide access to energy in rural areas (especially off-grid locations). The bank has also been working with several international agencies and development partners to promote and develop the renewable energy sector in the country. The latest example includes a US\$ 25 million green loan from the IFC to boost financing for green projects and SMEs.³¹⁵

With the objective to increase the engagement of the private sector as a key development partner promoting climate actions in the country, the GoN has undertaken some initiatives, especially in the segments of SMEs, agriculture, and renewable energy. Some of the examples from the country are outlined below:

- **Alternative Energy Promotion Centre (AEPCC)**,³¹⁶ the apex governmental body responsible for promotion of renewable energy in Nepal, established a Central Renewable Energy Fund (CREF) in 2015 to gradually increase the share of credit in project financing and encourage the private sector to develop renewable energy projects in off-grid areas, thereby also reducing subsidy-driven practices to promote renewable energy. CREF introduced several financial instruments, such as soft loans, partial credit guarantee, vendor financing and a vendor challenge fund with the support of UNDP and UNCDF. A credit guarantee mechanism, in particular, has been successful in attracting financing from commercial banks for community-owned and managed off-grid mini hydropower projects. Vendor financing, however, was found to be more attractive to farmers in the Terai seeking to install solar pumps for small irrigation projects. Lately, the AEPCC has teamed up with the World Bank and the FCDO to scale up private financing both in scope and size.
- **Federation of Nepalese Chambers of Commerce and Industry (FNCCI)**,³¹⁷ the nationally recognised umbrella institution of businesses in Nepal, represents the interests of the private sector and is involved in the promotion of socio-economic development in Nepal through private sector-led economic growth. FNCCI engages with several international and local donors to promote climate actions through private sector engagement. Some examples include the Agro Enterprise Centre (AEC), an agriculture wing of FNCCI, which promotes agri-businesses and trade in Nepal through integrated solutions to MSMEs engaged in green business practices; an Energy Efficiency Centre to implement projects related to energy and the environment; and the implementation of the Nepal Energy Efficiency Programme (NEEP) with GIZ support. FNCCI

was also engaged in the Sustainable and Efficient Industrial Development (SEID) initiative under the SWITCH-Asia Project of the EU, which seeks to shift consumption and production activities in the country to a more sustainable manner. The project supported the implementation of resource-efficient and responsible production interventions in the tourism and agro-based industries, sectors that significantly contribute to the economic development of the country but also contribute to higher carbon emissions and resource exploitation.

Some other developments to engage the private sector more broadly in climate change activities also include:

- **Dolma Impact Fund (DIF):**³¹⁸ DIF is the first international private equity and impact fund dedicated to providing capital and expertise to growth companies in Nepal. As an impact fund, it invested in companies that contribute to Nepal's SDGs across technology, media, telecom, healthcare and renewable energy sectors and through quality, gender-balanced employment. Investors in DIF I included European development finance institutions plus private investors, bringing in total commitments of US\$ 36.6 million. DIF II has secured US\$ 50.5 million. Their portfolio includes four renewable energy projects comprising of two in the hydropower sector and two on-grid solar projects.
- **Business Oxygen Private Limited (BO2):**³¹⁹ BO2 is Nepal's first private equity fund with a climate focus. It is a part of the IFC's Global SME Ventures initiative, with investments from the IFC of the World Bank Group, CIF's PPCR and the FCDO. It is managed by WLC Ventures Pvt. Ltd. The fund has been investing in climate smart businesses that are working proactively towards climate adaptation and mitigation such as solar, CNG and organic fertiliser.
- **Financing renewable energy:** Seven commercial banks in the country³²⁰ are partnering to channel subsidies and credits to renewable energy projects via a Central Renewable Energy Fund (CREF), established by the GoN under the National Rural and Renewable Energy Programme (NRREP).
- **Insurance products:** 17 insurance companies offer insurance to the agriculture and livestock sector. Weather Index Insurance (WII) is a promising adaptation instrument being promoted in Nepal, where an index measures deviations from the normal level of weather parameters like rainfall, temperature, wind speed, crop yield or livestock mortality rates. Losses and pay-outs are determined using measured variables. Participating farmers can purchase insurance at relatively low cost, which can help them recover from floods and other weather-related risks, thereby reducing their exposure. For example, Shikhar Insurance in association with Sakchyam Access to Finance initiative funded by UK Aid launched the WII in Nepal³²¹ in 2016 to protect apple farmers from weather-afflicted damage to crops. The insurance also added hailstorm as an additional rider to address farmers' risks. As of June 2019, more than 3,411 WII and Livestock Insurance policies have been issued to apple farmers, insuring more than 87,800 apple trees worth more than NPR 241 million (US\$ 1.93 million). Also, claims worth NPR 11.1 million (US\$ 0.08 million) have been paid to 1,376 farmers. Shikhar Insurance is in the process of expanding WII products to sugarcane and paddy crops as well. The GoN has helped incentivise the private companies offering agricultural insurance with tax waivers.
- World Wildlife Fund for Nature (WWF) and the Coca-Cola Foundation have partnered to promote the sustainable use of water, enhance livelihoods of local communities, and help conserve the freshwater ecosystem in Nepal.
- Dabur Nepal and the International Centre for Integrated Mountain Development (ICIMOD) have entered into a five-year partnership to promote herbal medicinal and aromatic plants from the Hindu Kush Himalayan region through establishing a herbal garden at the ICIMOD Knowledge Park at Godavari. The garden facilitates research and development and acts as a learning centre with demonstrations, hands-on training, and information sharing.³²²

- MinErgy is a service-oriented company dedicated to working on energy efficiency and environment-friendly and renewable energy technologies at both the household and industrial level to provide improved energy, environment and health conditions. It is also a partner with the Climate and Clean Air Coalition's Brick Initiative, working towards making the industry more energy-efficient, environment-friendly and socially responsible by reducing black carbon and CO₂ emissions along with promoting their related co-benefits on development and health.
- Sunfarmers Nepal is another innovative energy solution provider promoting solar in the country, such as solar-based irrigation technology for agriculture and renewable-powered electricity in health, education and business.

The GoN has been working towards leveraging private sector investment in adaptation and mitigation. As part of this effort, the government has recognised the indispensable role of the private sector in the commercialisation of agriculture in the Agriculture Development Strategy (2015–2035).³²³

The Fifteenth Plan (2019/20–2023/24)³²⁴ of Nepal seeks to achieve a target of 55% of investments from the private sector into a wide array of projects including infrastructure, commercialisation, modernisation and industrialisation of the agricultural sector, tourism and transport, among others. However, there is a need to ensure that a proportion of this investment is directed towards climate-resilient and low-carbon economic development.



Nepalese farmer working in a rice field at sunrise. © Nomad1988 via Shutterstock

4. Tools and platforms for facilitating climate finance at the local level

Climate finance is often inaccessible at the local and subnational levels and, where available, it can be highly complex. Additionally, the demand for investment-ready projects requires expertise and capacity development to create a strong pipeline of transformative local climate projects.

To overcome a range of barriers and fully unlock finance opportunities, it is essential to acknowledge the distinct dynamics that operate at national and subnational levels, and how these interact to facilitate or hamper financing climate-resilient actions at the local level. Rather than simply implementing stand-alone local actions or down-scaling national strategies, a range of effective solutions exist that national governments can employ to enhance access to climate finance via several policy, regulatory and fiscal measures. For instance, providing clear mandates and giving ownership to the city governments to devise innovative financing mechanisms to implement priority low-emission development projects, can be extremely helpful.

While it is important to mobilise financial resources at the national level, the requisite finance must reach the local level where it is needed the most. There are various platforms and tools to assist cities with financial resources to identify and implement climate-resilient development projects. Some of the important platforms and resources available for cities are as follows:

Transformative Actions Programme (TAP)

TAP is a project pipeline and project preparation facility developed by ICLEI and partners. TAP acts as an incubator that supports local and regional governments by catalysing capital flows for low-to-no emission and climate-resilient development. Through TAP, local and regional governments receive support to develop climate project concepts into low-risk, high-feasibility, high-impact, sustainable infrastructure projects. TAP is designed to connect local climate actors, technical experts and financial institutions. TAP is also acknowledged by the Leadership for Urban Climate Investment (LUCI) and the Cities Climate Finance Leadership Alliance (CCFLA) for contributing to close the finance gap and scale up subnational climate finance. As of April 2021, 45 projects have been connected to potential partners, and 27 have successfully accessed financing or Project Preparation Facilities under the TAP.

For more details: <https://tap-potential.org>

Cities Climate Finance Leadership Alliance (CCFLA)

This is a multi-level and multi-stakeholder coalition aimed at closing the investment gap for urban subnational climate projects and infrastructure. The objective is to mobilise finance for city-level climate actions at scale by 2030, mainly through amplifying ambition and engagement for city-level finance and by bridging the demand and supply along the investment chain. The CCFLA aims to facilitate investment through four main thematic Action Groups: project preparation, financial toolbox, enabling frameworks, global architecture.

For more information: <https://www.citiesclimatefinance.org/about/>

Global Climate City Challenge (GCCC)

The GCCC is a joint initiative of the EIB and the Global Covenant of Mayors (GCoM), representing over 9,000 cities from six continents, to provide technical assistance that helps prepare and fast-track financing of urban climate action projects. The GCoM and the EIB collaborate on the GCCC with global and local city networks, including ICLEI Local Governments for Sustainability, the C40 Cities Climate Leadership Group, as well as GIZ. The GCCC is part of a partnership under the umbrella of Global Urbis, an ambitious global initiative announced during the One Planet Summit in Paris in December 2017 that provides cities and local governments around the globe with technical assistance and financing for climate action. The GCCC targets municipal and local authorities or entities, such as utilities and local banks, with an interest in addressing climate change. The basic eligibility criteria require a project/programme investment value of over EUR 30 million or an engagement in a facility including smaller projects in different municipalities totalling EUR 30 million.

For more information: <https://www.eib.org/en/projects/sectors/urban-development/city-call-for-proposal/index.htm>

C40 Cities Finance Facility (CFF)

The CFF supports cities in developing and emerging economies to formulate finance-ready projects addressing climate change by providing technical assistance to prepare bankable investment proposals. It facilitates capacity development of municipal officials to mobilise and access multiple financing instruments and promotes knowledge sharing and partnerships between cities, financiers and policy-makers. The CFF is a collaboration of C40 Cities Climate Leadership Group and GIZ GmbH. It is funded by the German Federal Ministry for Economic Cooperation and Development, the Children's Investment Fund Foundation, the Government of the UK and the USAID.

For more information: <https://www.c40cff.org/about>

Global Covenant of Mayors for Climate and Energy (GCoM)

GCoM is the largest global alliance for city climate leadership, built upon the commitment of over 10,000 cities and local governments across six continents and 139 countries. The GCoM aim to serve cities and local governments by mobilising and supporting climate actions in their communities by working with city or regional networks, national governments, and other partners. It supports ambitious, locally-relevant solutions in sectors where cities can have the greatest impact. It works to provide value to participating cities by mobilising the critical financing and technical assistance cities require to access investment. The Invest4Cities initiative under GCoM focuses on creating better and more equitable access to finance for cities, supporting implementation and financing of cities' bold climate action commitments, enhancing a city's capacity and removing barriers to develop investor-oriented climate action plans and projects, and unlocking large-scale financing instruments to support local implementation of climate actions.

For more information: <https://www.globalcovenantofmayors.org/>

ICLEI CDP Unified Reporting System

Local and regional governments are encouraged to publicly report climate action data through one unified reporting system to strengthen subnational data and contribute to transparency and good governance. The 'Matchmaker' initiative by the CDP provides users with information on climate-resilient infrastructure projects across the world through a specialised project dashboard derived from the unique CDP Cities disclosure platform and partners. It serves as a bridge to connect the projects identified by cities with economic development outreach, eliminating communication and information barriers between cities and potential investors.

For more information: <https://iclei.org/en/cCR.html>

SouthSouth Triangular Cooperation (SSTrC)

SouthSouth Cooperation (SSC) is a broad framework of collaboration among developing countries for sharing knowledge, skills, expertise and resources to meet their development goals, while the Triangular Cooperation promotes collaboration between traditional donor countries and multilateral organisations to facilitate South-South initiatives through the provision of funding, training, management and technological support. Fifteen developing countries referred directly to SSC in their NDCs, while eight mentioned that they consider SSC to be a complement to North-South cooperation for climate actions, in particular regarding technology transfer and innovation and capacity-building. Bangladesh has established a South-South Cooperation Cell (SSCC) within the Economic Relations Divisions (ERD) under the Ministry of Finance to act as the focal point to coordinate initiatives aimed at strengthening and promoting SSC, sharing development experiences, and engaging with the private sector and NGOs. India's contribution of US\$ 150 million to the UN India Development Partnership Fund through the office of SouthSouth Cooperation has been a signifier of India's commitment to southern-owned, demand-driven, transformational, sustainable development in the developing world.

For more information: <https://www.unsouthsouth.org/about/about-sstc/>

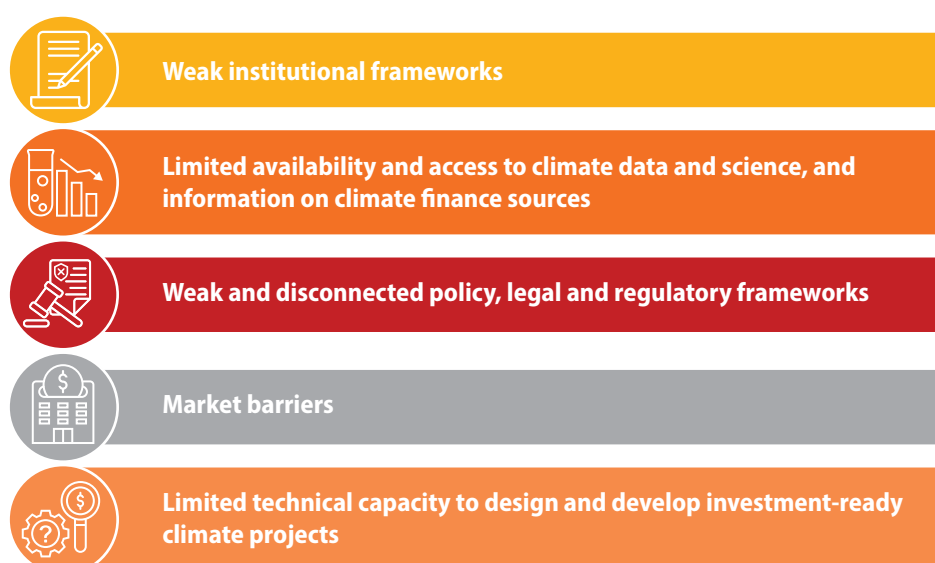


A farmer with her solar irrigation pump in Saptari District of Nepal.© Nabin Baral/IWMI via Flickr

5. Accessing climate finance: Challenges faced by Bangladesh, India and Nepal

As is evident, the climate finance landscape is complex and constantly evolving, providing many funding opportunities, each with different objectives and requirements to access finance. Often, navigating through the array of sources of climate finance can be challenging for developing countries. Most developing countries face a range of barriers and gaps – policy, regulatory, institutional, technical, financial, business and social – while accessing finance for climate action, as indicated in the Figure 25 below.

FIGURE 25: Barriers to access climate finance



Some of the key challenges, as indicated in Figure 25, include:

Limited technical capacity to design and develop investment-ready climate projects

- Understanding and meeting all the requirements of different funding opportunities can be a challenge for developing countries with limited technical capacities.
- The complicated landscape of international climate finance requires well-informed and capacitated governance mechanisms to access and effectively use climate funds. However, the national and subnational ministries and other public agencies often work in siloes and lack collaboration, cross-sectoral coordination and inter-departmental planning. Additionally, the lack of clarity on the roles and responsibilities of the ministries inhibits access to as well as the flow of climate finance to effectively address local vulnerabilities.
- With the NAPs, NDCs and climate action plans in place, the developing countries have identified relevant climate projects; however, preparing investment-ready project proposals that meet the requirements of different funding agencies is still a challenge and inhibits countries' access to climate finance. At the same time, multilateral and bilateral institutions find it difficult to identify suitable fundable projects that meet their requirements, thereby highlighting the technical and informational gaps at both the ends.

Weak institutional frameworks

- Most funds require high standards in fiduciary systems as well as environmental and social safeguards. Lack of institutional preparedness and a poor track record of fiduciary governance are major barriers to countries directly accessing external finance.
- The presence of multiple institutions engaged in a project cycle makes coordination a daunting challenge, along with difficulty in information sharing.
- This is further complicated by a lack of horizontal and vertical coordination. Often, there is no clear demarcation of roles and responsibilities among government bodies across sectors and governance levels, which leads to inadequate communication and consultation, resulting in delays in project implementation.
- Countries also struggle to track climate finance effectively. Considering that there are several donors and financial institutions active in each country, there is a need to establish a coordination mechanism to manage the multiple entities.

Limited availability and access to climate data and science, and information on climate finance sources

- Developing a project to access climate funds requires a thorough understanding of and ability to analyse and interpret climate data and disaster-risk information to demonstrate the relevance of the proposed project in building resilience in the face of climate change. Funds like the GCF require the proposed project to describe the 'climate rationale' by outlining the specific climate change problem underlying the proposed project and how the project helps to address it. Limited climate data and science, particularly at subnational and local levels, inhibits the ability to provide this scientific basis and identify a clear causal link between climate change and the problem the project is trying to address. Hence, it is challenging to meet this requirement of climate funds like the GCF.³²⁵
- Collating and translating climate data so it can be used for project development is a major difficulty observed in all three countries (Bangladesh, India and Nepal).
- There is limited awareness and knowledge of relevant sources of finance at international and national levels since this information is often scattered across various stakeholders.

Weak and disconnected policy, legal and regulatory frameworks

- A lack of coherence among policy, legal and regulatory frameworks hampers the creation of an enabling environment for public and private investment. Most developing countries, under pressure to provide basic services, develop policies encouraging infrastructure creation in vulnerable areas. Such policies may, for example, favour economic growth at the expense of environmental degradation and exploitation of natural resources or promote fossil fuels subsidies. Weak domestic market regulations may also lead to limited opportunities to attract public and private investment. Without a clear set of priorities for climate action and development projects at national, subnational and local levels, there is little integration of climate change into developmental planning. This lack of integration further limits the ability of local governments to use development finance in a way that can also support climate action.
- Ineffective monitoring in terms of budgeting, performance management and tracking of climate finance leads to a lack of transparency and accountability in the existing system. This reduces the standard of fiduciary management, and poor management systems discourage international financing agencies from investing in these countries.

Market barriers

- A lack of attractive financial incentives and regulatory risk-reduction frameworks discourages the private sector from investing in climate change. Currently, the national governments of Bangladesh, India and Nepal are in the nascent stages of bringing private sector investment into the climate action landscape. As such, incentives such as tax benefits for the private sector or the sharing of risks or subsidies for users have not been explored to the extent that is desirable. This hinders private investment in climate action and puts the burden on the public sector. Although municipal bonds, green bonds, crowdsourcing and PPPs are being encouraged, these mechanisms need to be strengthened and formalised to bring in more players.
- Poor understanding of climate risk and lack of accurate and reliable data makes it difficult for businesses and private investors to evaluate the financial implications of these climate risks, make informed decisions and investment accordingly.



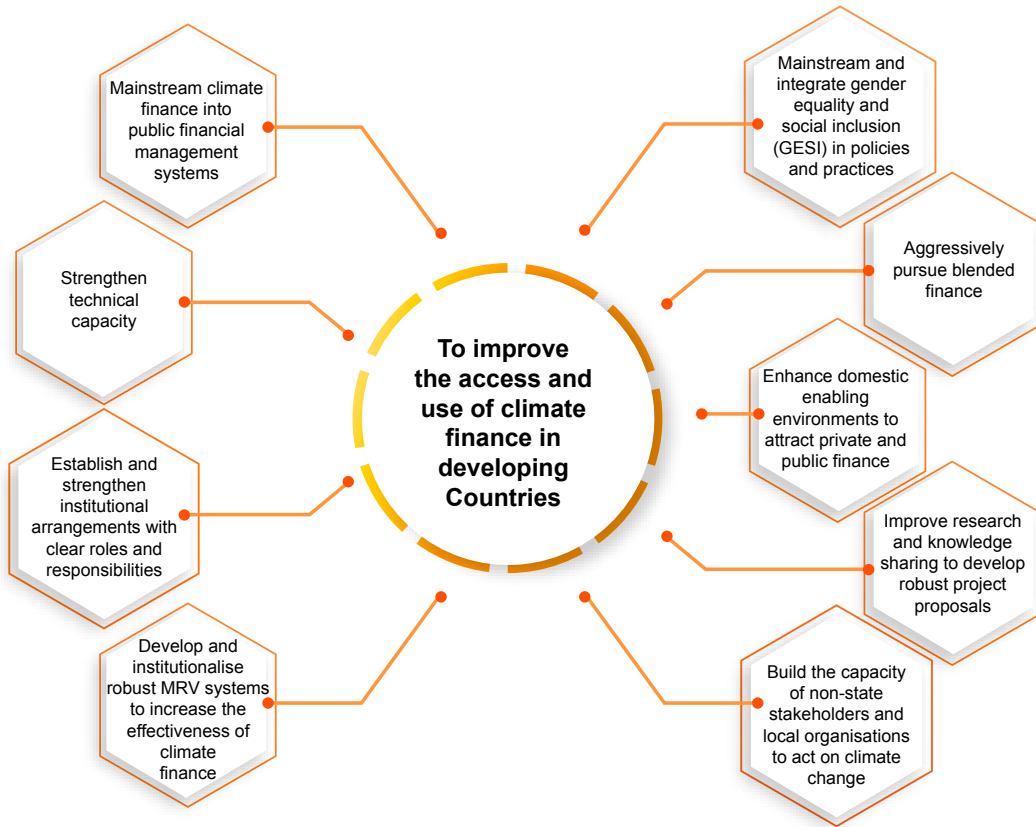
Aerial view of a village near Bhopal, Madhya Pradesh, India. © Paulose NK via Shutterstock

6. Recommendations to improve the access to and use of climate finance in Bangladesh, India and Nepal

In order to improve the access to and use of climate finance in Bangladesh, India and Nepal, action needs to be ramped up at all levels of government, including local, regional and national spheres, to provide an enabling environment for finance to flow at scale.

Here are some recommendations for the three countries (Figure 26):

FIGURE 26: Recommendations to improve the access to and use of climate finance in Bangladesh, India and Nepal



- Mainstream climate finance into public financial management systems:** The countries should adopt the practice of Climate Budget Tagging (CBT) to help mainstream climate change in public financial planning and management. They should also consider conducting a Climate Change Public Expenditures and Institutional Review (CPEIR).³²⁶ Mainstreaming climate finance across a government’s budget will help streamline reporting on spending and make it more regular and transparent. It will also help demonstrate the cross-cutting impact of climate-related programming. For example, the Climate Fiscal Framework of Bangladesh provides a roadmap for integrating climate finance into the country’s public financial management systems. Bangladesh also adopted a CBT system to report on budgetary provisions for climate change within the country. The GoB went a step further by publishing a *Citizen’s climate budget report*,³²⁷ summarising the key messages in an easy-to-understand and visually engaging format, thereby sensitising and generating awareness among the public.

- Strengthen technical capacity:** Most developing countries have insufficient technical capacity and financial expertise to design, implement and monitor climate finance projects and programmes. The limited skills for climate planning and programming also affects climate finance access and deployment, as countries battle to develop the robust long-term frameworks and initiatives for climate action often required by funders. Moreover, if officials are regularly transferred to unrelated ministries, this reduces the number of staff with relevant training, experience and institutional memory on climate change activities, thereby impacting the overall technical capacity of the country. To help address the skills gap, for example, a project preparation facility could be set up to develop a pipeline of ‘bankable’ or investment-ready projects working with public and private sector actors, improve the quality of project proposals for financing specific climate change-related programmes, offer assistance in identifying financing opportunities, and provide support for developing relevant measurement, reporting and verification (MRV) systems. Also, countries should strive to access global readiness funding offered by multilateral development partners to enable them to access international climate finance. For example, GIZ, UNDP and the GCF offer readiness support, which mainly focuses on enhancing the institutional capacity of the focal point and NDA, identifying potential NIEs (and their capacity-building capabilities), and developing a strategic framework or project pipeline for funding.
- Establish and strengthen institutional arrangements with clear roles and responsibilities:** Most international climate funds require countries to demonstrate high standards in fiduciary systems and environmental and social safeguards. Good management practices, transparency and accountability are essential to gain direct access to international climate finance. Therefore, it is imperative for developing countries to demonstrate that they have well-established institutions that will use funds and monitor implementation effectively. For example, the AF or the GCF typically assesses the institutional capacity of the country during the accreditation process. Therefore, developing countries should enhance institutional arrangements and coordination for managing and monitoring climate finance. Establishing clear and defined roles and responsibilities for different actors can help determine the flow of climate finance and guarantee that it is used in line with its intended purpose. Ensuring that at least one or more institutions become accredited as ‘implementing agencies’ at the subnational and local level to the relevant fund will facilitate the overall process.
- Develop and institutionalise robust MRV systems to increase the effectiveness of climate finance:** There is a need for a paradigm shift in developing and institutionalising MRV systems at the national level to increase the effectiveness of climate finance. This will enhance the understanding of the financial flows from different sources, enable tracking of estimated climate finance in terms of pledged amount vis-à-vis the amount received and utilised, and this, in turn, will also help identify investment gaps. A robust MRV will help in processing climate finance information periodically and with transparency, thereby facilitating access to high quality, reliable, and comparable data. It will also support the assessment of compliance with international climate change commitments as well as evaluate the effectiveness of climate changes activities against international metrics/measures. This will increase the trust between the donors and recipient countries, which could also translate into increased financial flows.
- Mainstream and integrate gender equality and social inclusion (GESI) in policies and practices:** There is increasing evidence to indicate multilateral and bilateral funds give weight to and consider more favourably gender-responsive and inclusive projects. More importantly, there is also evidence that projects that effectively integrate gender equality and social inclusion concepts and practices have more sustained impact and transformative outcomes. This involves effectively mainstreaming GESI across the project lifecycle. This starts with including a robust set of social, gender and environmental safeguards and guidelines during the design phase as well as identifying and budgeting for any capacity-building and other support needed for the whole project team to guarantee gender equality and women’s full participation throughout the

project. It is imperative that local gender experts lead gender work, and local women's groups and national and local gender institutions are involved, since they are most knowledgeable about the gender norms and dynamics at work within communities targeted by a project.³²⁸ It is also key that robust gender-related baseline data is collected at the start of a project, beyond participation and beneficiary data, to properly assess impacts and any unintended negative consequences from the project. This covers data on: 1) access to resources, 2) time and labour allocation, and 3) adherence to laws and policies that create greater gender equality.³²⁹ For more guidance, the GCF adopts a comprehensive gender-responsive approach through its [Gender Policy and Action Plan](#) as a key measure while implementing projects.³³⁰

- Aggressively pursue blended finance:** No single source of funding will be sufficient to cover the anticipated costs of climate actions in the short- and medium-term. The three countries should explore using a range of innovative financial and economic instruments to leverage climate finance to reduce the resource gap and maximise the best use of resources. The countries should aggressively pursue blended finance as a financial structuring tool whereby catalytic finance (from public and philanthropic sources) can be used to attract private finance at scale. Different sources of public finance, like those from MDBs or climate funds, use the blended finance approach to reduce perceived risks and lower the cost of capital, allowing a crowding-in of private sector capital. It also facilitates knowledge sharing, networking and capacity-building aspects, to allow greater private sector participation in developing countries.
- Enhance domestic enabling environments to attract private and public finance:** Develop robust and predictable regulatory frameworks and well-designed economic incentives to appeal to public and private international climate finance providers. The potential climate-related financing from the private sector is much larger than the amount available from multilateral and bilateral public sources. National governments need to create the necessary enabling regulatory environment through policy measures and guiding documents that (a) facilitates the flow of resources from the national to the local level where climate action takes place, (b) ensures more autonomy for local and regional governments to systematically leverage investments from public-private partnerships, and (c) attractive financial incentives such as subsidies, tax rebates, etc. For example, the GoI has identified 6,000 compliances (regulatory hurdles), both at the national and subnational levels, that would be eased as part of the government's plan to make it easier to do business under its programme: 'Ease of doing business in India'.
- Improve research and knowledge sharing to develop robust project proposals:** There is a need to adopt a systematic approach to addressing knowledge gaps on climate risks through research and knowledge sharing, which can then inform the prioritisation of climate finance needs and project proposals and design. The countries should identify and collaborate with multiple stakeholders – including CBOs, think tanks and NGOs – to deliver locally-relevant research outputs. The science of climate change should be translated into simple and vernacular language to enhance the understanding of practitioners. Urban practitioners and decision-makers should have relevant climate information to address information gaps and develop pro-poor and inclusive project proposals that address the needs of communities and clearly outline the scientific basis for such projects.
- Build the capacity of non-state stakeholders and local organisations to act on climate change:** Measures should be taken to introduce effective intermediaries at local levels and engage organisations such as NGOs and CBOs as partners. Domestically, coordinated and informed non-state actors can play a greater role in providing technical support to the local governments for developing robust project proposals for accessing additional climate finance from national and international sources. They can also play a critical role in generating local and indigenous climate information and ensure that finance is targeted to the needs of the marginalised and vulnerable populations during project implementation. This will enhance the

overall efficacy and impact of the climate finance. Non-state actors can also serve in knowledge sharing by communicating innovations in promoting and financing climate action at the local level, thereby creating the potential for replication and scale-up.

Considering that all the above recommendations are relevant to all three countries — Bangladesh, India and Nepal – the following boxes highlight two key recommendations for each country for enhancing access to and effective use of climate finance.

TWO KEY RECOMMENDATIONS TO ENHANCE ACCESS TO CLIMATE FINANCE IN BANGLADESH

- The GoB needs to strengthen the institutional structure and capacities of the line ministries and departments to counteract the large amounts of unaccounted funding. By strengthening fiduciary systems, environmental and social safeguards, and increasing monitoring and evaluation, this will improve accountability and transparency; thereby also building trust and confidence among donors.
- There is a need to develop robust and predictable regulatory frameworks and well-designed economic incentives to attract public and private international climate finance by, for example, adapting and implementing the revised Climate Fiscal Framework (2020).



Farmers load paddy at Chalan Beel (moving wetland) in Singra, Bangladesh. © ICLEI South Asia

TWO KEY RECOMMENDATIONS TO ENHANCE ACCESS TO CLIMATE FINANCE IN INDIA

- There is a strong need for adopting the practice of Climate Budget Tagging (CBT) in the country (as also outlined in the main recommendations above). CBT will support the generation of comprehensive data on relevant spending, thereby enabling the government to make informed decisions and prioritise climate investments. It will help in mainstreaming climate change in public financial planning and management and also facilitate integration of climate considerations when designing projects. By generating data on climate change investments, CBT will also strengthen accountability and transparency. India should also consider conducting a CPEIR, which will help in identifying and tracking budget allocations for climate actions.
- India should identify or create an independent coordinating agency to plan, access, mobilise, disburse and track climate finance at the national level. Such an agency should have the mandate to formulate an overall plan to access finance from international donors, the national budget, and private sources, etc. to provide overall support for the implementation of climate-related activities. Such an agency can be housed in the already existing Ministry responsible for accessing climate finance.

TWO KEY RECOMMENDATIONS TO ENHANCE ACCESS TO CLIMATE FINANCE IN NEPAL

- There is an urgent need to build the technical and institutional capacities of ministries and line departments responsible for overseeing climate finance for project development, strong fiduciary management and MRV.
- There is a need for well-coordinated and harmonised institutional mechanisms for responsive planning, programming, budgeting, implementation and monitoring to ensure that 80% of the climate funds reach actual beneficiaries at the local level (as outlined above in the section on Nepal, the country's National Climate Change Policy mandates allocating 80% of the total climate funds to the local level). Along with robust internal and external auditing measures, performance-based monitoring system based on key indicators to assess achievements of various climate funds should be put in place.



Nepalese farmers returning back home after working in the rice field. ©TravellingNepal via Shutterstock

Endnotes

- 1 Intergovernmental Panel on Climate Change (2021). 'Summary for policymakers', A1. In: *Climate change 2021: The physical science basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., Zhai, P. Pirani, A., Connors, S.L., Péan, C., Berger, S., Caud, N., Chen, Y., Goldfarb, L., Gomis, M.I., Huang, M., Leitzell, K., Lonnoy, E., Matthews, J.B.R., Maycock, T.K., Waterfield, T., Yelekçi, O., Yu, R. and Zhou, B. (eds.)]. In Press.
- 2 Daniel, T. (2021). *Guide to strengthening gender integration in climate finance projects*. Cape Town: Climate and Development Knowledge Network and Women's Environment and Development Organization. Retrieved from: <https://cdkn.org/resource/guide-strengthening-gender-integration-in-climate-finance-projects>
- 3 Organisation for Economic Co-operation and Development (2018). *Climate finance from developed to developing countries: 2013–17 public flows*. Retrieved from: <https://www.oecd.org/environment/cc/Climate-finance-from-developed-to-developing-countries-Public-flows-in-2013-17.pdf>
- 4 Intergovernmental Panel on Climate Change (2021). Op cit.
- 5 Intergovernmental Panel on Climate Change (2022). 'Summary for Policymakers'. In: *Climate change 2022: Mitigation of climate change*. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Shukla, P.R., Skea, J., Slade, R., Al Khourdajie, A., van Diemen, R., McCollum, D., Pathak, M., Some, S., Vyas, P., Fradera, R., Belkacemi, M., Hasija, A., Lisboa, G., Luz, S. and Malley, J. (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.001. Retrieved from: https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf
- 6 Woetzel, J. (2020). 'Climate change hits the poor hardest. Here's how to protect them'. World Economic Forum. Retrieved from: <https://www.weforum.org/agenda/2020/10/climate-change-poor-hardest-how-protect-them/>
- 7 Seed, F., Schleussner, C.F. and Ashfaq, M. (2021). 'Deadly heat stress to become commonplace across South Asia already at 1.5°C of global warming'. *Geophysical Research Letters*. DOI: [10.1029/2020GL091191](https://doi.org/10.1029/2020GL091191)
- 8 Ibid.
- 9 United Nations Framework Convention on Climate Change Standing Committee on Finance (2021). 'Executive summary'. In: *First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement*. Retrieved from: https://unfccc.int/sites/default/files/resource/54307_2%20-%20UNFCCC%20First%20NDR%20summary%20-%2020V6.pdf
- 10 Overseas Development Institute (2014). *Climate finance: Is it making a difference? A review of the effectiveness of Multilateral Climate Finance*. Retrieved from: <https://cdn.odi.org/media/documents/9359.pdf>.
- 11 United Nations Framework Convention on Climate Change (2016). *The Paris Agreement*. Retrieved from: https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf
- 12 UK COP26 Presidency (2021). *Climate finance delivery plan: Meeting the US\$ 100 billion goal*. Retrieved from: <https://ukcop26.org/wp-content/uploads/2021/10/Climate-Finance-Delivery-Plan-1.pdf>
- 13 UNFCCC Standing Committee on Finance (n.d.). 'New collective quantified goal on climate finance'. Retrieved from: <https://unfccc.int/NCOG>
- 14 Intergovernmental Panel on Climate Change (2021). Op cit.
- 15 Intergovernmental Panel on Climate Change (2022). 10.3.3, in Shaw, R., Luo, Y., Cheong, T.S., Abdul Halim, S., Chaturvedi, S., Hashizume, M., Insarov, G.E., Ishikawa, Y., Jafari, M., Kitoh, A., Pulhin, J., Singh, C., Vasant, K., and Z. Zhang, 2022: 'Asia'. In: *Climate change 2022: Impacts, adaptation, and vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.O., Roberts, D.C., Tignor, M., Poloczanska, E.S., Mintenbeck, K., Alegría, A., Craig, M., Langsdorf, S., Löschke, S., Möller, V., Okem, A. and Rama, B. (eds.)]. Cambridge University Press. In Press.
- 16 Fallesen, D. (2019). 'South Asia needs to act as one to fight climate change'. World Bank blogs. Retrieved from: <https://blogs.worldbank.org/endpovertyinsouthasia/south-asia-needs-act-one-fight-climate-change>
- 17 Asian Development Bank (2014). *Assessing the costs of climate change and adaptation in South Asia*. Retrieved from: https://www.preventionweb.net/files/38999_assessingcostsclimatechangeandadapt.pdf
- 18 International Finance Corporation (2017). *Climate investment opportunities in South Asia*. Retrieved from: https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/climate+business/resources/final+climate+investment+opportunities+in+south+asia+-+an+ifc+analysis
- 19 Germanwatch e.V. (2021). *Global Climate Risk Index 2021*. Retrieved from: https://germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf
- 20 Ministry of Foreign Affairs of the Netherlands (2018). *Climate change profile: Bangladesh*. Retrieved from: https://reliefweb.int/sites/reliefweb.int/files/resources/Bangladesh_7.pdf
- 21 The World Bank (2018). 'Bangladesh: Rising temperature affects living standards of 134 million people'. Retrieved from: <https://www.worldbank.org/en/news/press-release/2018/09/26/bangladesh-rising-temperature-affects-living-standards-of-134-million-people>
- 22 Cooke, K. (2018). 'To combat climate change, Bangladesh is the example to follow'. Oxford Policy Management. Retrieved from: <https://www.opml.co.uk/blog/combating-climate-change-bangladesh-example-to-follow>
- 23 Germanwatch e.V. (2021). *Global Climate Risk Index 2021*. Op cit.
- 24 Mohan, V. (2017). 'Climate change costs India \$10 billion every year: Government'. The Economic Times. Retrieved from: <https://economictimes.indiatimes.com/news/economy/finance/climate-change-costs-india-10-billion-every-year-government/articleshow/60113030.cms?from=mdr>
- 25 Ibid.
- 26 Government of India (2020). *Report of the Sub-Committee for the assessment of the financial requirements for implementing India's Nationally Determined Contribution (NDC)*. Retrieved from: <https://dea.gov.in/sites/default/files/Sub%20Committee%20Report%20Final.pdf>
- 27 Wester, P., Mishra, A., Mukherji, A., and Shrestha, A.B. (eds) (2019). *The Hindu Kush Himalaya assessment: Mountains, climate change, sustainability and people*. Kathmandu: International Centre for Integrated Mountain Development. Retrieved from: <https://link.springer.com/content/pdf/10.1007%2F978-3-319-92288-1.pdf>
- 28 Germanwatch e.V. (2021). *Global Climate Risk Index 2021*. Op cit.
- 29 Mahat, T.J., Bláha, L., Uprety, B. et al. (2019). *Climate finance and green growth: reconsidering climate-related institutions, investments, and priorities in Nepal*. Retrieved from: <https://link.springer.com/article/10.1186/s12302-019-0222-0#Tab4>
- 30 Ministry of Finance, Government of Nepal (2017). *Climate change financing framework: A roadmap to systematically strengthen climate change mainstreaming into planning and budgeting*. Retrieved from: https://www.climatefinance-developmenteffectiveness.org/sites/default/files/CCFF_Nepal_FINAL_Web.pdf
- 31 Krishna Sapkota, K. and Daha, T.N. (2019). *Nepal's citizens climate budget: Where is Nepal's money being spent 2018-2019?* Freedom Forum with UNDP, IBP and FCDO. Retrieved from: <https://www.undp.org/content/dam/nepal/docs/project-documents--2019/Nepal-Citizen-Budget-English.pdf>
- 32 Mahat, T.J., Bláha, L., Uprety, B. et al. (2019). *Climate finance and green growth: reconsidering climate-related institutions, investments, and priorities in Nepal*. Op cit.
- 33 UNFCCC Standing Committee (2016). *Biennial assessment and overview of climate finance flows report*. Retrieved from: https://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/2016_ba_technical_report.pdf
- 34 WRI (2012). *Public financing instruments to leverage private capital for climate-relevant investment*. Retrieved from: <https://www.wri.org/publication/public-financing-instruments-leverage-private-capital-climate-relevant-investment>
- 35 Green Climate Fund (2021). 'Resource mobilisation'. Retrieved from: <https://www.greenclimatefund/about/resource-mobilisation>
- 36 Global Environment Facility (2021). 'Funding'. Retrieved from: <https://www.thegef.org/about/funding>
- 37 Climate Investment Funds (2022), www.climateinvestmentfunds.org
- 38 European Bank for Reconstruction and Development (2021). *Joint report on multilateral development banks' climate finance*. Retrieved from: <https://reliefweb.int/sites/reliefweb.int/files/resources/2020-Joint-MDB-report-on-climate-finance-Report-final-web.pdf>

- 39 The Economic Times (2021). 'IRFC lists foreign currency, green bonds on NSE IFSC'. Retrieved from: https://economictimes.indiatimes.com/markets/bonds/irfc-lists-foreign-currency-green-bonds-on-nse-ifsc/articleshow/84903490.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- 40 The Economic Times (2020). 'SBI lists \$100 million green bond issue on India INX'. Retrieved from: https://economictimes.indiatimes.com/markets/stocks/news/sbi-lists-100-million-green-bond-issuance-on-indiainx/articleshow/74947492.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- 41 Islam, S. (2022). 'Green bond in Bangladesh attracts investors in trading debut'. PV Magazine. Retrieved from: <https://www.pv-magazine.com/2022/01/14/green-bond-in-bangladesh-attracts-investors-in-trading-debut/>
- 42 Sarkar, P. (2021). 'Green bonds, sustainable bonds demand picks up in India in the pandemic era'. *Forbes India*. Retrieved from: <https://www.forbesindia.com/article/sustainability-special/green-bonds-sustainable-bonds-demand-picks-up-in-india-in-the-pandemic-era/68141/1>
- 43 World Wildlife Fund (2018). *Financial instruments used by governments for climate change mitigation*. Retrieved from: https://www.fafrafrica.awsassets.panda.org/downloads/wwf_2018_financial_instruments_used_by_governments_for_climate_change_mitigation.pdf?26723/
- 44 The Indian Express (2020). 'UNDP and PCMC join hands for "first social impact bond"'. Retrieved from: <https://indianexpress.com/article/cities/pune/undp-and-pcmc-join-hands-for-first-social-impact-bond-7125350/>
- 45 Indian Global Business (2019). 'Development Impact Bonds: an innovative future for financing social impact'. Retrieved from: <https://www.indiaglobalbusiness.com/igb-archive/development-impact-bonds-an-innovative-future-for-financing-social-impact-india-global-business>
- 46 International Finance Corporation (2021). 'IFC invests \$10 million in Dolma Impact Fund II to help small businesses and support economic recovery in Nepal'. Retrieved from: <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=26368>
- 47 Khairunnessa, F., Vazquez-Brust, D.A., Yakovleva, N. (2013). *A review of the recent developments of green banking in Bangladesh*. Retrieved from: <https://www.researchgate.net/publication/349267099>
- 48 OECD (2022). Aggregate trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020, <https://www.oecd.org/climate-change/finance-usd-100-billion-goal>
- 49 Ibid.
- 50 Ibid.
- 51 Ibid.
- 52 Ibid.
- 53 Carty, T. Kowalzig, J. and Bertram Zagma, B. (2020). *The climate finance shadow report: Assessing progress to the \$ 100 billion commitment*. Oxford: Oxfam. Retrieved from: <https://oxfamlibrary.openrepository.com/bitstream/handle/10546/621066/bp-climate-finance-shadow-report-2020-201020-en.pdf>
- 54 Climate Funds Update (2022). Retrieved from: <https://climatefundsupdate.org/data-dashboard/#1541245745457-d3cda887-f010>
- 55 The Global Environment Facility (2021). Retrieved from: <https://www.thegef.org/about-us>
- 56 <https://fiftrustee.worldbank.org/en/about/unit/dfi/fiftrustee/fund-detail/gef>
- 57 The Global Environmental Facility (GEF) 18 partner entities are: Asian Development Bank, African Development Bank (AfDB), European Bank for Reconstruction and Development, Food and Agriculture Organisation, Inter-American Development Bank, International Fund for Agricultural Development, United Nations Development Programme (UNDP), United Nations Environment Programme, United Nations Industrial Development Organization, the World Bank, Conservation International, Development Bank of Latin America, Development Bank of Southern Africa, Foreign Economic Cooperation Office, Ministry of Environmental Protection of China, Brazilian Biodiversity Fund, International Union for Conservation of Nature, West African Development Bank, World Wildlife Fund-US.
- 58 <https://www.greenclimate.fund/>
- 59 Green Climate Fund (2022). GCF dashboard, accessed May 2022. Retrieved from: <https://www.greenclimate.fund/projects/dashboard>
- 60 Green Climate Fund (2021). 'Private sector financing', accessed May 2022. Retrieved from: <https://www.greenclimate.fund/sectors/private#portfolio>
- 61 <https://www.adaptation-fund.org/about/>
- 62 <https://www.adaptation-fund.org/projects-programmes/>
- 63 <https://www.adaptation-fund.org/apply-funding/innovation-grants/>
- 64 <https://www.forestcarbonpartnership.org/>
- 65 The National Adaptation Plan (NAP), introduced in 2011 by the UNFCCC, is a strategic and flexible process that builds on each country's existing adaptation activities, integrates climate change into national decision-making and enables countries to identify and address their medium- and long-term priorities for adapting to climate change. The National Adaptation Programme of Actions (NAPAs) was introduced by the UNFCCC in 2001 to help the least developed countries address their most urgent and immediate adaptation needs. The key difference between NAPAs and NAPs is that while NAPAs focused on short-term adaptation needs and priorities, the NAP process seeks to identify and address medium- and long-term adaptation needs. NAP processes build on the experience of the NAPAs of the country.
- 66 Global Environmental Facility (2021). 'Least Developed Countries Fund (LDCF)'. Retrieved from: <https://www.thegef.org/topics/least-developed-countries-fund-ldcf>
- 67 <https://www.thegef.org/topics/special-climate-change-fund-sccf>
- 68 Global Environmental Facility (2021). 'Special Climate Change Fund (SCCF)'. Retrieved from: <https://www.thegef.org/topics/special-climate-change-fund-sccf>
- 69 <https://www.climateinvestmentfunds.org>
- 70 <https://www.climateinvestmentfunds.org/topics/clean-technologies>
- 71 <https://www.climateinvestmentfunds.org/node/5>
- 72 <https://www.climateinvestmentfunds.org/topics/sustainable-forests>
- 73 <https://www.climateinvestmentfunds.org/topics/climate-resilience>
- 74 <https://www.climateinvestmentfunds.org/topics/energy-access>
- 75 <https://www.ifad.org/en/asap>
- 76 <https://www.forestcarbonpartnership.org/>
- 77 European Bank for Reconstruction and Development (2021). *Joint report on Multilateral Development Banks' climate finance*. Retrieved from: <https://reliefweb.int/sites/reliefweb.int/files/resources/2020-Joint-MDB-report-on-climate-finance-Report-final-web.pdf>
- 78 The *Joint report on Multilateral Development Banks' climate finance* (2020) defines 'MDB climate finance' as the financial resources (from own accounts and MDB-managed external resources) committed by MDBs to development operations and components thereof, which enable activities that mitigate climate change and support adaptation to climate change.
- 79 European Bank for Reconstruction and Development (2021). *Joint report on Multilateral Development Banks' climate finance*. Op cit.
- 80 Ibid.
- 81 Ibid.
- 82 Ibid.
- 83 <https://www.greenclimate.fund/>
- 84 <https://www.greenclimate.fund/about/partners/ae>
- 85 <https://www.greenclimate.fund/projects/process>
- 86 <http://www.thegef.org/gef/>
- 87 <https://www.thegef.org/topics/special-climate-change-fund-sccf>
- 88 <http://www.thegef.org/gef/ldcf>
- 89 <https://www.adaptation-fund.org/about/>
- 90 <https://www.adaptation-fund.org/apply-funding/project-funding/project-proposal-materials/>
- 91 <https://www.un-redd.org/>
- 92 <https://www.climateinvestmentfunds.org/country/india>
- 93 MDBs include: the World Bank Group, Inter-American Development Bank, AfDB, European Bank for Reconstruction and Development and the Asian Development Bank
- 94 <https://www.climateinvestmentfunds.org/topics/clean-technologies>
- 95 <https://www.cif.org/topics/climate-resilience>
- 96 <https://www.cif.org/topics/energy-access>
- 97 <https://www.climateinvestmentfunds.org/results/fip-results>
- 98 <https://www.ifad.org/en/asap>
- 99 <https://www.ifad.org/en/project-design-and-management>
- 100 <http://www.forestcarbonpartnership.org/>
- 101 <https://www.forestcarbonpartnership.org/requirements-and-templates#erpa7>

- 102 https://www.forestcarbonpartnership.org/sites/fcp/files/2019/July/FCPF_Process_Guidelines_2019.pdf
- 103 The Nordic Development Fund (NDF) is the joint development finance institution of the five Nordic countries: Denmark, Finland, Iceland, Norway and Sweden. It aims to facilitate climate change investments in low-income and lower-middle-income countries for mitigation and adaptation activities. NDF finances in cooperation with bilateral and multilateral development institutions through co-financing. <https://www.ndf.fi/about>
- 104 The Nordic Climate Facility (NCF) is a challenge fund set up in 2009 to finance early-stage climate change projects in developing countries. NCF is financed and managed by the NDF. <https://www.nordicclimatefacility.com/about-us>
- 105 <https://www.nordicclimatefacility.com/how-to-apply>
- 106 The Global Climate Change Alliance+ (GCCA+) is a flagship initiative from the European Union (EU) to support LDCs and Small Island Developing States (SIDS) address climate change. It contributes towards achieving the overall target of at least 20% of the EU budget spent on climate action by 2020. <http://www.gcca.eu/>
- 107 <https://www.gcca.eu/funding/how-does-gcca-funding-work>
- 108 The Climate Change Fund (CCF) was established in May 2008 by the ADB to facilitate greater investments in developing member countries to effectively address the causes and consequences of climate change, by strengthening support to low-carbon and climate-resilient development. <https://www.adb.org/what-we-do/funds/climate-change-fund>
- 109 GFDRR is a global partnership, managed by the World Bank, to help developing countries reduce their vulnerability to natural hazards and adapt to climate change. <https://www.gfdr.org/>
- 110 The Public-Private Infrastructure Advisory Facility (PPIAF), established in 1999, is a multi-donor technical assistance facility managed by the World Bank to facilitate private sector engagement in infrastructure. <https://ppiaf.org/>
- 111 The Small Grants Programme (SGP) is a corporate programme of the GEF implemented by the UNDP since 1992. It is present in over 125 countries and promotes community-based innovation, capacity development, and empowerment of local communities and CSOs with special consideration for indigenous peoples, women and youth. <https://www.thegef.org/what-we-do/topics/gef-small-grants-programme>
- 112 <https://sgp.undp.org/about-us-157/how-to-apply.html>
- 113 Buchner, B., Naran, B., Fernandes, P., Padmanabhi, R., Rosane, P., Solomon, M., Stout, S., Wakaba, G., Zhu, Y., Meattle, C., Guzmán, S. and Strinat, C. (2021). *Global landscape of climate finance 2021*. Climate Policy Initiative. Retrieved from: <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2021/>
- 114 Collated from different sources.
- 115 German Federal Ministry for Economic Cooperation and Development (2021). 'Climate finance: Germany remains a reliable partner'. Retrieved from: <https://www.bmz.de/en/development-policy/climate-change-and-development/climate-financing>
- 116 German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (2021). 'About the IKI'. Retrieved from: <https://www.international-climate-initiative.com/de/ueber-die-iki>
- 117 Donor Tracker (2021). 'Japan'. Retrieved from: <https://donortracker.org/country/japan>
- 118 Swiss Agency for Development and Cooperation (SDC) (2021). *Global programme climate change and environment: Programme framework 2021–24*. Retrieved from: https://www.eda.admin.ch/dam/deza/de/documents/publikationen/Diverses/Programme_Framework_2021-24_Global_Programme_Climate_Change_and_Environment_en.pdf.
- 119 UNFCCC (2020). *Switzerland's fourth biennial report under the UNFCCC*. Retrieved from: https://unfccc.int/sites/default/files/resource/CHE_BR4_2020.pdf
- 120 United Nations (2021). *COP26 Presidency compilation of 2021–2025 climate finance commitments*. Retrieved from: <https://ukcop26.org/cop26-goals/finance/>
- 121 UK International Climate Finance (2021). *UK International Climate Finance: A UK Government commitment to building resilience and accelerating transition*. Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1029990/icf-brochure-2021.pdf
- 122 European Commission (2021). 'International climate finance'. Retrieved from: https://ec.europa.eu/clima/eu-action/international-action-climate-change/international-climate-finance_en.
- 123 Ministry of Foreign Affairs of Denmark (2021). *Denmark at COP26*. Retrieved from: <https://denmark.dk/cop-26-english/subpage-1>
- 124 United Nations (2021). *COP26 Presidency compilation of 2021–2025 climate finance commitments*. Op cit.
- 125 Government of Canada (2022). 'Canada's international climate finance'. Retrieved from: <https://www.canada.ca/en/services/environment/weather/climatechange/canada-international-action/climate-finance.html>
- 126 United Nations (2021). *COP26 Presidency compilation of 2021–2025 climate finance commitments*. Op cit.
- 127 Ibid.
- 128 United Nations Development Programme (2020). *Human development report 2020: Bangladesh*. Retrieved from: http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/BGD.pdf
- 129 United States Agency for International Development (2018). *Climate risk profile: Bangladesh*. Retrieved from: https://www.climatelinks.org/sites/default/files/asset/document/2018-02-Mar_CadmusCISF_Climate-Risk-Profile-Bangladesh.pdf
- 130 Ministry of Environment, Forest and Climate Change, Government of Bangladesh (2015). *Intended Nationally Determined Contribution (INDC)*. Retrieved from: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Bangladesh%20First/INDC_2015_of_Bangladesh.pdf
- 131 The World Bank (2010). *Economics of adaptation to climate change: Bangladesh*. Retrieved from: https://documents1.worldbank.org/curated/en/841911468331803769/pdf/702660v10ESWOP0IC000EACCO_Bangladesh.pdf
- 132 Ministry of Environment, Forest and Climate Change, Government of Bangladesh (2021). *Nationally Determined Contribution (NDC) (Updated)*. Retrieved from: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Bangladesh%20First/NDC_submission_20210826revised.pdf
- 133 Ministry of Planning, Government of Bangladesh (2011). *Eighth Five-Year Plan: July 2020–June 2025*. Retrieved from: http://www.plancomm.gov.bd/sites/default/files/files/plancomm.portal.gov.bd/files/68e32f08_13b8_4192_ab9b_abd5a0a62a33/2021-02-03-17-04-ec95e78e452a813808a483b3b2e14a1.pdf
- 134 Ministry of Planning, Government of Bangladesh (2012). *Perspective plan of Bangladesh (2010–2021): Making Vision 2021 a reality*. Retrieved from: https://bangladesh.gov.bd/sites/default/files/files/bangladesh.gov.bd/page/6dca6a2a_9857_4656_bce6_139584b7f160/Perspective-Plan-of-Bangladesh.pdf
- 135 https://mujibplan.com/wp-content/uploads/2021/12/Mujib-Climate-Prosperity-Plan_ao-21Dec2021_small.pdf
- 136 Government of Bangladesh (2021). *Mujib Climate Prosperity Plan. Decade 2030*. Retrieved from: https://mujibplan.com/wp-content/uploads/2021/12/Mujib-Climate-Prosperity-Plan_ao-21Dec2021_small.pdf
- 137 Ministry of Environment and Forests, Government of Bangladesh (2017). *Bangladesh country investment plan for environment, forestry and climate change (2016–2021)*. Retrieved from: http://nda.erd.gov.bd/files/1/Publications/CC%20Policy%20Documents/CIP_FINAL_PRINTED_VERSION_2017.pdf
- 138 Ministry of Environment, Forest and Climate Change (2021). *Country investment plan for MoEFCC*. Retrieved from: <https://moef.gov.bd/site/news/c2cd4153-1ce7-4323-a4d4-4ddb24c95016/Country-Investment-Plan-for-MoEF>
- 139 Bangladesh Planning Commission (2018). *Bangladesh Delta Plan 2100*. Retrieved from: <https://oldweb.lged.gov.bd/UploadedDocument/UnitPublication/1/756/BDP%202100%20Abridged%20Version%20English.pdf>
- 140 Ministry of Finance, Government of Bangladesh (2021). *Climate financing for sustainable development: Budget report 2021–22*. Retrieved from: https://mof.portal.gov.bd/sites/default/files/files/mof.portal.gov.bd/page/6e496a5b_f5c1_447b_bbb4_257a2d8a97a1/Budget%20Book%20English%20Version%2001_06_2021.pdf
- 141 UKAID (2017). *Financing green growth in Bangladesh: Challenges and opportunities*. Retrieved from: <https://www.greengrowthknowledge.org/resource/financing-green-growth-bangladesh-challenges-opportunities>
- 142 Ministry of Finance, Government of Bangladesh (2021). *Climate financing for sustainable development: Budget Report 2021–22*. Op cit.
- 143 Green Climate Fund (2021). *Bangladesh*. Retrieved from: <https://www.greenclimate.fund/countries/bangladesh#overview>
- 144 Green Climate Fund (2021). *Bangladesh*. Retrieved from: <https://www.greenclimate.fund/countries/bangladesh#overview>

- 145 <https://www.greenclimate.fund/project/fp150>
- 146 <https://www.greenclimate.fund/project/sap008>
- 147 <https://www.greenclimate.fund/project/fp070>
- 148 <https://www.greenclimate.fund/project/fp069>
- 149 <https://www.greenclimate.fund/project/fp004>
- 150 <https://www.ifad.org/en/web/operations/-/project/2000002356>
- 151 <https://www.ifad.org/en/web/operations/-/project/2000001464>
- 152 <https://www.ifad.org/en/web/operations/-/project/2000001465>
- 153 <https://www.ifad.org/en/web/operations/-/project/1100001758>
- 154 <https://www.ifad.org/en/web/operations/-/project/1100001648>
- 155 <https://www.ifad.org/en/web/operations/-/project/1100001585>
- 156 <https://www.ifad.org/en/web/operations/-/project/1100001537>
- 157 Global Environmental Facility (2021). *Projects*. Retrieved from: https://www.thegef.org/projects-operations/database?f%5B0%5D=countries%3A23&f%5B1%5D=funding_source%3A479
- 158 <http://www.thegef.org/projects-operations/projects/10207>
- 159 <https://www.thegef.org/projects-operations/projects/8036>
- 160 <https://www.thegef.org/projects-operations/projects/6984>
- 161 <https://www.thegef.org/projects-operations/projects/5636>
- 162 <https://www.thegef.org/projects-operations/projects/5456>
- 163 <https://www.thegef.org/projects-operations/projects/4700>
- 164 <https://www.climateinvestmentfunds.org/projects/coastal-climate-resilient-infrastructure-project>
- 165 <https://www.climateinvestmentfunds.org/projects/coastal-embankment-improvement-project-phase-i-ceip-i>
- 166 <https://www.climateinvestmentfunds.org/projects/coastal-towns-infrastructure-improvement-project>
- 167 <https://www.climateinvestmentfunds.org/projects/climate-smart-sme-financing>
- 168 <https://www.climateinvestmentfunds.org/projects/investment-project-1-%E2%80%9Cpromoting-climate-resilient-agriculture-and-food-security%E2%80%9D-climate>
- 169 <file:///C:/Users/Ritu/AppData/Roaming/Microsoft/Word/climateinvestmentfunds.org/projects/technical-assistance-project-2>
- 170 <https://www.climateinvestmentfunds.org/projects/taf-implementation-support-building-energy-and-environment-rating-system-bangladesh-and>
- 171 <https://www.climateinvestmentfunds.org/projects/grid-connected-utility-scale-solar-pv>
- 172 www.climateinvestmentfunds.org/projects/grid-solar-pv-solar-irrigation
- 173 <https://www.climateinvestmentfunds.org/projects/scaling-renewable-energy>
- 174 <https://www.thegef.org/projects-operations/projects/10702>
- 175 <https://www.thegef.org/projects-operations/projects/10523>
- 176 <https://www.thegef.org/projects-operations/projects/9957>
- 177 <https://www.thegef.org/projects-operations/projects/9913>
- 178 <https://www.thegef.org/projects-operations/projects/9909>
- 179 <https://www.thegef.org/projects-operations/projects/9368>
- 180 <https://www.thegef.org/projects-operations/projects/5823>
- 181 <https://www.thegef.org/projects-operations/projects/5189>
- 182 <https://www.thegef.org/projects-operations/projects/5099>
- 183 <https://www.thegef.org/projects-operations/projects/4931>
- 184 <https://www.thegef.org/projects-operations/projects/4922>
- 185 <https://www.thegef.org/projects-operations/projects/4459>
- 186 <https://www.gcca.eu/programmes/gcca-support-enhancing-communities-resilience-climate-change-and-related-disasters>
- 187 <https://www.gcca.eu/programmes/bangladesh-climate-change-resilience-fund-bccrf>
- 188 <https://www.bd.undp.org/content/bangladesh/en/home/projects/un-redd-bangladesh-national-programme.html>
- 189 Ministry of Finance, Government of Bangladesh (2021). *Climate financing for sustainable development: Budget Report 2021–22*. Op cit.
- 190 Ibid.
- 191 Ibid.
- 192 Ibid.
- 193 Ministry of Finance, Government of Bangladesh (2021). *Climate financing for sustainable development: Budget report 2021–22*. Op cit.
- 194 The World Bank (2012). *Bangladesh Climate Change Resilience Fund*. Retrieved from: <https://www.worldbank.org/en/news/feature/2012/05/22/bangladesh-climate-change-resilience-fund-bccrf>
- 195 At the rate of 1 US\$ = 84 BDT (2016)
- 196 Ministry of Finance, Government of Bangladesh (2021). *Climate financing for sustainable development: Budget report 2021–22*. Op cit.
- 197 Ministry of Finance, Government of Bangladesh (2021). *Climate financing for sustainable development: Budget report 2021–22*. Op cit.
- 198 Zheng, G.W., Siddik, A.B., Masukujjaman, M., Fatema, N., Alam, S.S. (2021). *Green finance development in Bangladesh: The role of private commercial banks (PCBs)*. Retrieved from: <https://www.mdpi.com/2071-1050/13/2/795>
- 199 New Economics Foundation (2017). *Green central banking in emerging market and developing country economies*. Retrieved from: <https://neweconomics.org/uploads/files/Green-Central-Banking.pdf>
- 200 The Financial Express (2021). 'BSEC approves green bond for first time in Bangladesh'. Retrieved from: <https://thefinancialexpress.com.bd/stock/bangladesh/bsec-approves-green-bond-for-first-time-in-bangladesh-1617810399>
- 201 International Finance Corporation (2017). *Climate investment opportunities in South Asia. Factsheet: Bangladesh*. Retrieved from: <https://www.ifc.org/wps/wcm/connect/246d3a0a-5f50-4663-b6e0-179271e3f5f1/17663-IFC-Bangladesh-Factsheet-v3.pdf?MOD=AJPERES&CVID=m0ynfyt>
- 202 Ibid.
- 203 Ibid.
- 204 Hossain, M. (2018). *Green finance in Bangladesh: Policies, institutions, and challenges*. ADBI Working Paper 892. Tokyo: Asian Development Bank Institute. Retrieved from: <https://www.adb.org/sites/default/files/publication/467886/adbi-wp892.pdf>
- 205 Aayog, N. (2020). *India Voluntary National Review 2020*. Retrieved from: https://pminewyork.org/pdf/menu/submenu_803244579.pdf
- 206 United Nations Development Programme (2020). *Human development report 2020*. Retrieved from: <http://hdr.undp.org/en/content/latest-human-development-index-ranking>
- 207 National Institute of Disaster Management (n.d). *India*. Retrieved from: https://nidm.gov.in/easindia2014/err/pdf/country_profile/India.pdf
- 208 The World Bank (2018). 'Climate change could depress living standards in India, says New World Bank Report'. Retrieved from: <https://www.worldbank.org/en/news/press-release/2018/06/28/climate-change-depress-living-standards-india-says-new-world-bank-report>
- 209 The World Bank (2018). 'Climate change could depress living standards in India, says New World Bank Report'. Op cit.
- 210 Germanwatch e.V. (2021). *Global Climate Risk Index 2021*. Op cit.
- 211 International Labor Organization (2019). *Working on a warmer planet: The effect of heat stress on productivity and decent work*. Retrieved from: https://www.ilo.org/global/publications/books/WCMS_711919/lang--en/index.htm
- 212 United States Agency for International Development (2017). *Climate risk profile: India*. Retrieved from: https://www.climatefunds.org/sites/default/files/asset/document/2017_USAID%20ATLAS_Climate%20Risk%20Profile%20-%20India.pdf
- 213 Energy World (2020). 'India to overachieve UNFCCC 2030 target, share of non-fossil fuels to increase to 64 per cent by 2030'. Retrieved from: <https://energy.economicstimes.indiatimes.com/news/coal/india-to-overachieve-unfccc-2030-target-share-of-non-fossil-fuels-to-increase-to-64-per-cent-by-2030/76619443>
- 214 Business Today (2020). 'India exceeding Paris targets; to achieve 450 GW renewable energy by 2030: PM Modi at G20 summit'. Retrieved from: <https://www.businesstoday.in/current/economy-politics/india-exceeding-paris-targets-to-achieve-450-gw-renewable-energy-by-2030-pm-modi-at-g20-summit/story/422691.html>
- 215 <https://pib.gov.in/PressReleasePage.aspx?PRID=1768712>
- 216 Prime Minister's Office, Government of India (2021). 'National statement by Prime Minister Shri Narendra Modi at COP26 Summit in Glasgow'. Retrieved from: <https://pib.gov.in/PressReleasePage.aspx?PRID=1768712>
- 217 To add ref

- 218 Singh, V.P. and Sidhu, G. (2021). *Investment sizing India's 2070 net-zero target*. New Delhi: Council on Energy, Environment and Water. Retrieved from: <https://www.ceew.in/cef/solutions-factory/publications/CEEW-CEF-Investment-Sizing-India%E2%80%99s-2070-Net-Zero-Target.pdf>
- 219 The study assessed the funds primarily from four multi-lateral climate funds-the Green Climate Fund (GCF); Adaptation Fund; Climate Investment Funds (CIF); and Global Environment Facility (GEF).
- 220 Carbon Brief (2017). *Mapped: Where multilateral climate funds spend their money*. Retrieved from: <https://www.carbonbrief.org/mapped-where-multilateral-climate-funds-spend-their-money>
- 221 Global Environmental Facility (2021). 'India'. Retrieved from: <https://www.thegef.org/country/india>
- 222 International Institute for Sustainable Development (2015). 'International Solar Energy Alliance launched'. Retrieved from: <http://sdq.iisd.org/news/international-solar-energy-alliance-launched/>
- 223 Adaptation Fund (2021). 'Projects and programme: India'. Retrieved from: <https://www.adaptation-fund.org/projects-programmes/project-information/projects-table-view/>
- 224 <https://www.adaptation-fund.org/project/building-adaptive-capacities-of-small-inland-fishers-for-climate-resilience-and-livelihood-security-madhya-pradesh-2/>
- 225 <https://www.adaptation-fund.org/project/building-adaptive-capacities-communities-livelihoods-ecological-security-kanha-pench-corridor-madhya-pradesh/>
- 226 www.adaptation-fund.org/project/climate-proofing-of-watershed-development-projects-in-the-states-of-rajasthan-and-tamil-nadu
- 227 <https://www.adaptation-fund.org/project/climate-smart-actions-and-strategies-in-north-western-himalayan-region-for-sustainable-livelihoods-of-agriculture-dependent-hill-communities/>
- 228 <https://www.adaptation-fund.org/project/enhancing-adaptive-capacity-and-increasing-resilience-of-small-and-marginal-farmers-in-purulia-and-bankura-districts-of-west-bengal/>
- 229 <https://www.adaptation-fund.org/project/conservation-and-management-of-coastal-resources-as-a-potential-adaptation-strategy-for-sea-level-rise/>
- 230 Global Environmental Facility (2021). 'Projects: India'. Retrieved from: https://www.thegef.org/projects-faceted?f%5B0%5D=field_country%3A77
- 231 <https://www.thegef.org/projects-operations/projects/10484>
- 232 <https://www.thegef.org/projects-operations/projects/10276>
- 233 <https://www.thegef.org/projects-operations/projects/10204>
- 234 <https://www.thegef.org/projects-operations/projects/10194>
- 235 Global Environmental Facility (2021). *Projects: India*. Retrieved (2021). *Projects: India*. Op cit.
- 236 <https://www.thegef.org/projects-operations/projects/9323>
- 237 <https://www.thegef.org/projects-operations/projects/9258>
- 238 <https://www.thegef.org/projects-operations/projects/9249>
- 239 <https://www.thegef.org/projects-operations/projects/9243>
- 240 <https://www.thegef.org/projects-operations/projects/9148>
- 241 <https://www.thegef.org/projects-operations/projects/4536>
- 242 <https://www.thegef.org/projects-operations/projects/4901>
- 243 <https://www.climateinvestmentfunds.org/projects/dpsp-iii-scaling-demand-side-energy-efficiency-project>
- 244 <https://www.climateinvestmentfunds.org/projects/innovations-solar-power-and-hybrid-technologies>
- 245 <https://www.climateinvestmentfunds.org/projects/solar-rooftop-pv-0>
- 246 <https://www.climateinvestmentfunds.org/projects/shared-infrastructure-solar-parks-phase-i>
- 247 <https://www.climateinvestmentfunds.org/projects/solar-rooftop-pv>
- 248 <https://www.climateinvestmentfunds.org/projects/partial-risk-sharing-facility-energy-efficiency>
- 249 https://www.climateinvestmentfunds.org/sites/default/files/140508_ADB_CTF_Proposal_-_RE_Mini-Grids_Program_PUBLIC_1.pdf
- 250 Green Climate Fund (2021). 'Projects & programme: India'. Retrieved from: <https://www.greenclimate.fund/countries/india#overview>
- 251 <https://www.greenclimate.fund/project/fp045>
- 252 <https://www.greenclimate.fund/project/fp164>
- 253 <https://www.greenclimate.fund/project/fp081>
- 254 <https://www.greenclimate.fund/project/fp084>
- 255 Government of India (2018). *India's Intended Nationally Determined Contribution: Working towards climate justice*. Retrieved from: <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/India%20First/INDIA%20INDC%20TO%20UNFCCC.pdf>
- 256 Rashmi, R. (2022). 'Green finance: Can India grab the opportunity?' Indian Express. Retrieved from: <https://indianexpress.com/article/opinion/green-finance-india-grab-opportunity-7770432/>
- 257 Gupta, S. (2021). 'How Budget 2021 can boost climate finance and adaptation funds in India'. Gaon Connection. Retrieved from: <https://en.gaonconnection.com/how-budget-2021-can-boost-climate-finance-and-adaptation-funds-in-india/>
- 258 Ministry of Environment, Forest and Climate Change (2019). 'Centre releases Rs. 47,436 crores for afforestation to various states'. Retrieved from: <https://pib.gov.in/PressReleaseframePage.aspx?PRID=1583452>
- 259 Centre for Budget and Governance Accountability (2017). *A framework for understanding climate change responsiveness of the Union Budget in India*. Retrieved from: <https://www.cbgaindia.org/wp-content/uploads/2017/12/A-Framework-for-Understanding-Climate-Change-Responsiveness-of-the-Union-Budget-in-India-2.pdf>
- 260 Prateek, S. (2018). 'India has spent over 140 billion to mitigate climate change'. Mercom India. Retrieved from: <https://mercomindia.com/india-140-billion-mitigate-climate-change/>
- 261 Centre for Budget and Governance Accountability (2017). *A framework for understanding climate change responsiveness of the Union Budget in India*. Retrieved from: <https://www.cbgaindia.org/wp-content/uploads/2017/12/A-Framework-for-Understanding-Climate-Change-Responsiveness-of-the-Union-Budget-in-India-2.pdf>
- 262 Ministry of Environment, Forest and Climate Change (2014). *India's progress in combating climate change briefing paper for UNFCCC COP 20 Lima, Peru*. Retrieved from: http://harenvironment.gov.in/sites/default/files/Indian_Progress_Combating_Climate_Change.pdf
- 263 Economic Times (2020). '5 new smart cities proposed in budget 2020'. Retrieved from: <https://government.economicstimes.indiatimes.com/news/smart-infra/5-new-smart-cities-proposed-in-budget-2020/73844330>
- 264 National Institute of Urban Affairs (2021). 'Climate centre for cities (C-Cube)'. Retrieved from: <https://www.niua.org/c-cube/content/climate-centre-cities-c-cube>
- 265 Deloitte (2019). *Smart and sustainable cities of the future key initiatives under Smart Cities Mission, Government of India*. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/in/Documents/public-sector/in-gps-Cl-SmartCity_SustainableSmartCities.pdf
- 266 The Times of India (2019). 'World's first emission trading scheme yields positive result'. Retrieved from: <https://timesofindia.indiatimes.com/city/surat/worlds-first-emission-trading-scheme-yields-positive-results/articleshow/71729263.cms>
- 267 The Times of India (2020). 'Indore civic body earns Rs 50 lakh revenue from carbon credit'. Retrieved from: http://timesofindia.indiatimes.com/articleshow/79219072.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- 268 Non-Banking Financial Companies (NBFC) are financial institutions that offer various financial services and banking facilities without meeting the legal definition of a bank. They are regulated by the Reserve Bank of India and provide banking services like loans, credit facilities and investing; however, they are restricted from taking any form of deposits from the general public. NBFCs play a crucial role in the economy, offering their services in urban as well as rural areas, mostly granting loans allowing for the growth of new ventures.
- 269 Mehta, S. (2017). 'SBI extends Rs 2317 crores for 43 solar power projects'. The Economic Times. Retrieved from: https://economicstimes.indiatimes.com/industry/banking/finance/sbi-extends-rs-2317-crores-for-43-solar-powerprojects/articleshow/61343035.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- 270 Mukul, J. (2021). 'Tata Cleantech, JICA sign 10 bn yen loan deal for climate change projects'. Business Standard. Retrieved from: https://www.business-standard.com/article/companies/tata-cleantech-jica-sign-10-bn-yen-loan-deal-for-climate-change-projects-121032500777_1.html
- 271 <https://greenbanknetwork.org/>
- 272 Joshi, A. (2020). 'India becomes second-largest market for green bonds with \$10.3 billion transactions'. ETEnergyWorld. Retrieved from: <https://energy.economicstimes.indiatimes.com/news/renewable/india-becomes-second-largest-market-for-green-bonds-with-10-3-billion-transactions/73898149>

- 273 Ghosh, S. (2020). 'State Bank of India raises \$100 million in green bonds'. Mint. Retrieved from: <https://www.livemint.com/companies/news/state-bank-of-india-raises-100-million-in-green-bonds-11585408209737.html>
- 274 Ramesh, M. (2019). 'Green bonds issuance goes through the roof'. The Hindu. Retrieved from: <https://www.thehindubusinessline.com/markets/green-bonds-issuance-goes-through-the-roof/article29842441.ece>
- 275 Climate Bonds Initiative (2018). *Country briefing: India*. Retrieved from: https://www.climatebonds.net/files/reports/india-country-briefing_final.pdf
- 276 DownToEarth (2020). 'CSR: Is India Inc spending responsibly?' Retrieved from: <https://www.downtoearth.org.in/news/governance/csr-is-india-inc-spending-responsibly--69353>
- 277 Worldometer (2020). 'Nepal demographics'. Retrieved from: <https://www.worldometers.info/demographics/nepal-demographics/>
- 278 Nepal Economic Forum (2020). *Overview of the Human Development Report*. Retrieved from: <https://nepaleconomicforum.org/neftake/overview-of-the-human-development-report-2020/>
- 279 Germanwatch e.V. (2021). *Global Climate Risk Index 2021*. Op cit.
- 280 Germanwatch e.V. (2019). *Global Climate Risk Index 2019*. Retrieved from: https://germanwatch.org/files/Global%20Climate%20Risk%20Index%202019_2.pdf
- 281 <https://reliefweb.int/sites/reliefweb.int/files/resources/PFRNA%20Report.pdf>
- 282 Climate Change Finance and Development Effectiveness (2021). *Governance of climate change finance in Nepal*. Retrieved from: <https://www.climatefinance-developmenteffectiveness.org/countries/nepal>
- 283 Ibid.
- 284 Prakriti Resource Centre (2016). *Access to climate finance in Nepal*. Retrieved from: <http://prc.org.np/assets/uploads/resource/Jy0pqZeHw6j7eLUBpu9YxMM9eIK5Zlhu.pdf>
- 285 Ministry of Population and Environment, Government of Nepal (2016). *Nationally Determined Contribution*. Retrieved from: <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nepal%20First/Nepal%20First%20NDC.pdf>
- 286 United States Agency for International Development (2017). *Climate risk profile: Nepal*. Retrieved from: https://www.climatelinks.org/sites/default/files/asset/document/2017_USAID%20CCIS_Climate%20Risk%20Profile_Nepal.pdf
- 287 Ministry of Forest and Environment, Government of Nepal (2019). *National Climate Change Policy, 2076 (2019)*. Retrieved from: https://mofe.gov.np/downloadfile/climatechange_policy_english_1580984322.pdf
- 288 Transparency International (2018). *Climate finance governance in Nepal*. Retrieved from: <http://isetnepal.org.np/wp-content/uploads/2018/12/Final-Climate-Finance-governance-in-Nepal-compressed.pdf>
- 289 Climate Action Tracker (2020). *Nepal*. Retrieved from: <https://climateactiontracker.org/climate-target-update-tracker/nepal/>
- 290 Government of Nepal (2021) National Adaptation Plan (2021–2050). Summary for policymakers. Retrieved from: https://unfccc.int/sites/default/files/resource/NAP_Nepal.pdf
- 291 Government of Nepal (2021) National Adaptation Plan (2021–2050). Summary for policymakers. Retrieved from: https://unfccc.int/sites/default/files/resource/NAP_Nepal.pdf
- 292 Transparency International (2018). Op cit.
- 293 Mahat, T.J., Bláha, L., Uprety, B. et al. (2019). 'Climate finance and green growth: Reconsidering climate-related institutions, investments, and priorities in Nepal'. *Environmental Sciences Europe* 31 (4). Retrieved from: <https://link.springer.com/article/10.1186/s12302-019-0222-0#Tab4>
- 294 National Planning Commission, Government of Nepal (2018). *Implementation of the SDGs in Nepal: Status and challenges*. Retrieved from: https://www.unescap.org/sites/default/files/Nepal_15.pdf
- 295 Rai, S., Chhetri, R.P. and Dhital, B. (2020). *Climate adaptation finance study report Nepal*. Kathmandu: CARE Nepal. Retrieved from: <https://careclimatechange.org/wp-content/uploads/2021/01/Nepal-Climate-Adaptation-Finance-Tracking.pdf>
- 296 Ibid.
- 297 <https://www.adaptation-fund.org/project/adapting-to-climate-induced-threats-to-food-production-and-food-security-in-the-karnali-region-of-nepal-3/>
- 298 <https://www.greenclimate.fund/project/fp118>
- 299 <https://www.greenclimate.fund/project/fp131>
- 300 <https://www.greenclimate.fund/project/fp172>
- 301 <https://www.climateinvestmentfunds.org/projects/building-climate-resilience-watersheds-mountain-eco-regions>
- 302 <https://www.climateinvestmentfunds.org/projects/building-resilience-climate-related-hazards>
- 303 https://www.climateinvestmentfunds.org/sites/cif_enc/files/fp_ip_nepal.pdf
- 304 <https://www.thegef.org/projects-operations/projects/5203>
- 305 <https://libird.org/projects/lrep/>
- 306 <https://www.undp.org/nepal/projects/renewable-energy-rural-livelihood-0>
- 307 <https://www.undp.org/nepal/projects/closed-nepal-climate-change-support-programme>
- 308 <https://www.ifad.org/en/web/operations/-/project/2000001418>
- 309 <https://asha.gov.np/>
- 310 Ministry of Finance, Government of Nepal (2021). *Public announcement of income: Expenditure details of fiscal year 2021/22*. Retrieved from: https://www.mof.gov.np/uploads/document/file/1627455031_Budget_speech_2021.pdf
- 311 Ministry of Finance, Government of Nepal (2021). *Public announcement of income-expenditure details of fiscal years*. Retrieved from: <https://www.mof.gov.np/site/publication-category/87>
- 312 Ibid.
- 313 Government of Nepal (2021) *National Adaptation Plan (2021–2050). Summary for policymakers*. Retrieved from: https://unfccc.int/sites/default/files/resource/NAP_Nepal.pdf
- 314 Ibid.
- 315 United Nations Development Programme (2021). *A background policy paper on green financing in Nepal*. Retrieved from: https://www.undp.org/sites/g/files/zskgke326/files/2022-05/UNDP-NP-GF-PolicyPaper-2022_0.pdf
- 316 <https://www.aepc.gov.np/>
- 317 <https://www.fncci.org/energy-and-environment-division-134.html>
- 318 <https://www.dolmimpact.com/>
- 319 <https://bo2.com.np/>
- 320 The seven commercial banks include NMB Bank, Civil Bank, Bank of Kathmandu, Himalayan Bank, Sangrila Bank Limited, Mega Bank, and Nepal Investment Bank Limited.
- 321 The Kathmandu Post (2016). 'Apple crop insurance launched in Jumla'. Retrieved from: <https://kathmandupost.com/money/2016/05/06/apple-crop-insurance-launched-in-jumla>
- 322 International Centre for Integrated Mountain Development (2015). *Partnership with private sector*. Retrieved from: <https://www.icimod.org/wp-content/uploads/2019/12/Private-sector-partnership.pdf>
- 323 Government of Nepal (2015). *Agriculture Development Strategy (2015–2035)*. Retrieved from: <http://extwprlegs1.fao.org/docs/pdf/nep171433.pdf>
- 324 Government of Nepal, National Planning Commission (2019). *The Fifteenth Plan (Fiscal Year 2019/20–2023/24)*. Retrieved from: https://npc.gov.np/images/category/15th_plan_English_Version.pdf
- 325 Acclimatise and Climate and Development Knowledge Network (2020). *Green Climate Fund Proposal Toolkit 2020: Toolkit to develop a project proposal for the GCF*. Retrieved from: <http://www.acclimatise.uk.com/wp-content/uploads/2020/06/GCF-Funding-Proposal-Toolkit-2020.pdf>
- 326 A Climate Change Public Expenditures and Institutional Review (CPEIR) is a systematic qualitative and quantitative analysis of a country's public expenditure, especially in terms of identifying and tracking budget allocations for climate actions. It also reviews the country's climate change plans and policies, institutional framework and public finance architecture in order to make recommendations to strengthen them.
- 327 Government of Bangladesh (2020). *Bangladesh's Citizens Climate Budget Report*. Retrieved from: <http://www.indiaenvironmentportal.org.in/files/file/climate%20financing%20sustainable%20development.pdf>
- 328 Daniel, T. (2021). Op cit.
- 329 Ibid.
- 330 Green Climate Fund (2019). *Gender policy*. Retrieved from: <https://www.greenclimate.fund/sites/default/files/document/gcf-gender-policy.pdf>



About CDKN

CDKN works to improve the lives of the most climate-affected people in the global South through mobilising knowledge-into-action, capacity and Southern climate leadership from local to global levels. We collaborate with the public, private and non-governmental sectors in support of locally-owned and -led climate-resilient action.

About ICLEI - Local Governments for Sustainability, South Asia

ICLEI South Asia supports South Asian cities on multiple aspects of sustainable development. We aim to build and serve a regional network of local governments to achieve tangible improvements in regional and global sustainability through local initiatives. Please visit <https://southasia.iclei.org/>

www.cdkn.org

cdkn@southsouthnorth.org



This work was carried out with the aid of a grant from the Ministry of Foreign Affairs of the Netherlands and the International Development Research Centre (IDRC), Canada, as part of the Climate and Development Knowledge Network (CDKN) Programme. The views expressed herein do not necessarily represent those of the Ministry of Foreign Affairs of the Netherlands, or of the International Development Research Centre (IDRC) or its Board of Governors, or of the entities managing CDKN.

© Climate and Development Knowledge Network, 2022. This work is licensed under a Creative Commons Attribution, Non-Commercial Licence (CC BY-NC 3.0).