



# 2018-2019 Annual Report





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# Foreword



The last year has been quite eventful for climate action—a landmark Intergovernmental Panel on Climate Change (IPCC) report was released, which underscored the magnitude of the challenge; countries have reached an agreement at COP24 on a near-complete rulebook for the

Paris Agreement; and, while no consensus emerged on operationalization of Article 6, activities on carbon pricing and markets continued to grow around the world. With the expected conclusion of the negotiation process on the rulebook at COP25 in Chile, countries are poised to raise climate ambition and initiate climate action post-2020 through NDC implementation and international cooperation. Over the last year, the Carbon Finance Assist—as one of the key World Bank initiatives on climate action—has continued to support these developments through various ongoing, and some new, activities.

CF-Assist's country support program has provided technical assistance to Ethiopia, Colombia, Lao PDR, and Zimbabwe in integrating climate change considerations in their development policies. The Mexico program on building national institutional capacity to plan for evaluation, selection, access, management, deployment, and monitoring of proposals for GCF financing has successfully concluded.

After two successful events in Barcelona (2017) and Frankfurt (2018), the third edition of the Innovate4Climate (I4C)—the flagship World Bank climate event—has moved to Asia (Singapore, June 4-7, 2019) with the objective of capturing the growing interest and demand in the region and maintaining its status as a premier global event focused on climate finance, investment, and markets. The 2019 edition of the global *States and Trends of Carbon Pricing* report will also be launched at I4C.

CF-Assist has also supported the World Bank's partnership role in organizing regional Climate Weeks and Carbon Forums, which have become part of the annual climate calendar. During 2018-19, this partnership comprising WB, various UN agencies and regional development banks successfully conducted the Asia Pacific event in Singapore,

Latin America and the Caribbean event in Uruguay, and the Africa event in Ghana. The feedback from various stakeholders indicates the evolution of these events as the most significant forums to highlight the climate challenges and opportunities in specific regions.

As part of its knowledge management function, CF-Assist has piloted a webinar series on carbon pricing and market mechanisms, which attracted record-breaking participation from stakeholders. The Carbon Pricing Leadership Coalition (CPLC)—one of the platforms managed through CF-Assist—organized the first global research conference on carbon pricing in New Delhi, India in February 2019. First of its kind, the conference brought together academic researchers, policymakers, and practitioners for a meaningful dialogue across conceptual and practical aspects of carbon pricing.

CF-Assist has also facilitated innovative work on operationalization of Article 6 of the Paris Agreement, which has led to the development of the Climate Warehouse. This aims to catalyze early participation in climate markets by piloting the creation of demand and supply of Mitigation Outcomes, and the creation of a common market infrastructure.

All these activities have been made possible by the generous support from CF-Assist's contributing partners—the Government of Spain, the Netherlands, Germany, and Switzerland. As the WB's client countries and others move towards enhanced climate action, the support programs of CF-Assist could only gain in relevance, and the team looks forward to successfully delivering the continuing work program.

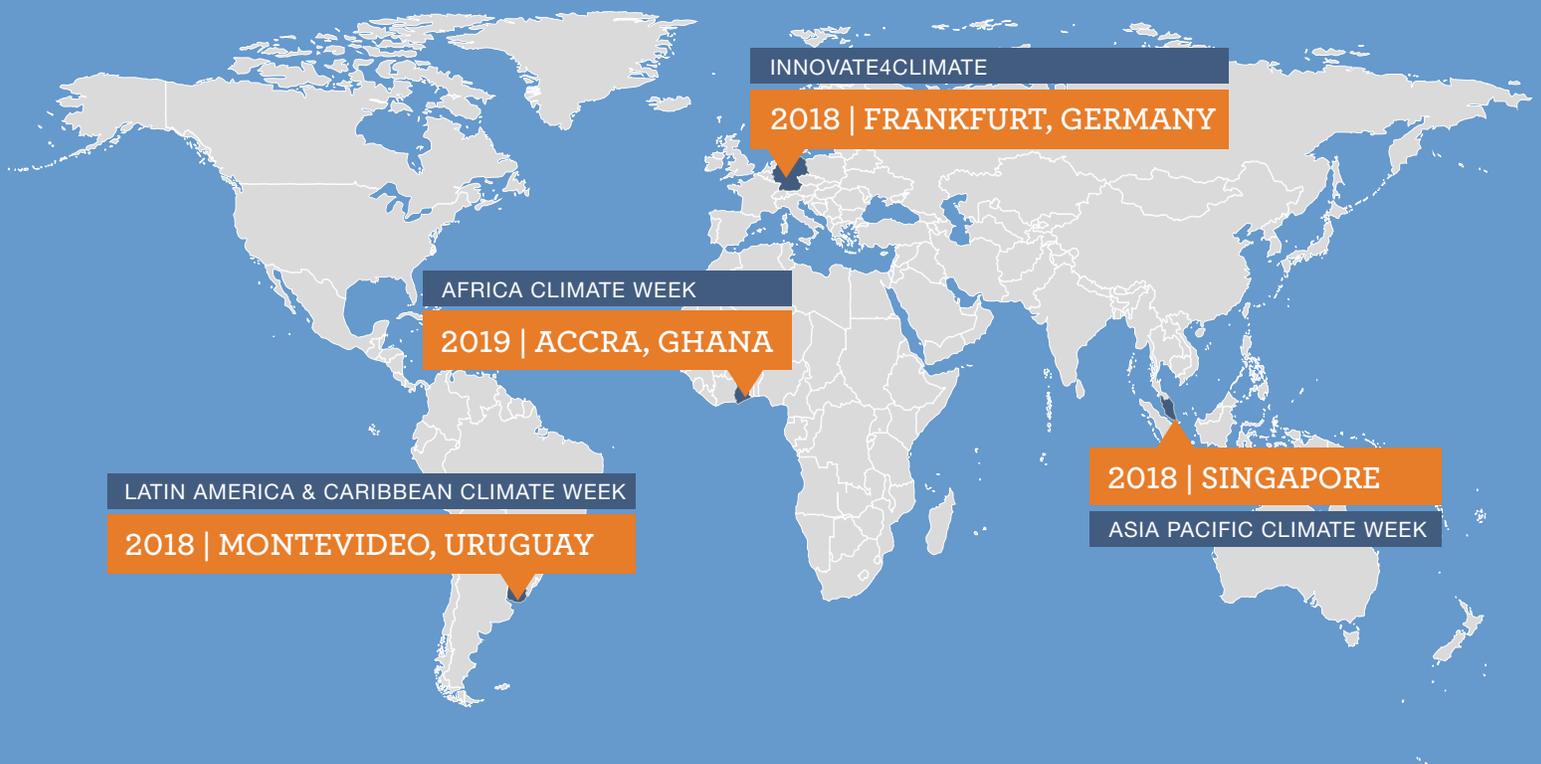
Venkata Ramana Putti, PhD  
Program Manager  
Carbon Markets and Innovation  
The World Bank Group

# CF-Assist: In Action

## 2.1 Climate Knowledge Forums

CF-Assist offers a discrete platform for private and public sector partners to connect and collaborate on climate finance, as well as policies and measures that incentivize financial support from international and domestic sources. Its annual conferences contribute to post-Paris Agreement

efforts to meet climate goals that complement the Sustainable Development Goals at the national level. These forums provide an opportunity for capacity building in designing carbon-pricing policies and the investment planning that supports countries' NDCs.



## CLIMATE KNOWLEDGE FORUMS

# Innovate4Climate (I4C)

Innovate4Climate (I4C) was launched in 2017 as a global platform to showcase and foster climate-smart investment, finance, and markets. It facilitates deal-making on transformative climate action by convening a dialogue between developed and developing countries, public and private actors, and development organizations in an apolitical and business-supportive environment. It serves as both a flagship event on WBG climate change action, as well as provides a platform to showcase action and opportunities from countries, institutions, and the private sector.

I4C builds on CARBON EXPO, the preeminent global forum on carbon markets from 2003 to 2016. The World Bank Group played a leading role in convening CARBON EXPO. In 2016—together with the Government of Spain (GoS), a long-time donor and supporter—it rebranded the EXPO to better reflect the role of finance, policy, and targeted investment in climate action. With financial

support from GoS, the WBG launched I4C as a three-year pilot to establish an event that could be an integral part of the global dialogue on climate change. In an already-crowded calendar of climate-related events, the goal is to make I4C the go-to climate event on finance, investment, and markets. Its goal is to bring leaders together to think innovatively about how to leverage and direct the investment needed to combat climate change. It examines how to channel it to achieve the biggest impact.

The second edition of I4C was hosted by the WBG and the Government of Germany, supported by the GoS, in Frankfurt, May 22–24, 2018.

In 2019, I4C will take place outside of Europe for the first time. The objectives of this move are threefold: 1) leverage I4C's convening power to mobilize and bring the climate community together in different regions where new

## Milestones of Frankfurt:

- 1,233 attendees from 74 countries participated
- In 56 workshop sessions, about 282 speakers discussed ways to address the pressing challenge of climate change
- I4C also included a dynamic “Marketplace,” where 44 exhibitors—from leading governments and industry groups, to clean energy firms and carbon traders—showcased their strategies and technologies for driving the fight against climate change.
- #Innovate4Climate got 296,000 social media hits
- The World Bank's initiative, “New Generation of Market Instruments,” focused on operationalization of the Paris Agreement's Article 6, was launched, with financial support from the Government of Spain.
- The World Bank's annual report on emerging trends in global carbon pricing, “State and Trends of Carbon Pricing 2018,” was launched.

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*In Spain, we are betting on technological innovation and the design of new business formulas and project financing. We want to explore and learn from an early position the challenges that the future presents us.*

*—María García Rodríguez, former Spanish Secretary of State for the Environment*



opportunities and challenges can be highlighted; 2) acknowledge and learn from the growing interest in, and implementation of, carbon pricing instruments globally; and 3) establish I4C as a truly global event on climate finance, investment, and markets. With these goals in mind, Singapore has been selected as the first venue for the I4C rotation outside of Europe.

### Features of I4C 2019 will include:

- High-level summit featuring transformative investment opportunities in clean cooling, battery storage, and climate-smart cities.
- High-level plenaries on Asia's green bond market; Chinese, Korean, and Japanese carbon markets; and the future of carbon assets and operationalization of Article 6.
- Workshop program with 50+ sessions across four tracks: finance, technology, markets, and resilience;
- Inaugural Pitch Hub competition attracting 200+ submissions from start-ups and entrepreneurs with climate-smart solutions for low-carbon and climate-resilient cities;
- Marketplace and exhibition hall for leading practitioners and proponents of sustainability;
- Site visits showcasing Singapore's leadership in urban sustainability.

In addition to the WBG, I4C 2019 is supported by Singapore's National Climate Change Secretariat, Spain's Ministry for the Ecological Transition, and Germany's Ministry for the Environment, Nature Conservation, and Nuclear Safety.

The third edition of I4C will be hosted in Singapore and will build on previous events in Barcelona (2017) and Frankfurt (2018).



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*Innovate4Climate creates a much-needed space for public and private actors to come together to collaborate around solutions to the greatest challenge of our times. This has become the go-to place—especially for sharing inventive, innovative, and non-traditional approaches to financing climate solutions.*

*—John Roome, Senior Director for Climate Change at the World Bank.*

## CLIMATE KNOWLEDGE FORUMS

# Latin America and Caribbean Climate Week

The Latin America and Caribbean Climate Week was held in Montevideo, Uruguay in August 2018. This 12<sup>th</sup> edition was one of the most successful events in the region during the last few years, both in attendance and in content. The four-day event recorded over 900 registered participants from various government agencies, the private sector, non-profit organizations, and academia, in addition to eight ministers and deputy ministers of environment from various Latin American and Caribbean countries, including representation from a Caribbean parliamentarian.

The theme of this year's edition was "Climate Action for Sustainable Development: Driving Change in Latin America and Caribbean." It focused on climate finance, NDCs, Talanoa Dialogue, carbon markets, and carbon pricing.

## Highlights:

The event showcased opportunities in line with the Paris Agreement such as:

- Implementing NDCs
- Leveraging public and private finance for climate action
- Carbon pricing mechanisms and carbon markets
- Sustainable development and transformational change
- Public-private partnerships
- Innovative business models to fight climate change.



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*I have no doubt that the future of our economies will be shaped and defined here, which is one of the many reasons why this Climate Week is so important. It represents a transformational shift that is already underway, and which embraces the participation of all constituencies, including states, regions, businesses, investors, and civil society at large.*

– Patricia Espinosa, UNFCCC Executive Secretary

## CLIMATE KNOWLEDGE FORUMS

## The Asia Pacific Climate Week

The Asia Pacific Climate Week was held in Singapore in July 2018. The three-day conference was attended by nearly 750 registered participants from various government agencies, the private sector, non-profit organizations, and academia, in addition to five ministers and deputy ministers of environment from various East Asia Pacific countries. The event focused on market-based approaches, economic instruments, and climate-aligned finance to drive investment in climate action. Other events included: high-level sessions with the champions of the Marrakech Partnership; a high-level ministerial meeting; a low-emissions development strategy (LEDS) workshop; a regional technology meeting on industrial energy efficiency; and the Asia Pacific Talanoa Dialogue.

### Highlights:

- During the three-day conference, participants discussed the challenges countries in the region are facing to find suitable financing sources for their climate projects and carbon markets, particularly on implementation.
- Furthermore, the event showcased groundbreaking action underway in the region to dramatically reduce emissions and build resiliency. Delegates attending the event called for a new kind of multilateralism to ensure that Asia Pacific implements the Paris Agreement.
- Looking ahead, it became clear that carbon markets are a priority for the region, and indeed formed a major part of discussions, with delegates openly calling for strong leadership on the issue. This represents an opportunity for the Bank to enhance and continue working with the region even more.

## Africa Climate Week

The 13<sup>th</sup> edition of Africa Climate Week took place in Accra, Ghana in March 2019. Over the five days of the event, there were more than 2,500 participants from various government agencies, the private sector, non-profit organizations, international donors, and academia; there were seven ministers and deputy ministers of environment from various African countries. The inaugural session included the President of Ghana, Nana Akufo-Addo, and the President of COP24, Michał Kurtyka. Africa Climate Week provided a critical opportunity to build momentum for raising the level of ambition on the part of African countries to achieve the goals of the Paris Agreement, and to limit climate change.

### Highlights:

- Practical examples of policies, initiatives, and actions in Africa;
- Barriers and enabling measures for engaging climate

action in key sectors;

- Financial instruments and regulatory frameworks;
- Advancing the implementation of climate action.

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*Africa has come together to join the rest of the world in tackling the issues of climate change as we have just one world and we have to protect it now.*

– Asmau Jibril of the Federal Ministry of Environment of Nigeria

## 2.2 Knowledge and Learning

Endorsing global capacity building and innovative knowledge solutions, CF-Assist provides support in translating technical knowledge into coherent online learning packages. Through a suite of different e-courses,

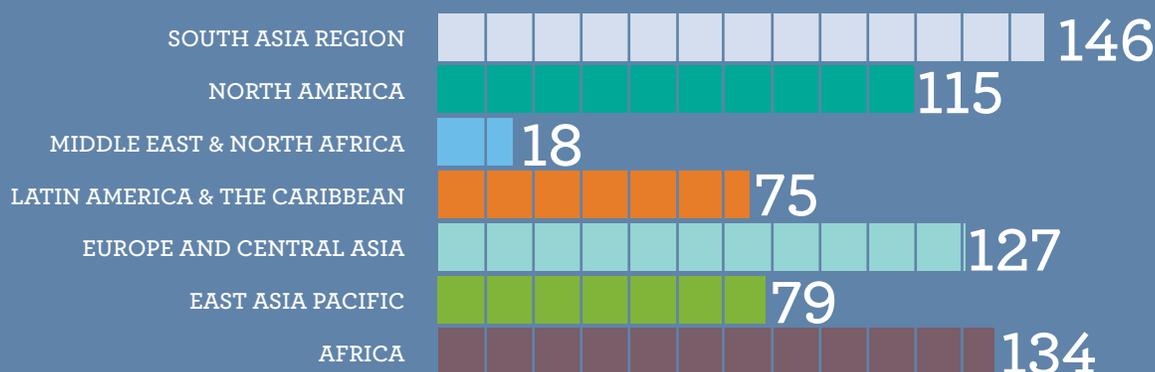
publications, and webinars, learners can access innovative and impactful information on carbon markets and pricing, Article 6 of the Paris Agreement, NDCs, and climate finance.

### E-COURSES



Knowledge and learning under CF-Assist is undergoing a revamp. The focus is on developing a strategic plan on development and delivery of e-courses. The CF-Assist courses on emissions trading systems and designing, monitoring, and verification of climate finance continue to be

popular. In the next financial year, we will update these courses to develop a well-designed learning map for CF-Assist clients and climate change practitioners. Below is a breakdown of participants across the globe who undertook CF-Assist courses this year:



### WEBINAR



With CF-Assist's support, a series with four webinars was designed and delivered to expand clients' and partners' understanding of the challenges and opportunities of adopting different carbon pricing mechanisms. These topics are:

- i. Guide to communicating carbon pricing
- ii. Designing accreditation and verification of carbon pricing instruments
- iii. Blockchain and climate markets
- iv. Climate auctions for national climate action.

### Results:

- The series received interest from 1,233 climate change stakeholders
- All sectors were well represented—Africa, Middle East and North Africa, Latin America and the Caribbean, East Asia Pacific, South Asia Region, Europe and Central Asia, and North America
- Understanding on carbon pricing was enhanced; peer-to-peer learning increased.
- Strengthened collaboration
- Paved the way to develop further in-depth knowledge and learning products.

## PUBLICATIONS



### ■ STATE AND TRENDS OF CARBON PRICING

CF-Assist supports the development of the annual *State and Trends of Carbon Pricing* publication. This report provides an up-to-date overview of existing and emerging carbon pricing instruments around the world, including international, national, and subnational initiatives. It also investigates trends surrounding the development and implementation of carbon pricing instruments. This year's edition discusses the relation between policies that put an explicit price on carbon and policies and those that put an implicit price on carbon.

### ■ GUIDE TO COMMUNICATING CARBON PRICING

In collaboration with the Partnership for Market Readiness, the Carbon Pricing Leadership Coalition (CPLC), supported by CF-Assist, released the *Guide to Communicating Carbon Pricing* at COP24. Stakeholder and public support are critical for an enduring and robust carbon pricing policy. The guide explains how jurisdictions communicating their carbon pricing policy plays a key role in creating and maintaining support.

### ■ CARBON PRICING LEADERSHIP REPORT

Together with providing an update on CPLC's activities over the last year, this report showcases articles from thought leaders to inspire and guide government and business leaders to increase their carbon pricing ambition.

### ■ CARBON PRICING AND THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURE

This brief discusses the value of carbon pricing as a metric to meet the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) by assessing the materiality of climate risk at the portfolio level. While banks and other financial institutions tend to apply carbon pricing primarily at the operational level, they are most vulnerable through their financed emissions, and should expand pricing accordingly.

### ■ CONSTRUCTION INDUSTRY VALUE CHAIN REPORT

The global construction industry is the world's largest consumer of raw materials, and constructed entities account for between 25 and 40 percent of total carbon

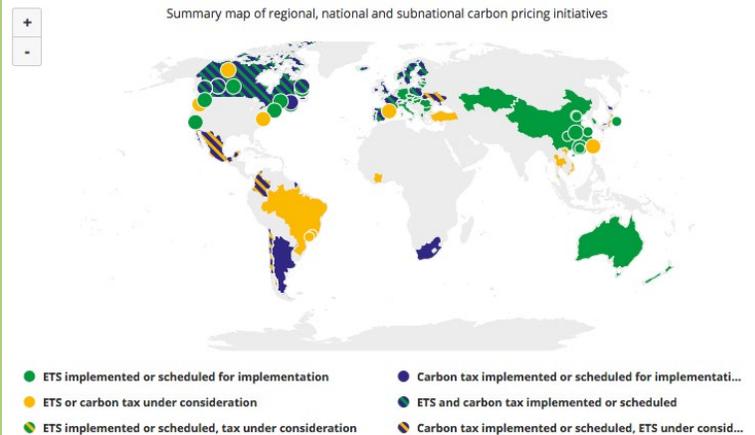
emissions in the world. The report showcases how companies along the construction value chain are adopting various practices and approaches to embed sustainability in their operations, as well as exploring how they are using carbon pricing to manage their carbon risk and reduce their carbon footprint.

## ONLINE DASHBOARD



While the *State and Trends* is published annually, the carbon pricing dashboard provides up-to-date information on existing and emerging carbon pricing initiatives around the world. CF-Assist supports this project; the dashboard is an online interactive platform to find data on national, regional, and subnational carbon pricing instruments. Users make a selection and navigate through different tabs to view the value and the emissions covered. Complementing the *State and Trends* publication, the dashboard allows users to visualize data, and download and compare carbon pricing in different parts of the world.

<https://carbonpricingdashboard.worldbank.org>





## 2.3 Climate Analytics and Advisory Services

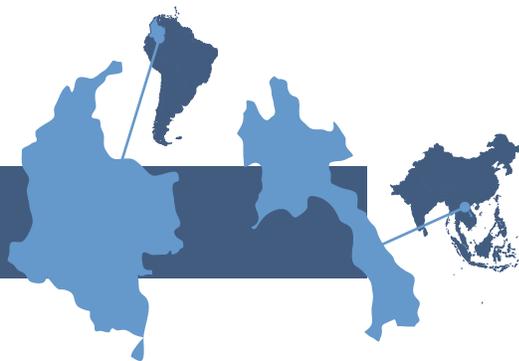
CF-Assist strengthens the capacity of client countries to understand, integrate, and develop low-carbon initiatives consistent with their NDCs, sustainable development priorities, and country climate action strategies. Country programs focus on the identification of transformational

policy packages and the enhancement of national capacity to plan for, access, deliver, and monitor climate finance. The program currently works in Colombia, Bhutan, Ethiopia, Lao PDR, Vietnam, and Zimbabwe.



CLIMATE ANALYTICS AND ADVISORY SERVICES

## Colombia &amp; Lao PDR



## AIR POLLUTANT AND GHG EMISSION MITIGATION IN CITIES THROUGH POLLUTION CHARGES AND CARBON PRICING—COLOMBIA AND LAO PDR

In Colombia, CF-Assist is working with the local authorities of the Metropolitan Area of the Aburra Valley (AMVA)—which includes Colombia’s second largest city, Medellín—to support the development of market-based instruments. The program, Air Pollutant and GHG Emission Mitigation in Cities through Pollution Charges and Carbon Pricing, provides incentives to reduce emissions of local air pollutants and GHG.

The program has helped estimate the economic costs of the health issues caused by exposure to fine particulate matter (PM<sub>2.5</sub>) in the Aburra Valley in current conditions and in the future under a baseline scenario. In addition, the initiative has developed a model to show the positive effects of adopting different market-based instruments on air pollution and GHG emissions, and demonstrate the subsequent health improvements.

The analytical work conducted in the Aburra Valley and its recommendations has been presented and discussed with representatives from Colombia’s Ministry of Environment and Sustainable Development, and the National Planning Department. Based on this dialogue, CF-Assist worked with national government agencies in developing a charge on PM<sub>2.5</sub> emissions from fixed and mobile sources that aims to reduce the emissions of air pollutants and short-lived climate pollutants.

In Lao PDR, the program supports the development of pollution charges and fees to reduce emissions of local pollutants and GHG. During FY19, CF-Assist completed analytical work to underpin the adoption and strengthening of market-based instruments that can help Lao PDR tackle its environmental and climate change priorities. The options assessed by CF-Assist include increasing the excise tax on transport fuels and the establishment of water effluent fees

in Lao PDR. In March 2019, key newspapers and media included articles on the government’s commitment to adopt environmental taxes that provide clear incentives to reduce pollution as part of the National Green Growth Strategy.

### Objectives:

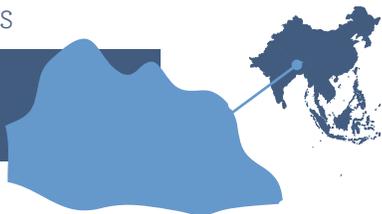
- Develop a strategic framework and a methodology for regulatory impact analysis of pricing policies for air pollution and GHG in cities;
- Apply the framework in cities, including the preparation of analytical work and organizing stakeholder consultations.



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## CLIMATE ANALYTICS AND ADVISORY SERVICES

## Bhutan



## BHUTAN CLIMATE FUND

The Bhutan Climate Fund (BCF) is intended to aggregate and monetize emission reductions (or Mitigation Outcomes (MOs) in the context of Article 6 of the Paris Agreement) from renewable energy projects in Bhutan, starting with the ecologically sound development of run-of-river hydropower.

**Objectives:**

- Aggregating MOs to reduce transaction costs, establish a common framework, and channel carbon revenues systematically;
- Facilitate the monetization of Bhutan's net negative GHG emissions and carbon offsets from renewables;
- Increase the viability of hydropower projects in Bhutan by providing an additional revenue stream; and
- Support the country in meeting its NDC commitments, while meeting its overall development goals.

In FY19, the conceptual development of the BCF was completed and approved by the National Environment Commission Secretariat. A task force consisting of representatives of relevant ministries of the Royal Government of Bhutan and key stakeholders has been constituted to lead detailed design development. The BCF is also exploring opportunities for trading MOs to build the necessary institutional mechanisms, capacity, and experience to participate in post-2020 climate markets.



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## Ethiopia



## EXPLORING CARBON PRICING IN DEVELOPING COUNTRIES: A MACROECONOMIC ANALYSIS IN ETHIOPIA

In response to a challenge from the Carbon Pricing Panel to expand carbon pricing to cover 25 percent of global emissions by 2020, Ethiopia commissioned a study to obtain recommendations on the role and possible forms of policies in Ethiopia. This study opened new avenues for policy dialogue on climate and environment issues at the highest levels. This work is a follow up to the country's participation in President Kim's and Managing Director Lagarde's Carbon Pricing Panel, which has helped solidify the international perception of Ethiopia as a climate leader and the Bank as a key partner in this effort.

The key milestones and goals reached are:

- i. methodology for evaluating the economic and social impact of climate carbon pricing was developed, peer-reviewed, and agreed with the Ethiopian Development Research Institute (EDRI) and Government of Ethiopia (GoE);
- ii. carbon pricing study completed, peer-reviewed, and presented to the client; and
- iii. complementary analytical pieces that evaluate how carbon tax revenues enhance environmental co-benefits have been produced.

This study has enhanced the understanding of carbon pricing implementation and associated policy instruments. It has produced ongoing discussions with the Ministry of Finance for excise tax reforms and for mainstreaming of Climate Resilient Green Economic (CRGE) considerations in the development planning process. Findings from this study act as a guiding approach to design similar studies for other low-income countries, such as Ghana and Rwanda.

Appropriate pricing instruments such as feebates or tax revisions can potentially bring a transformational change by complementing and contributing towards NDC implementation. This study is a starting point to identify areas for deeper analysis across countries.

### Objectives:

- The study summarized in this report is a collaborative effort by the GoE, the EDRI, and the World Bank to better understand the potential benefits and costs for Ethiopia with use of carbon pricing to reduce GHG emissions. The study also investigates distributional impacts of carbon pricing and measures to address unwanted distributional impacts. The specific aims include supporting the GoE in identifying policy actions, including carbon pricing, to achieve its GHG emission reduction targets; facilitating a dialogue among Ethiopian stakeholders on related policy instruments; and building analytical and technical capacity for GoE's future policy planning.

### Key findings from this analysis include:

- A significant impact for Ethiopia of applying a carbon price to fossil fuels is that substantial revenues can be generated—up to \$800 million per year by 2030. This revenue can be used in part for income transfers to soften impacts on the poor and to make revenue-neutral reductions in other taxes to spur investment and productivity gains.
- Application of carbon pricing to fossil fuel use in Ethiopia will have a somewhat limited effect on total GHG emissions (up to two percent of total national GHG emissions), especially as the tax rate rises over time. This, in turn, reflects both the low base level of fossil fuel use, and the relatively low-price responsiveness of transport fuel demand. However, carbon pricing on fuels can contribute to mitigating a “lock-in” of high levels of individual vehicle use and high demand for road expansion by limiting vehicle use and creating support for expanding high quality public transit in more densely populated areas.
- The direct effect of the carbon pricing is likely to be felt more by higher-income households since they are more intensive consumers of fossil fuels. Indirect economic effects to higher fuel prices can lead to modestly slower growth for the urban poor, but the size of that impact will depend on how carbon revenues are recycled. Because the rural poor are not intensive users of fossil fuels, and the economic adjustments to carbon pricing may favor the agriculture sector, the rural poor are likely to face little impact from it.



CLIMATE ANALYTICS AND ADVISORY SERVICES

## Vietnam



## VIETNAM GETTING ON A LOW-CARBON ENERGY PATH TO ACHIEVE NDC TARGETS

The Government of Vietnam submitted its NDC under the Paris Agreement in 2015, which commits to reducing GHG emissions by eight percent compared to the business-as-usual case by 2030 with domestic resources and 25 percent with international financial support.

In this context, the Ministry of Natural Resources and Environment requested each key line ministry submit their sectoral goals to achieve the NDC targets, and propose new and more ambitious targets for the next round of NDC submission.

The energy sector, comprising power generation, industry, buildings in the residential and commercial sectors, and transport is the single largest source of GHG emissions in Vietnam, accounting for more than 60 percent of GHG emissions now, and projected at more than 85 percent by 2030.

The Ministry of Industry and Trade (MOIT) requested World Bank support in developing its energy sector emission reduction targets and pathways contributing to the national NDC targets.

### Objectives:

- This study aims to support the development of the Roadmap for GHG Mitigation in the energy sector up to 2030. More specifically, the primary objectives of this analytical advisory are to support Vietnam in:
  - developing and reaching consensus on cost-effective low-carbon mitigation options and pathways both on the demand and supply sides to achieve NDC targets;
  - estimating the total costs and financing needs to achieve NDC targets; and
  - recommending updated NDC targets for the energy sector and determining the roadmap to achieve these goals.
- It is anticipated that the final *NDC Pathways Analysis Report* will be delivered to MOIT in June or July 2019.



## Zimbabwe



# CLIMATE FINANCE AND LOW CARBON DEVELOPMENT ACTIVITIES; ZIMBABWE CLIMATE CHANGE TECHNICAL ASSISTANCE (ZIM-CLIM)

CF-Assist supports the Zimbabwe Climate Change Technical Assistance Program (ZIM-CLIM), which aims to increase the capacity of the Government of Zimbabwe to integrate climate change considerations in the planning, design, and implementation of development programs in priority sectors. It seeks to turn knowledge into investment plans that can be supported by emerging climate finance mechanisms. Specifically, CF-Assist support targets the cross-cutting work stream of ZIM-CLIM, fostering cross-sectoral policies and processes. These aim to make Zimbabwe's development more climate-resilient and less carbon-intensive through:

- NDC implementation framework for mitigation. The NDC implementation framework will be instrumental in documenting the country's progress in achieving its commitments, and will help attract financial support from different public and private sources.
- Building capacity to mobilize climate finance to attract and execute scaled-up financing from the Green Climate Fund (GCF) and other sources. Support is focused on:
  - i. Building capacity to develop bankable projects in line with the country's climate change strategies, plans, and policies; and
  - ii. support of the Infrastructure Development Bank of Zimbabwe (IDBZ) to achieve accreditation to the GCF.

### Milestones:

- Development of the NDC implementation framework for mitigation. This work included a robust analysis leading to the identification of:
  - i. expected BAU emissions trajectories through 2030;
  - ii. feasible mitigation options in the energy sector and GHG emission reduction pathways; and
  - iii. potential mitigation options from the agriculture and forestry sectors, which could help achieve the target.
- The analysis also developed a MRV method for one of the prioritized mitigation actions (solar irrigation), analyzed implementation arrangements, and developed policy recommendations for the achievement of the NDC.
- The report on NDC implementation framework for mitigation received feedback from various stakeholders through a validation workshop held in Harare in September 2018; was peer-reviewed; and shared with the government. An additional workshop to launch the report took place in April 2019. The analysis conducted provides the Government of Zimbabwe updated and robust information of an important input for the 2020 NDC review and update.
- In addition, two standalone reports for the MRV framework were produced:
  - Institutional Arrangements and Governance Structures for MRV Framework
  - MRV Method for Energy-Agriculture-Water Nexus.



- Building capacity to mobilize climate finance. The grant helped the Infrastructure Development Bank of Zimbabwe (IDBZ) finalize its accreditation to the GCF. Trainings on project preparation, environmental and social policies, and the Environmental and Social Safeguards Management Systems (ESMS) were conducted during 2018. These were targeted to IDBZ staff and included other relevant stakeholders. Inputs for the trainings allow for the continuous improvement of the ESMS. It is expected that IDBZ will submit their application by the end of March 2019.

In addition, support is being provided to IDBZ and other stakeholders in Zimbabwe to strengthen their capacity to mobilize climate finance resources from international, national, and private sources. There is specific attention on opportunities to mainstream climate issues within the Zimbabwean financial system. As part of this support, advisory services on innovative climate financial instruments will be provided to IDBZ. A workshop will be conducted in April 2019 to present initial findings on the analysis of the current financial landscape in Zimbabwe, and to discuss lessons learned and best practices from other countries that could be relevant for the country.

## 2.4 Networked Carbon Markets

The current global landscape for carbon pricing is trending towards a network of decentralized market mechanisms, linking at regional, national, and subnational levels. While international climate markets have the potential to significantly lower costs and mobilize resources for low carbon development, the heterogeneous landscape of climate actions make it complex for policymakers and investors to move forward an internationally coordinated approach on climate markets. Article 6 recognizes the heterogeneity of approaches by allowing Parties to engage in bottom-up cooperative approaches through “internationally transferred Mitigation Outcomes”. However, there are still several unresolved issues related to Article 6 that negotiators must address before COP25 in December 2019. Therefore, focused effort on Article 6 is now more important than ever to ensure the most cost-effective achievement of the highest possible ambition.

Against this backdrop, the Networked Carbon Markets (NCM) initiative is working closely with the World Bank program, Climate Warehouse to develop and pilot tools and frameworks to support post-2020 climate markets. Key activities in FY19 include:

- Develop and pilot a module, Module International Transfer Readiness (ITR), to assess a country’s readiness to engage in Article 6 of the Paris Agreement. The module seeks to support broader capacity building activities by identifying key institutional requirements and gaps for transferring Mitigation Outcomes internationally under Article 6.
- Partner with the Designated Operational Entities and Independent Entities Association (DIA) to develop a manual and code of conduct to ensure quality control of independent assessments using the Mitigation Action Assessment Protocol (MAAP).
- Partner with the World Bank Technology and Innovation Lab to experiment and explore the feasibility of Blockchain-enabled climate markets through a multi-phased proof of concept (PoC). This PoC builds on NCM’s report, *Blockchain and Emerging Digital Technologies for Enhancing Post-2020 Climate Markets*.

- Contribute to Climate Transparency’s *Brown to Green* report in November 2018. This provides a comprehensive overview of G20 countries’ transition to a low-carbon economy. Climate Transparency, an independent global consortium, is supported by NCM and other partners to enhance assessments of G20 countries’ climate policies and targets.

### Objectives:

- The NCM initiative develops innovative tools and frameworks to support bilateral or regional cooperation and linkage of climate markets. The goal is to enhance the transparency, comparability, and potential fungibility of heterogeneous climate actions to enable more countries to participate in international climate markets, while ensuring the environmental integrity of the trade.
- In light of the bottom-up framework embedded in the Paris Agreement, the growing diversity of climate market mechanisms, and the rapidly evolving landscape of digital technology, a new architecture is needed to facilitate more liquid trading across heterogeneous systems. NCM’s products and activities are geared towards achieving this goal.



## 2.5 Climate Warehouse

### CATALYZING THE NEXT GENERATION OF CLIMATE MARKETS BY OPERATIONALIZING ARTICLE 6

The Climate Warehouse program proposes to catalyze early participation in climate markets by piloting the creation of demand and supply of Mitigation Outcomes (MOs), and the creation of common market infrastructure through four work streams:

- i. **Asset development:** Create initial supply of MOs starting with the WB lending portfolio by developing design documents to quantify MOs and establish monitoring, reporting, and verification (MRV) systems—to be completed for four projects by June 2019. This is accompanied by stakeholder engagement and support for development of institutional and governance frameworks for Article 6, as appropriate.
- ii. **Transaction platform:** Facilitate demand for MOs through the development of financial and risk mitigation products. Design of two risk mitigation products for Article 6 transactions (MIGA guarantee and options contract) is on track for completion by June 2019.
- iii. **Warehouse for MOs:** Create market infrastructure to allow for the exchange of MOs through the design and establishment of the Warehouse facility. Functions of the Warehouse have been defined and agreed with the Advisory Group, and the request for information process completed. Piloting is targeted in FY2020.
- iv. **Enabling environment:** The pilot activities are expected to create practical experience and enable “learning by doing” for countries to participate in climate markets under Article 6 of the Paris Agreement. An options paper for Article 6 was published and updated. A tool for assessing countries’ international transfer readiness for Article 6 was developed with nine countries initiating the pilot phase.

The program has been developed through a consultative process engaging several categories of stakeholders. An Advisory Group, consisting of three donor governments

and 11 private sector participants, has been established and has held three meetings. In addition, a Multilateral Development Bank (MDB) Working Group on Article 6 was established and held two meetings to share knowledge on MO generation. The Working Group released a joint statement on Article 6.

#### Objectives:

- The expected long-term goal of the advisory services and analytics is to catalyze climate markets, which would enable the public and private sector to work together to finance the global public good of limiting the temperature increase to two degrees. The program proposes to (a) inform the design of clear and transparent regulations and rules for the future climate market; (b) address market barriers for first movers; and (c) create markets for MOs through four work streams.

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*The ultimate goal of the Working Group is to position Article 6 as a high strategic priority in climate negotiations and encourage Parties to leverage market or priced-based mechanisms as an important tool to deliver NDC commitments cost-effectively, drive increased ambition, and support sustainable development.*

*– Joint statement of the MDB Working Group on Article 6 of the Paris Agreement*





## 2.6 Carbon Pricing Leadership Coalition

Four years since its launch in Paris, the Carbon Pricing Leadership Coalition (CPLC), supported through CF-Assist, continues to convene leaders from government, business, and civil society to support the introduction of carbon pricing, share experiences, and enhance understanding of the emerging practices in the implementation of carbon pricing instruments.

Last year, the CPLC restructured its work program around the following distinct, but interrelated, pillars: regional advocacy; private sector leadership; fostering partnerships; knowledge creation; and outreach and communications. The Coalition's secretariat facilitates the engagement of its partners through an array of activities ranging from regional-focused virtual working groups, and thematic task teams, to activities at the regional and international level.

### Key Activities in 2018:

#### ■ INNOVATE4CLIMATE

At Innovate4Climate, CPLC and the PMR co-hosted a technical workshop on effectively communicating carbon pricing.

#### ■ REGIONAL CLIMATE WEEKS

CPLC hosted carbon pricing workshops and high-level dialogues at three regional Climate Weeks, attracting 390 participants in total.

#### ■ GLOBAL CLIMATE ACTION SUMMIT

Together with the State of California, the European Commission, the International Emissions Trading Association, and other partners, CPLC organized, *Carbon Pricing Driving Climate Ambition*, a carbon pricing day in the margins of GCAS.

#### ■ INTERNAL CARBON PRICING IN HIGHER EDUCATION TOOLKIT

Presenting this toolkit, CPLC co-hosted, together with Yale University, Second Nature, and other partners in the Carbon Pricing in Higher Education Working Group, a side event with former U.S. Secretary of State John Kerry.

#### ■ CONFERENCE OF PARTIES (COP) 24

CPLC convened a leadership dialogue on carbon

pricing revenues with high-level participation from Canada, Singapore, Costa Rica, British Columbia, and corporate leadership from Suncor. CPLC partners, Belgian, French, Swedish, and German governments convened a workshop on carbon taxation in the EU's non-ETS sectors. In addition, together with the partnership for market readiness, the CPLC launched the *Guide to Communicating Carbon Pricing*.

#### ■ HIGH-LEVEL COMMISSION ON CARBON PRICING AND COMPETITIVENESS

Tasked with exploring the evidence base, the concerns of business, and lessons learned in the design and successful implementation of carbon pricing policies, Commissioners of the high-level Commission on Carbon Pricing and Competitiveness have started their work by hosting a series of regional consultations. Their findings will be presented in the fall of 2019.

#### ■ KNOWLEDGE PRODUCTS

Development and delivery of information and learning through knowledge products have been key to CPLC's activities last year. The Coalition presented three reports last year: *Guide to Communicating Carbon Pricing*, *Construction*

*Industry Value Chain Report, and Carbon Pricing, and the Task Force on Climate-Related Financial Disclosure.* Details on this can be found under the Knowledge and Learning section (page 9).

#### ■ CPLC RESEARCH CONFERENCE

The CPLC successfully held the world's first International Research Conference on Carbon Pricing. In collaboration with the Energy and Resources Institute (TERI), the two-day event in New Delhi brought together more than 30 researchers and 150 participants from a range of sectors, with young, emerging scholars and researchers from developing countries leading in participation. The cornerstone of the conference

was to take stock of the existing carbon pricing research base—both theoretical and practical—to better inform future decisions made by business leaders and policymakers using carbon pricing.

#### ■ HIGH-LEVEL ASSEMBLY (HLA)

Attended by leaders from 14 governments, 21 companies, and 45 strategic organizations, including civil society bodies and academia, the fourth HLA focused on integrating carbon pricing into investment decision making and ensuring that carbon pricing policies are designed with consideration of social and development concerns. The third *Carbon Pricing Leadership Report* was released at this event.

## Forward Looking

Going forward, the Coalition, as called for during the HLA, will continue to broaden engagement from developing countries and subnational jurisdictions at the public and private sector level, while deepening engagement so that support for carbon pricing policies is strengthened at an institutional level. Utilizing the recently launched *Guide to Communicating Carbon Pricing*, CPLC will also continue

to advocate for carbon pricing policies that are designed and communicated in a way to increase acceptability and sustainability.

Additionally, the CPLC will explore how to make carbon pricing a demand instrument. It will build the evidence base on application of shadow prices to understand fairness and define approaches that would be relevant for portfolios in developing countries.



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*We all need to join forces to ensure an effective carbon pricing design. Solid evidence of effective carbon pricing will help give policymakers the courage to introduce such measures.*

*- Susanne Åkerfeldt, member of the CPLC Research Conference Scientific Committee and Senior Adviser to the Swedish Ministry of Finance*

# CF-Assist: Looking Ahead

With new programs launched, the road ahead for the CF Assist reaffirms its task in strengthening its work by providing capacity-building and technical assistance for client countries to help them raise their climate ambition and advance their sustainable development goals. CF Assist's primary efforts in the years ahead will be in strategically supporting the World Bank Group's post-Paris climate policy and markets strategy through its work in developing Innovate4Climate as a global platform for climate finance and markets; facilitating innovation on operationalization of Article 6 (of the Paris Agreement), with instruments such as Climate Warehouse aiming to catalyze early participation in climate markets by piloting the creation of demand and

supply of Mitigation Outcomes, and the creation of common market infrastructure. In knowledge and learning, CF Assist supported flagship knowledge periodicals such as State and Trends of Carbon Pricing and the online carbon pricing dashboard will continue providing clients with the latest on carbon pricing and markets around the world. Also, in the pipeline and expected to launch next fiscal year is an e-Course on Carbon Tax aimed to equip clients and climate change stakeholders with cutting edge knowledge around this carbon pricing instrument. With the ongoing and proposed activities, CF Assist is well poised to support the post 2020 operationalizing Paris Agreement in right earnest.





