Strategic Directions for CIF

Joint Meeting of the CTF and SCF Trust Fund Committees

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Agenda Item #5

Monday, June 3, 2019 | Washington DC

Climate investments need to shift into high gear

- The world is nowhere near on track to avoid warming beyond the 1.5°C target
- Limiting global warming to 1.5°C will require "*rapid and far-reaching transitions in energy, land, urban and infrastructures, and industrial systems*"
- A decisive shift in these systems is required in the critical two to three-year window ahead to avoid carbon and climate vulnerability lock-in for the decades to come
- Investments in climate action need to scale up significantly and as soon as possible to enable rapid structural and systemic changes in financial systems and the real economy

"This is our 'use it or lose it' moment: the decisions we take over the next 2-3 years will determine our growth and climate future"
(NCE, 2018)

Source: IPCC (2018)

Facts highlight the urgency

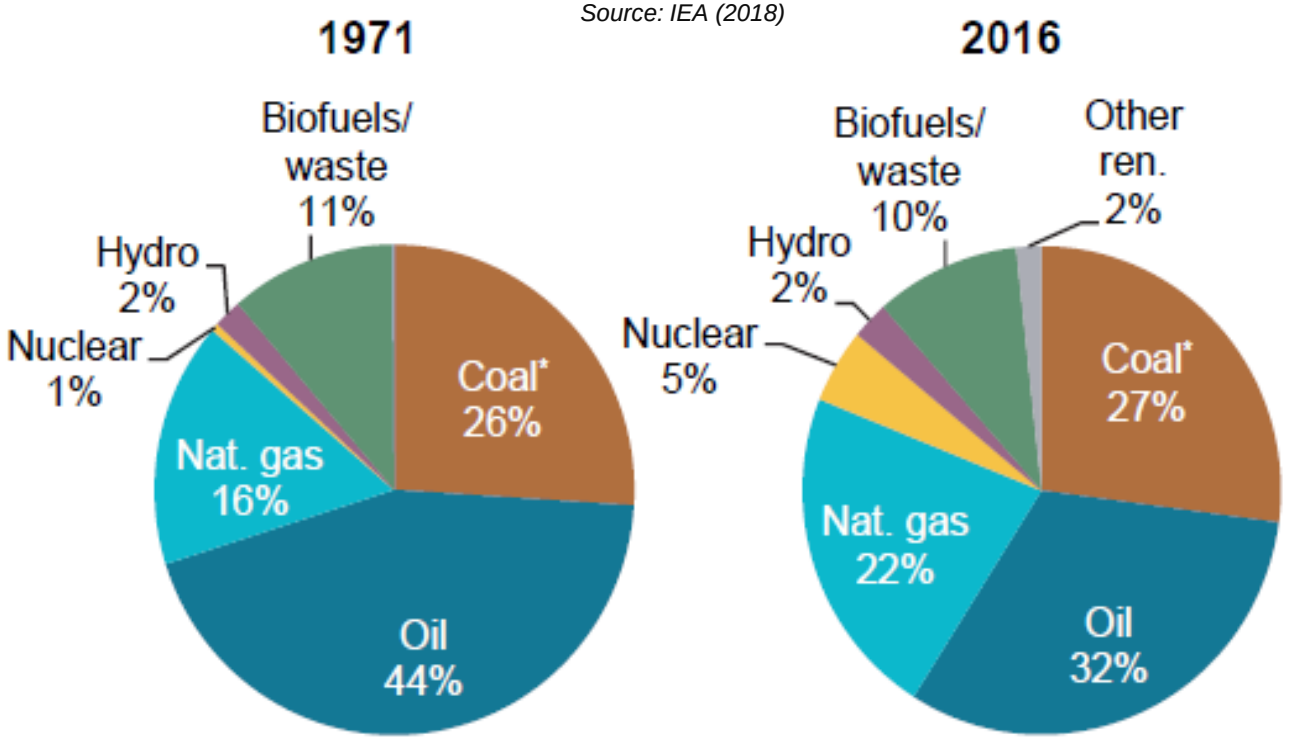
Global carbon emissions hit record high in 2018: IEA

While emissions from all fossil fuels increased, the power sector accounted for nearly two-thirds of emissions growth

Coal still remains the 2nd largest source of primary energy & the largest source of electricity. Coal the single largest source of global temperature increase

Total primary energy supply by fuel

Source: IEA (2018)



Facts highlight the urgency

Climate change may make hurricanes and cyclones deadlier, study finds

A view of Beira (Mozambique) after cyclone Idai

IFRC/RED CROSS CLIMATE CENTRE VIA REUTERS

Cyclone IDAI and Kenneth post-impact situation in numbers (UNICEF, 2019)

Over **177,796 displaced,**
camps decreasing while resettlements increasing, with limited services available

Over **1,005 dead**

3M People in need

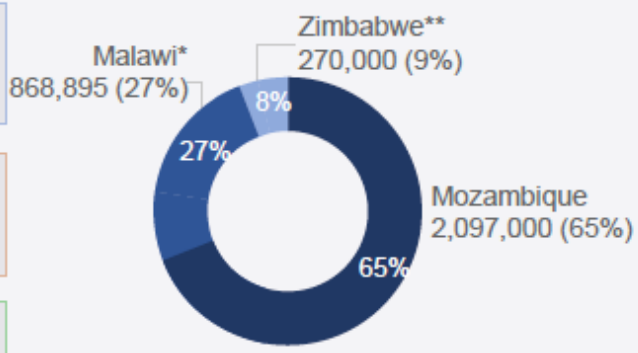
1.6M Children in need

PEOPLE AND CHILDREN IN NEED
BY COUNTRY FOR IDAI AND KENNETH CYCLONE IMPACT

Malawi*
868,895
443,136

Zimbabwe**
270,000
129,600

Mozambique
2,097,000
1,048,500

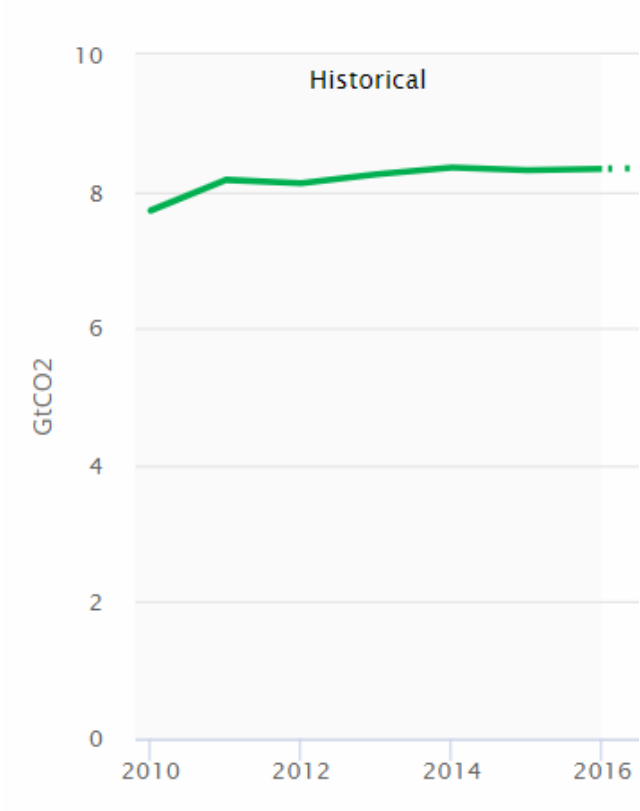


*Malawi has total of 3.3M people in need and 1.7M children in need as per HAC 2019.
**Zimbabwe has total of 5.3M people in need and 2.5M children in need as per HAC 2019.

Facts highlight the urgency

Direct CO_2 emissions from industry increased in 2016, reaching 24% of global emissions

Source: IEA (2018)



Emissions from high-emitting industries such as cement manufacturing are hard to abate. Rapidly growing demand for these services makes decarbonization urgent

Source: Davis et al. (2018)

© Gasmet

Investments in climate action need to scale up significantly and as soon as possible

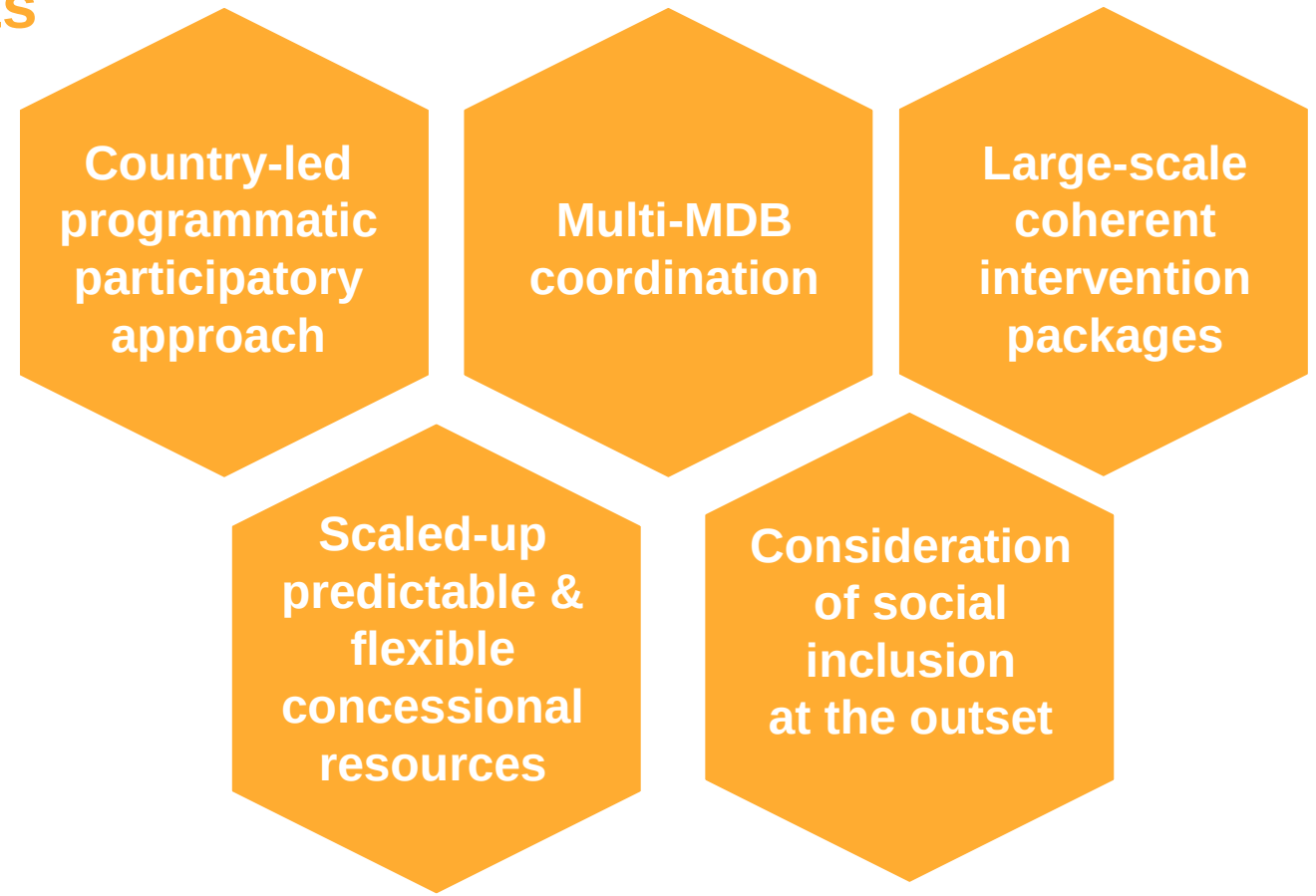
- Energy system: avg. of US$ 3.5 trillion per year on a global basis up to mid-century
- Urban system: the estimated deficit in investment for global infrastructure is growing by more than US$ 1 trillion a year
  - The investment gap in developing countries range between US$ 1.2 trillion and US$ 2.3 trillion per year
- Industry system: cumulative investment needs estimates for energy-intensive corporates are USD 7 to 8.7 trillion, 34% of which would need to be made before 2030

Sources: IPCC (2018); NCE (2018); NCE (2017); IEA (2018).

CIF's business model has proven to help accelerate investments for rapid and systemic climate action

CIF's comparative advantage resides in the unique features of its business model

5 core elements



Source: ITAD et al., (2019).

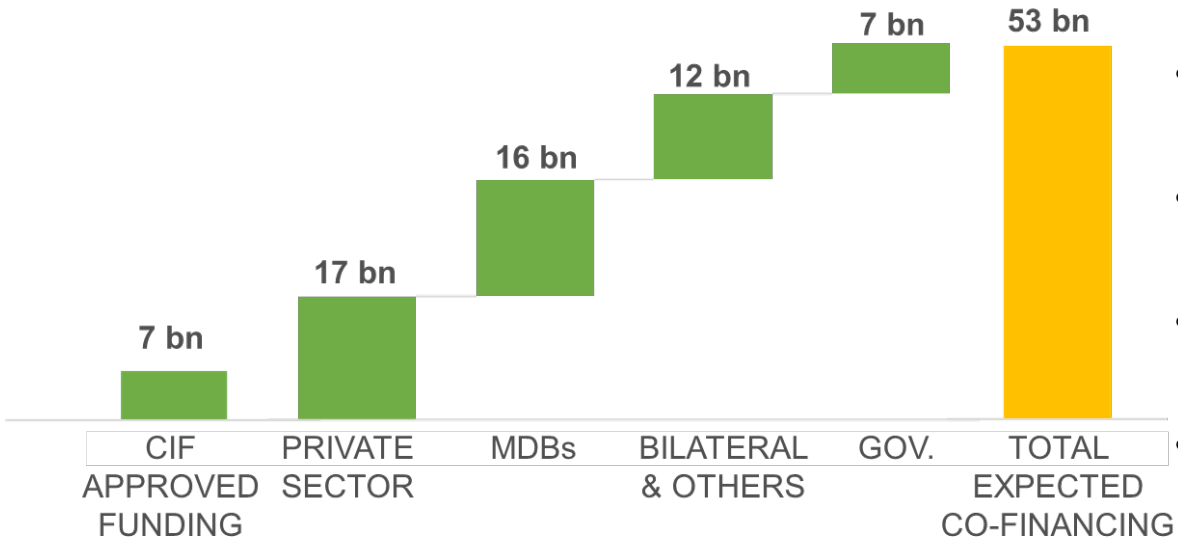
CIF is delivering sizeable impacts on the ground

$8 bn CONTRIBUTED BY 14 DONOR COUNTRIES

$53 bn EXPECTED CO-FINANCING

CLIMATE-SMART INVESTMENTS IN **72** COUNTRIES

CIF CO-FINANCING



CIF's 300+ programs are leading to the following results:

- 51 million tons in GHG emission reductions a year, which is equivalent to taking all the cars in Pakistan or South Africa off the road (10 million cars)
- 26,500 MW in clean power, which is more than the total power capacity of Vietnam and almost the same as Netherlands (26.6 GW)
- 8.5 million people with improved access to energy, which is equivalent to the population of Switzerland or Sierra Leone
- Over 10,000 GWh/year energy saved, which is the equivalent of total annual electricity production of Uruguay
- Over 36 million ha of forests under improved management, the area of Congo or Germany
- 45 million people supported to cope with effects of climate change, more than the population of Argentina or Sudan

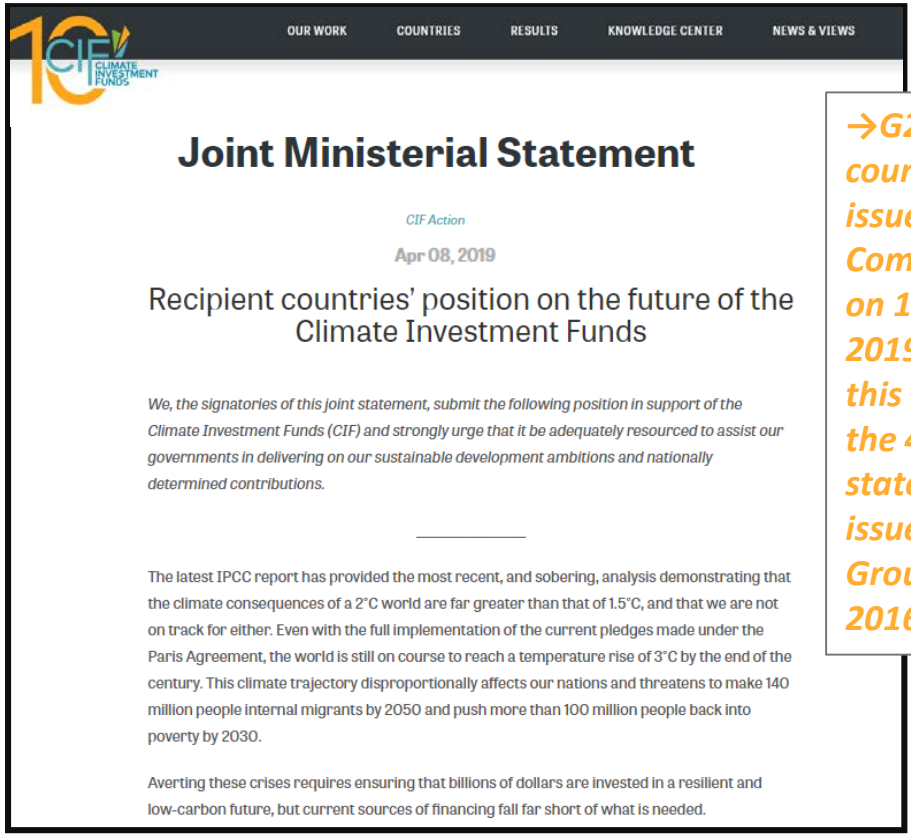
Sources: CIF's Programs Semi-Annual Operational Reports published on May 2019
Note: CIF funding refers to Committee Approved resources; Expected co-financing data as of 31 December 2018

Recipient countries recognize the vital role CIF has played, and are urging for continued CIF support

- Ministers from the following 47 CIF recipient countries signed a Joint Ministerial Statement "***strongly urging that the CIF be adequately resourced in light of the vital role it has played, and continues to play, in helping secure the safety and sustained prosperity of our peoples in a climate changing world***"

47 CIF recipient countries representing a combined population of over 3 billion people

Armenia
Bangladesh
Benin
Bhutan
Bolivia
Brazil
Burkina Faso
Cambodia
Cameroon
Colombia
Cote d'Ivoire
DRC
Egypt
Ghana
Guyana
Honduras
India
Jamaica
Kenya
Kiribati
Kyrgyz Republic
Lao PDR
Liberia
Madagascar
Malawi
Mali
Mexico
Mongolia
Mozambique
Niger
Nigeria
Papua New Guinea
Philippines
Samoa
Sierra Leone
Solomon Islands
South Africa
St. Lucia
Tajikistan
Tonga
Tunisia
Turkey
Uganda
Ukraine
Vanuatu
Vietnam
Zambia



www.climateinvestmentfunds.org/news/joint-ministerial-statement

→G24 countries issued a Communique on 11 April 2019 echoing this call (it is the 4th such statement issued by the Group since 2016)

New frontiers for CIF

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New frontiers for the CIF's business model at play

- CIF has track record and a functional structure in place that can help drive system transitions in priority areas
- Six challenge areas that could benefit from the CIF business model were discussed at the January 2019 Joint TFC meeting
  - Climate-smart urbanization
  - Sustainable transport
  - Energy transition and access
  - Cooling
  - Adaptation and resilience
  - Forestry and sustainable landscapes

New frontiers for the CIF's business model at play

- Following the January 2019 Joint TFC meetings, MDBs developed a set of new program proposals that would:
  - Harness the comparative advantages of the CIF's model
  - Tackle current gaps in the climate finance architecture
  - Support priority sector/technology requiring to take-off
  - Accelerate frontier technologies/markets to nearing tipping points
  - Deliver a pipeline in the next two to three years
  - Mobilize private capital at a significant scale

Three new programs harness the unique strengths of CIF's model

- *Large-Scale Integration of Renewable Energy* to accelerate deployment of flexible grid integration solutions – including battery storage – and energy access
- *Climate-Smart Urbanization* to overcome barriers and scale-up support to cities' climate action
- *Accelerating Low-Carbon Transition in Industry* to help catalyze deep behavioral change and sustained impact in 'tough-to-crack' high-emitting sectors

Note: A fourth program proposal seeking to scale up sustainable landscape-based management solutions is still under development

Large-Scale Integration of Renewable Energy Program

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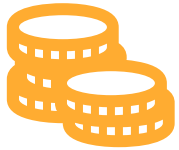
Challenges to the integration of renewable generation into the grid and increase off-grid access

- The share of renewables in the power mix needs to rise from 1/4 today to 2/3 in 2040 to meet climate goals. However, most power systems are not yet designed to deal with the variability and uncertainty of renewable energy generation
- Technologies, tools and services exist to address integration-related challenges, but they fail to attract enough investment

Institutional and regulatory barriers

- Institutional inertia, weak capacity & siloed supply-driven perspective
- Weak policy and regulatory frameworks
- Lack of price on negative externalities



Financial and economic barriers

- High upfront costs & transaction costs
- Inadequate risk-adjusted returns
- Inadequate access to finance
- Market distortions

Technology barriers and challenges

- Lack of track-record
- Inadequate conversion and connection infrastructure
- Transition shortages
- Inadequate skills

Socio-cultural barriers

- Inadequate awareness and risk perception
- Behavioral or lifestyle issue
- Public opposition

The Program's solution is the deployment of an integrated mix of flexibility measures across key areas

Enabling Environment	Enabling Technologies	Enabling infrastructures	Electrification & Demand Management
Sector policy enablers ▪ Set policy targets and roadmap for deep decarbonization ▪ Create/improve auctions/procurement mechanisms for renewable energy ▪ Carbon pricing mechanisms Market & system design & operations ▪ Advanced weather forecasting and training on RE integration for grid operators ▪ Increased time and space granularity in electricity markets ▪ Promoting net billing schemes ▪ Designing carbon pricing / markets, renewable certificate (iREC) ▪ Long term contracting of energy or enabling hedging strategies	▪ Energy storage technologies, such as batteries, pumped hydro, and hydrogen, which are able to back up the variability of renewables and provide various services to the grid ▪ New technologies for real-time grid management that enhance electricity system flexibility and facilitate distributed generation, such as advanced metering systems, wireless network control and demand side management	▪ Grid interconnection to integrate regional markets increasing their flexibility ▪ Grid modernization (to improve control of voltage, frequency, fault current, etc.) and expansion (to improve RE power transfer capacity). ▪ Improve the climate resilience of grids to more frequent increased temperatures and extreme weather events as a result of climate change, particularly for hydropower-dominated systems ▪ Electric vehicle charging infrastructure, opening doors to new markets for renewable generation as well as new ways to store the generation surplus.	▪ Business models that empower consumers, turning them into active participants ▪ New and smart grids, both large and small scale, that complement each other and enable new ways to manage renewable energy generation. ▪ Innovative schemes that enable renewable energy supply, in both off-grid and connected areas with focus on energy access

..enabled by the targeted use of flexible concessional resources through the CIF's business model

Programmatic participatory approach	To enable cross-government levels and cross-ministerial coordination in planning and policy-making To adopt an integrated energy system management approach
Multi-MDBs coordination & action	To encourage sustained investments in multiple energy infrastructure areas
Scaled-up, predictable, and flexible concessional resources	To meet investment-specific needs and mobilize private capital at scale

Climate-Smart Urbanization Program

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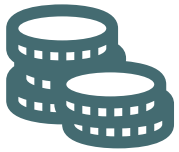
Challenges to low-carbon and climate-resilient cities

- Meeting the climate and sustainable development goals depends on compact, connected, and coordinated use of urban land. This requires an urgent overhaul of the current urban development paradigm and, thereby, the tackling of systemic barriers to cities' climate action

Institutional and regulatory barriers

- Institutional inertia including governance failures and short-termism
- Weak institutional capacity, knowledge and skills



Financial and economic barriers

- Legal barriers undermining PPPs
- Inadequate access to finance
- Misaligned incentives
- Insufficient and/or uncertain risk-adjusted returns

Technology barriers and challenges

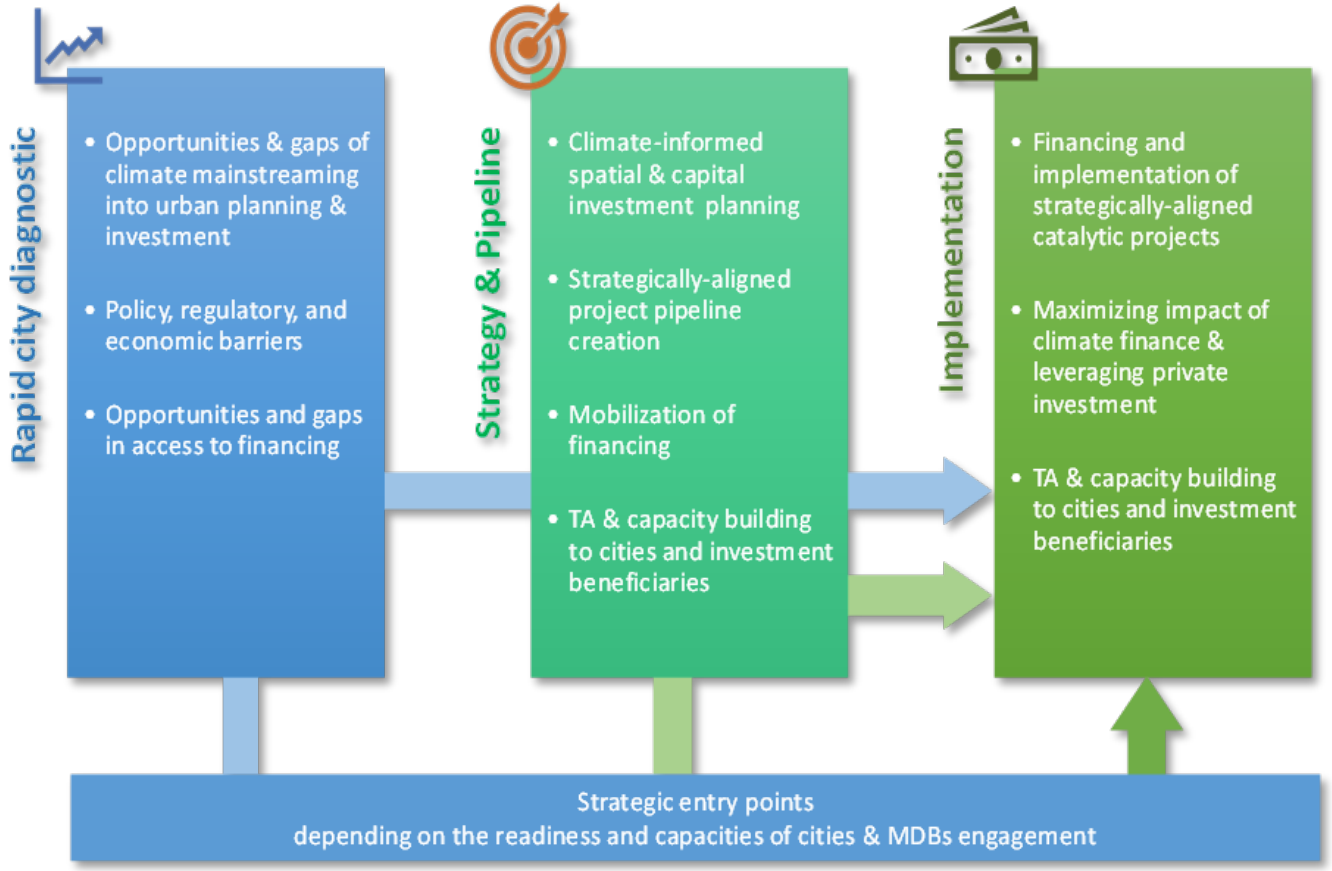
- Limited technical capacity and data availability to evaluate climate-related impacts

Socio-cultural barriers

- Inadequate public awareness of climate-related risks and impacts

The Program's solution is a multi-phased approach to diagnose, plan and invest

Multi-phased approach: strategically-aligned deployment



Inclusive sectoral coverage

- Achieving good density
- Transforming motor-dominated corridors into transit-oriented development
- Promoting electrification of public & private transportation
- Enhancing the use of renewable energy
- Low-carbon resilient housing stock, energy efficient infrastructure & services
- System approach for efficient cooling
- Integrated waste management
- Green spaces

..enabled by the targeted use of flexible concessional resources through the CIF's business model

Programmatic participatory approach	To align multiple actors' behavior and incentives around a common transformative vision
Multi-MDBs coordination & action	To foster strategic partnerships, mobilize institutional and political support and resources toward strategically-linked interventions
Scaled-up, predictable, and flexible concessional resources	To increase cities ownership, remove barriers and bring investment plans to action

Accelerating Low-Carbon Transition in Industry Program

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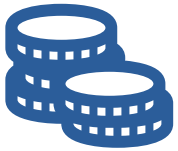
Challenges to the low-carbon transition in industry

- The biggest challenge in meeting the Paris Agreement lies in the major harder-to-abate industries
- Many opportunities exist to reaching net-zero CO_2 emissions from these industries by mid-century. However, industry faces several barriers that prevent it from shifting investments towards low-emission alternatives

Institutional and regulatory barriers

- Institutional inertia & weak capacity
- Weak policy and regulatory frameworks
- Lack of/inadequate carbon price



Financial and economic barriers

- High upfront costs
- Inadequate risk-adjusted returns
- Inadequate access to finance

Technology barriers and challenges

- Technology risk perception due to inadequate track-record
- Supply chains not conducive to tech transfer
- Inadequate technical skills

The Program's solution is an integrated package of interventions at multiple levels

National	Sectoral	Corporate	Industrial facility/technology
▪ Support countries to update their Nationally Determined Contributions and long-term low-carbon strategies under the Paris Agreement ▪ Support national actions required to drive investments into low-carbon corporate and industrial solutions e.g. carbon pricing and energy efficiency standards ▪ Support the development of markets for Internationally Traded Mitigation Outcomes (ITMO) approaches ▪ Enhance the regulatory environment for ITMO approaches such as GHG MRV and accounting under NDCs	▪ Develop sectoral low-carbon "roadmaps" addressing policy, regulatory, social and investment barriers to transformational change ▪ Enhance existing Nationally Appropriate Mitigation Actions to leveraging significant climate finance for catalytic whole-of-sector transformation approaches ▪ Promote sector and stakeholder group inclusivity and country ownership over sectoral low-carbon transformation pathways	▪ Piloting and accelerating the implementation of the TCFD's recommendations ▪ Managing GHGs emissions in the supply chain by promoting life-cycle emission analysis and scaling up green procurement approaches ▪ Build corporate's technical capacity to issue green bonds and catalyze demand from investors through tailored investment support e.g. credit enhancement ▪ Introduce corporate level MRV systems	Energy efficiency technologies ▪ High energy efficient production/process machineries ▪ Energy savings measures for process equipment e.g. heat recovery ▪ Energy management system upgrades ▪ Electrical and hybrid handling equipment and charging points/electrification solutions ▪ Low-carbon transport related technologies e.g. anti-ilding technologies, hybrid traction systems Renewable energy technologies: ▪ Facility level solar systems, biogas/biomass use, energy storage, advanced waste management

..enabled by the targeted use of flexible concessional resources through the CIF's business model

Programmatic participatory approach	To enable the private-public cooperation required to develop and implement Paris-aligned national and sectoral roadmaps
Multi-MDBs coordination & action	To drive deep behavioral changes and generate demonstration effects that go beyond the direct impacts of each MDB's individual investments
Scaled-up, predictable, and flexible concessional resources	To address financial barriers that prevent industrial corporates from investing in low-carbon, climate-resilient technologies

Driving innovation

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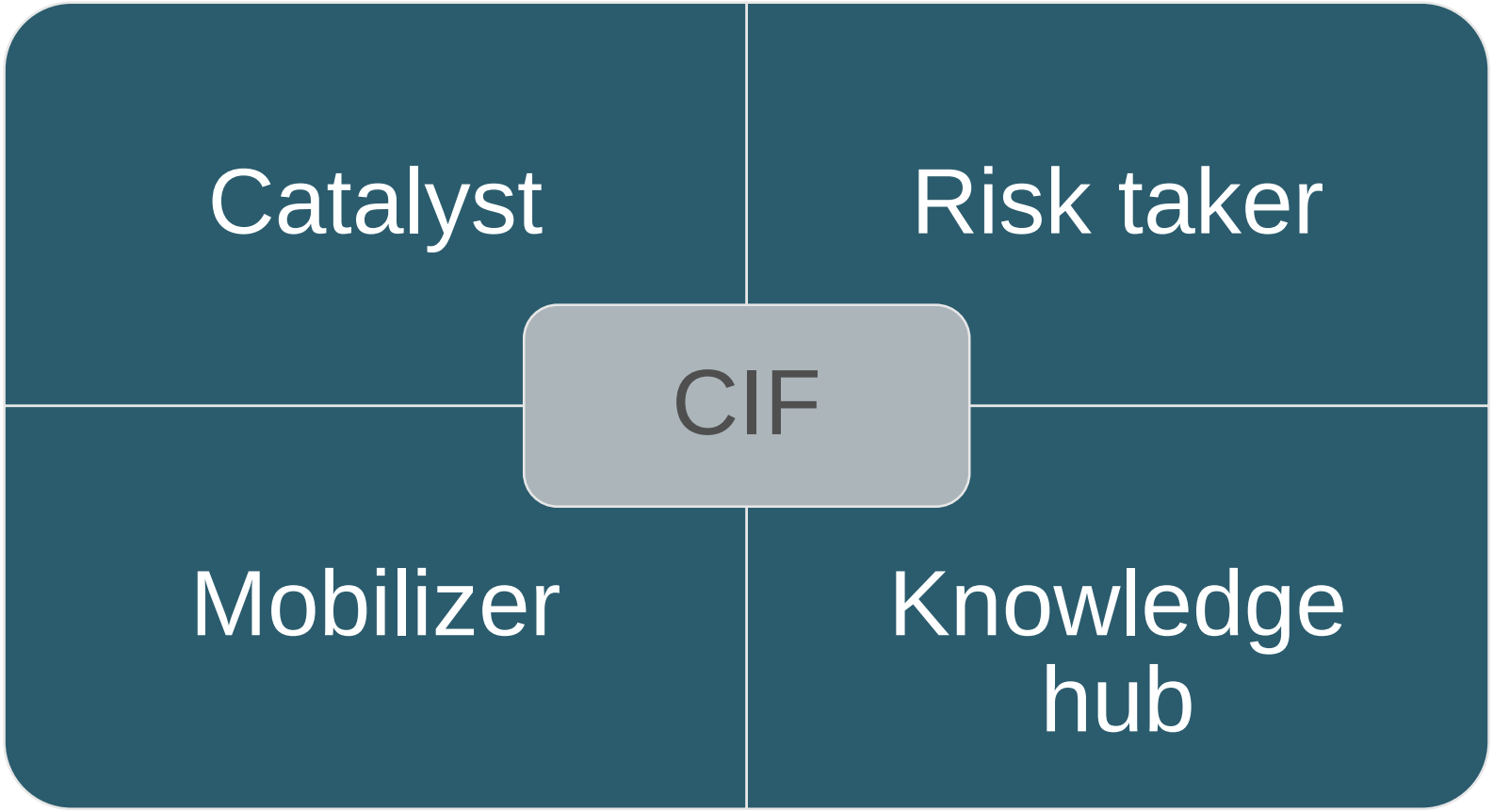
CIF's proven business model can push boundaries to drive innovation

- The new programs offer an opportunity to accelerate MDBs' efforts in pursuing frontier approaches in difficult contexts and attracting private capital in new ways
- CIF can foster enhanced dialogues and learning with MDBs, and support them in the design and implementation of innovative financing strategies to
  - Tackle barriers to private investments that have not yet been addressed and/or that could be addressed more effectively and efficiently
  - Mobilize capital toward areas that have not yet been able to attract MDB or commercial capital at all or at scale
  - Accelerate recipient countries' ability to deliver on their climate and sustainable development targets

CIF partnered with The Lab to identify innovative blended finance instruments and business models

- The analysis of 41 instruments of The Lab has helped identify opportunities for:
  - Enhancing the CIF's enabling role
  - Expand MDBs' toolbox to overcome persistent barriers



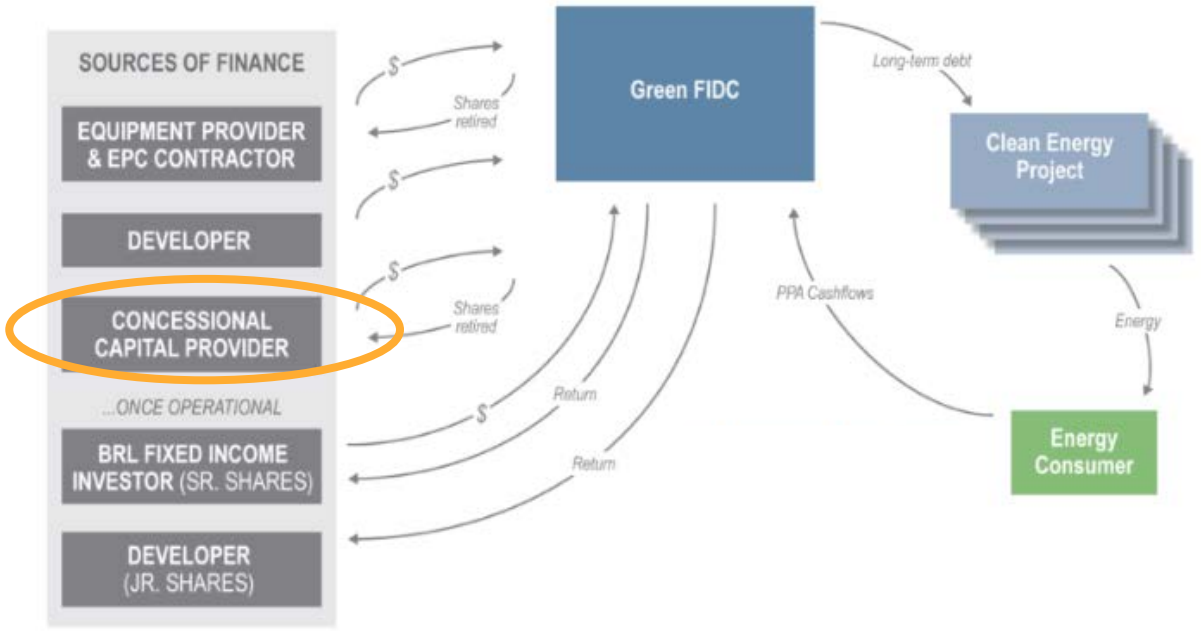
Example of innovative instrument to explore under the Large-Scale Integration of Renewable Energy Program

Green Receivables Fund (Green FIDC)

Project finance instrument that allows green projects to secure financing based on future cash flows through an asset-backed vehicle

Scale up and increase the availability of long-term private finance for green projects

- Goal: Provide lower-cost, long-term capital to clean energy project
- Innovative feature: combines green certification criteria, and a financial model tailored to the needs of renewable energy and energy efficiency projects to an existing instrument, the FIDC
- Key benefits:
  - Mobilization potential: enables green projects to tap into capital markets
  - Attractiveness to private investors:
    - The FIDC is well-known among domestic investors
    - Offers greater liquidity, and tax efficiency compared to alternatives
    - Allows for segregation of operational and financial risks



Source: www.climatefinancelab.org

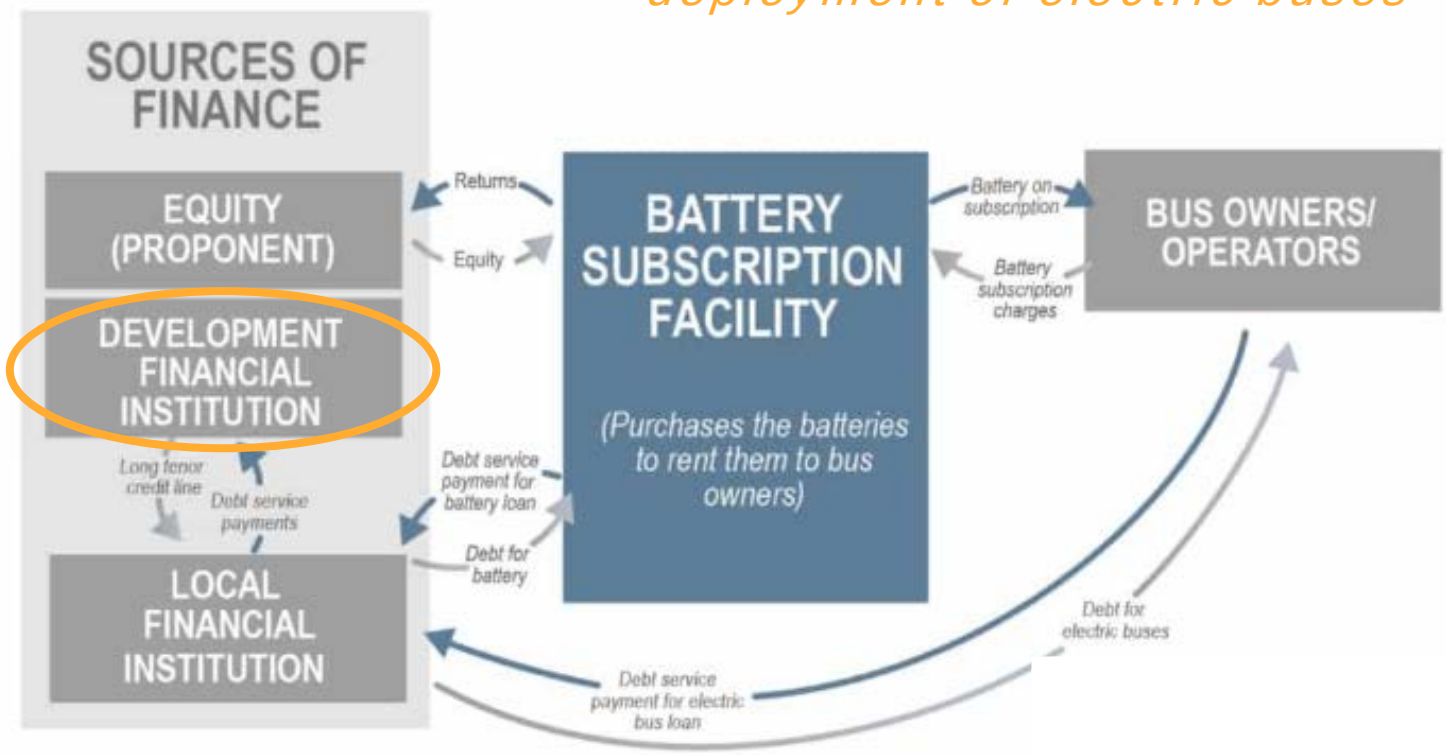
Examples of innovative instrument to explore under the Climate-Smart Urbanization Program

Battery Subscription Facility

Pay-per-service vehicle investing in batteries for electric buses, and providing them to bus operators on a subscription basis, charging for use on daily or per kilometer rates

Accelerating deployment of electric buses

- Goal: Enable the mass adoption of electric buses
- Innovative feature: Enables third-party led, non-subsidized deployment of electric buses at scale
- Key benefits: Demonstration potential i.e. prove a business model where there is currently no track record and appetite from commercial investors



Source: www.climatefinancelab.org

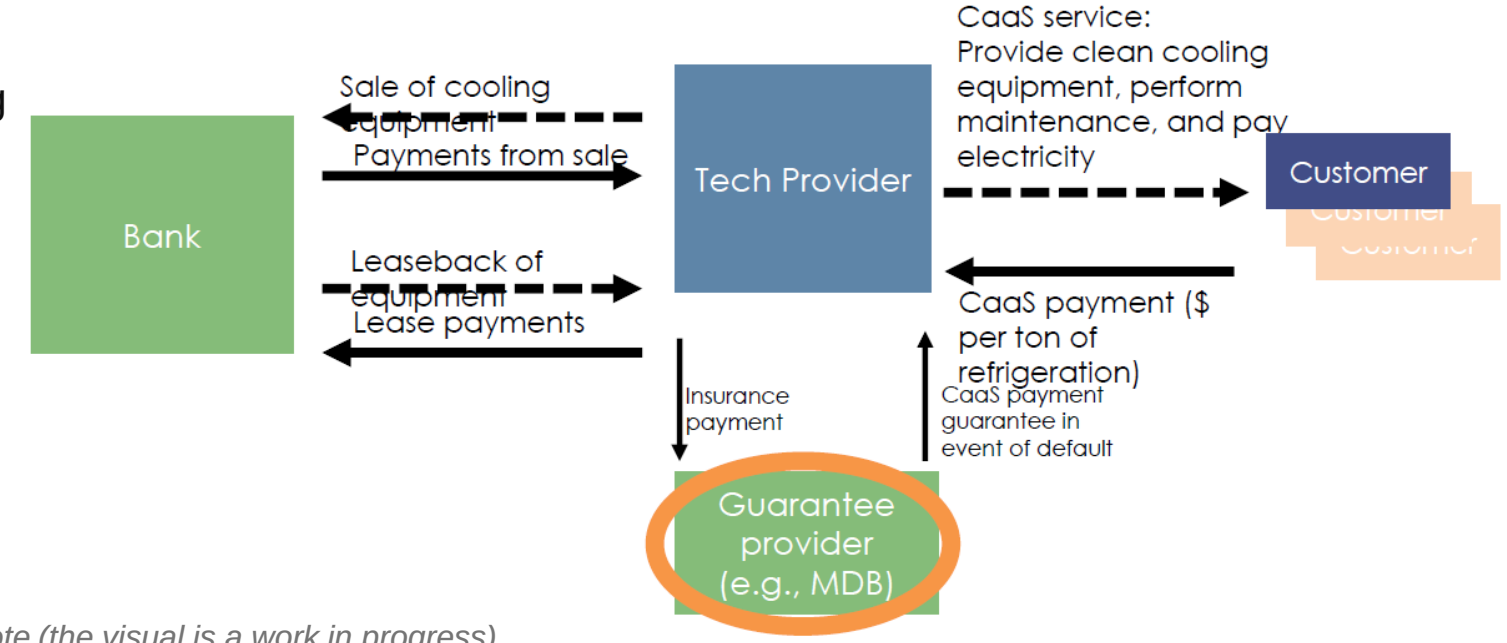
Example of innovative instrument to explore under the Accelerating Low-Carbon Transition in Industry Program

Cooling as a Service (CaaS)

Pay-per-service model with integrated financial tools to recapitalize technology providers who own, maintain and operate the equipment. CaaS enables customers to base their investment decision on life-cycle cost, and pay per-unit of service used.

Scaling-up efficient and clean cooling systems

- Goal: Decrease energy consumption and potent HFC emissions from cooling systems through a pay-per-service model
- Innovative features:
  - Pay-per-service model applied to cooling to incentivize the design and use/re-use of efficient cooling technologies
  - Includes a 'sale-and-leaseback' to engage financial institutions
- Key benefits: Accelerate uptake of energy efficient state-of-the-art technologies resulting in accelerated emission reductions



Source: www.climatefinancelab.org: https://www.caas-initiative.org: Note (the visual is a work in progress)

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Thank you!

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