

GREEN  
CLIMATE  
FUND

# Financing modalities for cities' climate actions: leveraging climate and blended finance

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# The APPETISER – Cities and GHG emissions: INDICATIVE 80% burden of blame

## Average per capita GFG emissions in cities:

Rotterdam 29.8 tCO<sub>2</sub>eq.  
Sydney 15 tCO<sub>2</sub>eq.  
Shanghai 12tCO<sub>2</sub>eq.  
Mexico City 4.25 tCO<sub>2</sub>eq.  
Amman 3.4 tCO<sub>2</sub>eq.  
Colombo 1.54 tCO<sub>2</sub>eq.  
Kathmandu 0.12 tCO<sub>2</sub>eq.



### Caveat:

Close interaction between urban form, service access and per capita GHG emissions;  
Low and high neighborhoods in the same city vary by a factor of 10. Density play

## The IEA estimates:

While currently 71% of GHG emissions;  
76% of energy related GHG by 2030 will come from the cities.



### Caveat:

Scope 1: production-based emissions  
Scope 2: consumption-based emissions  
Scope 3: consumption-based emissions embodied in fuel, food, building materials and water

## Importance of urban economies:

Both **Tokyo** and **New York** gave a greater GDP than Canada;  
by 2030 **New Delhi** will have a greater GDP than Malaysia.



### Caveat:

Focus on urban form and integrated Transportation system;  
Greater material, products and activities efficiency; low carbon energy / lower energy intensity

# The Rationale

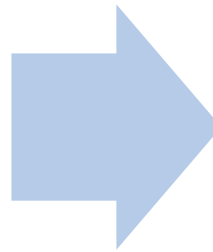
The rationale for (climate change transformative) urban investment is based on the UNFCCC Technical Paper 13 (2014) ...

referring to integrated, cross-sectoral mitigation activities in urban areas, that illustrates **the transformational impact:**

***“... through strong mitigation actions aimed at low-carbon, climate-resilient development at the local level across the key sectors such as buildings, transport and waste,***

***...cities in aggregate could reduce their GHG emissions in these core sectors **by an estimated 24 per cent by 2030 and by 47 per cent by 2050*****

*(Erickson et al., 2014)”.*



To undertake its core mandate to foster paradigm shifts and transformation addressing climate change, the **GCF** needs to

**a) find ways to influence and**

**b) where possible fundamentally alter the form and functioning of urban systems:**

which currently perpetuate resource-intensive and high-carbon process.





# Transformative action fields for cities

Transformative Action Fields	2030 GHG emissions reduction	2050 GHG emissions reduction
Decarbonization of energy sector: renewable energy and storage	50% to 70% renewables, saving 35% - 45% of GHG At cost \$40-\$80 per MW	Up to 90% reduction on the basis of the same trend
Improving energy efficiency in building stock	Buildings: 32% reduction in primary material consumption and associated GHG	Buildings: 53% reduction in primary material consumption and associated GHG
Mobility and transport	20% to 45% emissions reduction	Same trend
Urban form	20% emissions reduction	40% emission reduction combined with transportation strategies
Urban resilience	DRR / Optimizing value for money through resilience enablers	DRR / Optimizing value for money through resilience enablers
Materials and material flow	32% reduction in primary material consumption and associated GHG	53% reduction in primary material consumption and associated GHG
Improving waste management	20 % reduction in related GHG emission	40% reduction in related GHG emissions



Drivers of change across the GCF results area

**Four drivers of paradigm-shift**

**Paradigm - shift pathways (Transformative Action Fields)**

- Decarbonized & distributed Energy
- Energy efficient buildings
- Green & mobility-enhanced cities
- Circular urban economy
- Compact & resilient urban form

**Transformational planning & programming**

- Strengthen mechanisms to implement NDCs and urban climate targets through planning and programming process
- Foster integrated urban, transport, energy and infrastructure development
- Institutional strengthening for pipelining and project development
- Develop and apply new technical standards (MES etc) and performance standards in support of the above

**Catalyzing climate Innovation**

- New business models that reduce upfront capital cost requirements and tap new revenue sources ( ex: pay-as-you-go schemes; land value capture, etc.)
- Support to integrated implementation of new technologies
- New institutions (ESCOs, etc.)
- New urban development models (TOD, etc.)
- New legislation (producer responsibility)

**Mobilization of finance at scale**

- Increased access to of cities and city institutions to domestic and international capital markets through
- Support to pipeline development at scale
- Catalyse and participate in private sector funding vehicles eg SPVs for PPPs
- Targeted investments in catalytic funds, city raisings and PPP structures
- Support to direct access AEs (especially NDBs) in subnational climate financing
- Mechanisms to enhance the use of blended finance, sub-sovereign finance and mechanisms to leverage the private sector to work for cities – especially in SIDS and LDCs
- Mobilization of national and global PIC funds through capital markets
- Incentivize IFIs to leverage resources and to incentivize efficiency and innovation

**Expansion and replication of knowledge**

- Developing knowledge products on business models through the Community of Practice for each TAF
- Utilise partnerships within CCFLA to upscale action on project development, PIC financing and NDBs
- Partner with other agencies & networks to maximize knowledge feedback / learning loops in each TAF sector
- Effectively disseminate knowledge through GCF knowledge repository and networking events

# Diagnostics – urgent need for urban climate financing recalibration at global scale

## National Governments

Opportunities	Threats
Institutional capacities	Limits to local fiscal capacity / appetites
Convening power	Efficiencies
Political concentration	FM Capacities

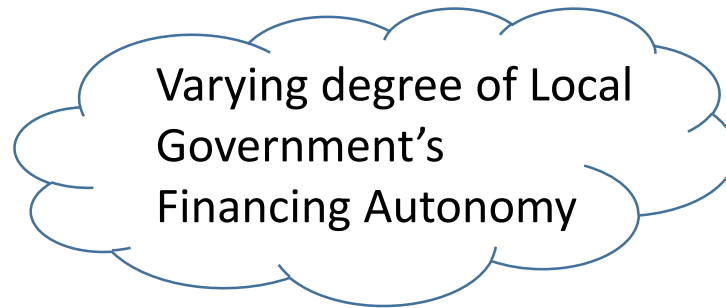
### TOP-DOWN approaches

- ODA financial sources
- UNFCCC financial mechanisms
- World Bank PPCR
- National financing mechanisms

Central transfers / Ad hoc revenue sources  
 Divestment pressures  
 Decentralization pressures



Limited public finance sources  
 Infrastructure Service Provision  
 Resilience and DRR responsibilities  
 Conflicting objectives



**INEFFECTIVE  
 MITIGATION & RESILIENCE  
 FINANCING DELIVERY  
 CONDUITS**



## Local Governments

Opportunities	Threats
Governance	Technical Capacities
Fiscal space: land and properties	Accountability
Efficiencies	FM / Institutional Capacities

### Bottom-up approaches

- Subnational financing
- Local / community financing
- Output Funding / Results Based Management approach and considerations;
- Capital markets

# Possible solutions...forward thinking approach to climate finance for cities

## • Demand

- Capacity for structuring hybrid / catalyzing financing solutions – knowledge transfer and policy support are a must;
- Project development vehicles;
- Greening of existing public finance flows;
- Private participation in financing;
- Legal and regulatory framework, including arbitration mechanism;
- Enhancing creditworthiness, boosting utilities credit rating and municipal revenue autonomy, fiscal and administrative capacities;
- On a long run, strengthen domestic capital markets

## • Supply

- Facilitative financing mechanisms (municipal development funds);
- Incentive structures (risk mitigation and credit enhancement);
- Specialized financial instruments and mechanisms (pooled finance, insurance, revolving funds, municipal bonds, guarantees, viability gap subsidies and funding, etc.)
- Public money as a ‘seed’ source (guarantees, insurance, incentives, knowledge and policy support, preparatory technical assistance, etc.) to attract and mobilize private finance with staying power through de-risking structures and transformative interventions;

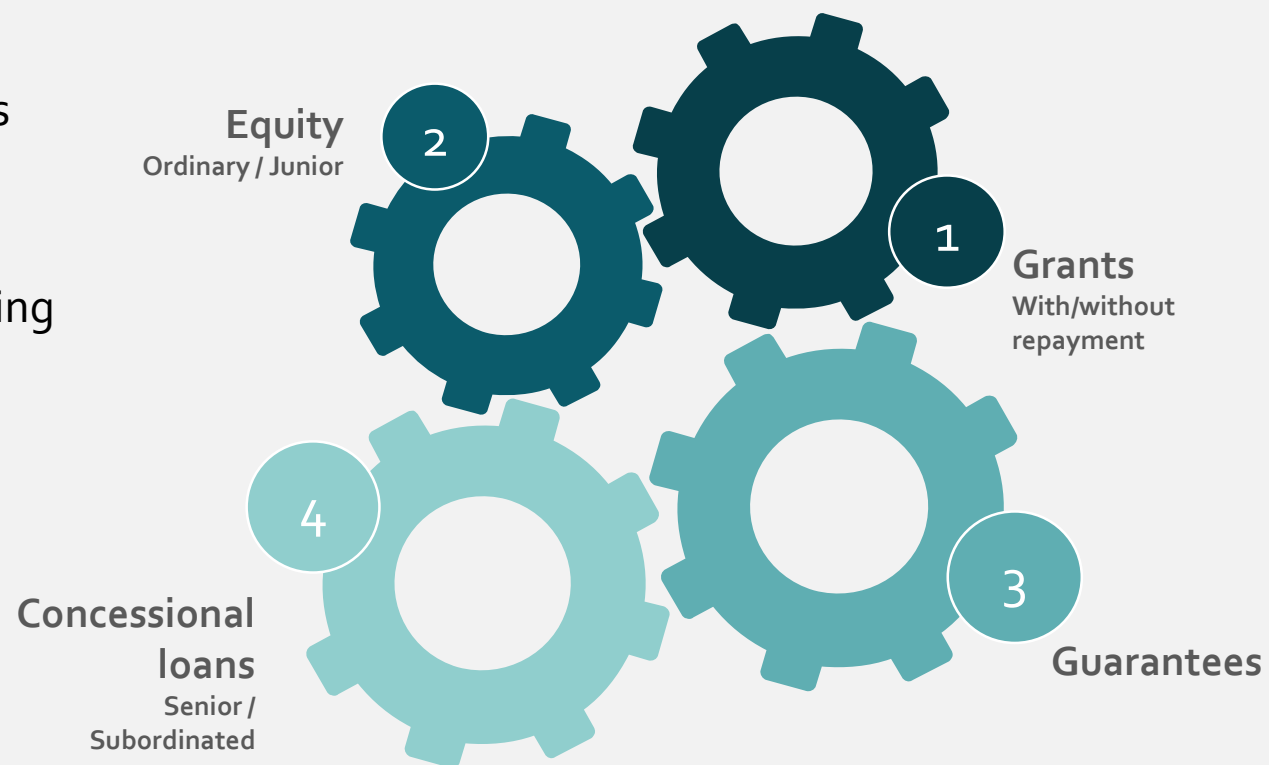
←—————→  
IMPORTANCE OF PROPER SEQUENCING OFTEN UNDERSTATED



# HOW WE INVEST

## Through a range of financial instruments

- We invest through a range of financial instruments, including equity, debt, guarantees and grants
- These can be combined into a variety of financing structures, e.g.:
  - Project-based (SPVs)
  - Direct equity/debt funds
  - Fund-of-funds
  - Structured finance vehicles
  - On-lending



# Financial Terms and Conditions of selected GCF instruments

- Grants
  - available in major convertible currencies;
  - Grants without repayment contingencies (no reimbursement required);
  - Grants with repayment contingency, terms adapted to the required level of concessionality of the project or programme.
- Concessional Loans

Type of Concessional Loans	Major Convertible Currency	Maturity (years)	Grace period (years)	Annual principal repayment Years 11-20 or 6-20 (% of initial principal)	Annual principal repayment Years 21-40 (% of initial principal)	Interest	Service fee per annum	Commitment fee per annum
High	Any	40	10	2%	4%	0.00%	0.25%	Up to 50 bps
Low	Any	20	5	6.7%	NA	0.75%	0.50%	Up to 75 bps

# ROLE OF THE GREEN CLIMATE FUND

## De-risking & Concessionality

### Need for concessionality

- › Reducing risk in a transaction;
- › Anchoring role for co-investors to participate;
- › Fostering behavioral changes conducive to stronger climate impacts;
- › Creating demand by making climate solutions affordable.

### Instruments of concessionality

- › Pricing concessionality
- › Subordinated position;
- › Flexible term & tenor
- › Flexible guarantees
- › Fit for purpose grants to foster future climate action



Leveraging private sector, institutional investors and DFIs funding to **support green growth in Developing Countries**



# WHAT WE LOOK FOR



## Climate Rationale and Additionality

### Additionality of GCF Funding

- Why GCF?
- Projects must crowd-in additional financing on top of GCF

### Strong Climate Rationale

- Climate Impact of investment is key
- Scientific evidence to provided

### 8 Results Areas



Energy



Transport



Buildings, Cities, Industries



Ecosystems



Livelihoods of people & comm



Health, food and water security



Forests and land use



Infrastructure

### Compliance with GCF Policies

- Fiduciary standards
- Risk Management
- ESS
- M&E Criteria
- Gender Policy
- Legal Standards

### Country Driven Approach

- Alignment with NDCs
- Early country (NDA) engagement
- No-objection letter

### Six Investment Criteria

1. Impact Potential
2. Paradigm Shift Potential
3. Sustainable development potential
4. Recipient needs
5. Country ownership
6. Efficiency & effectiveness

### Completeness of documentation

- Feasibility study
- Financial Model
- Project Timetable
- Gender Analysis
- Environmental studies
- No-objection letter



# Why cities and climate change: Opportunities

- Cities and urban areas are identified in SR1.5 as one of the four critical global systems transitions **that can accelerate ambition and upscale climate action.**
- Significant **gap** between
  - conceptualizing climate action plans in cities;
  - and implementing dedicated hard-core infrastructure interventions;
  - backed by policy, regulatory reforms and cost recovery measures.
- A lot of actors in helping cities conduct studies, but limited actors and TA instruments helping with making projects viable and enabling proper access to long term finance.

**Structural change** is about the transformation of the economy by **transferring resources to higher productivity** activities:

- Diversifying production
- Upgrading exports & production
- Increasing labor productivity

The extent of “decoupling” economic growth and emissions **depends entirely on reductions in energy and carbon intensity.**

# Selected GCF Portfolio in Cities / urban and energy efficiency sector

Title, Country and AE	Total Financing	GCF financing
ADB Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Project (AHURP) Mongolia	\$544 million	\$95 million concessional loan \$50 million grant
ADB ASEAN Catalytic Green Finance Facility (multi country: Cambodia, Indonesia, Lao PDR, Malaysia, Thailand and the Philippines)	\$3.385 billion	\$ 280 million concessional loan \$20 million grant
World Bank Viet Nam: Scaling Up Energy Efficiency for Industrial Enterprises in Viet Nam	\$ 497 million	\$75 million guarantee facility \$11.3 mil grant
ADB Catalyzing Climate Finance (Shandong Green Development Fund) PRC	\$ 1.5 billion	\$100 million concessional loan
UNDP Scaling-up Investment in Low-Carbon Public Buildings, Bosnia-Herzegovina	\$122 million	\$17.3 million grant
EBRD Green Cities Facility (multi-country: Albania, Armenia, Georgia, Jordan, Moldova, Mongolia, North Macedonia, Serbia, Tunisia)	Euro 600 million	Euro 65 million concessional loan; Euro 22 million grant

# FP082 Catalyzing Climate Finance (Shandong Green Development Fund)

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Part of Beijing – Tianjin – Hebei area

Population 100 Million

3,000 km coastline

Rank 8<sup>th</sup> (GDP / Capita)

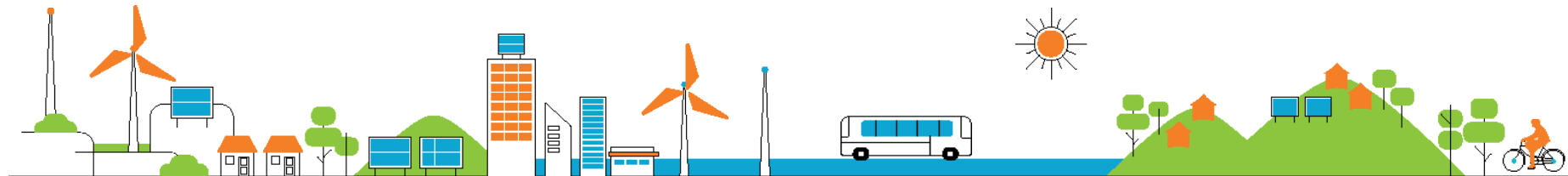
Highly industrialized => Representative of PRC

Largest energy and coal (10%) consumer

## Proactive Provincial Climate Change Policies:

Decarbonize the economy: Industrial Transformation

Peaking CO<sub>2</sub> emission by 2027 (3 years ahead of NDC)



# FP082: GCF Investment Framework

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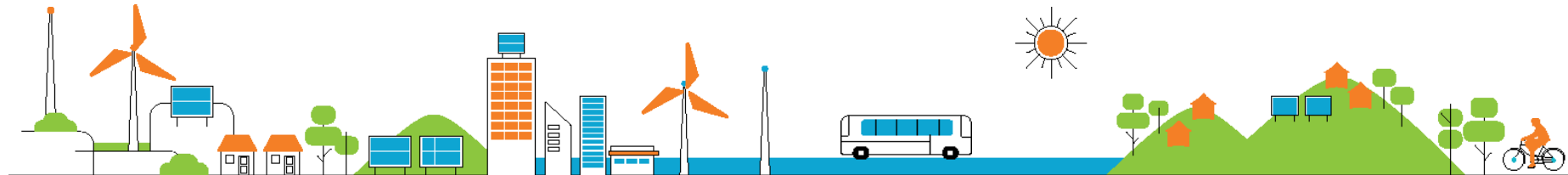
**Generating pipeline** bankable climate positive subprojects  
Screened and Assessed

**Six Investment Criteria <-> Baseline**

**Transformational:** H2; Green Corridor, Circular economy...

**Advanced Benefits:** Biomass; Renewable Energy, Green Procurement (EU Guidelines), ...

**Good Practices:** Climate positive subprojects in line with Government Regulation





# FP082: Monitoring and Evaluation

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## ***Dedicated M&E:***

- International Green / Financial Rating (funded under ADB Loan):  
Each subproject (Baseline & Completion) & SGDF (> Year 5)
- Reporting DMF Milestones and Targets
- Tracking Funds: Disbursement & Reflows (**GCF Ringfenced**)

⇒ Integrity Due Diligence of Investors and subprojects sponsors

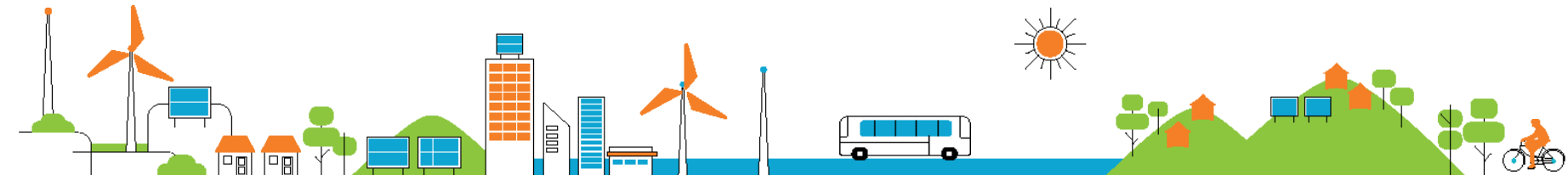
⇒ **GCF Investment Framework: Included ADB Loan Agreement**

⇒ **GCF Annual Performance Report**

⇒ ADB Approves First 3 Subprojects

⇒ ADB Statement of Utilization of Funds

⇒ Free limit (€70 M)

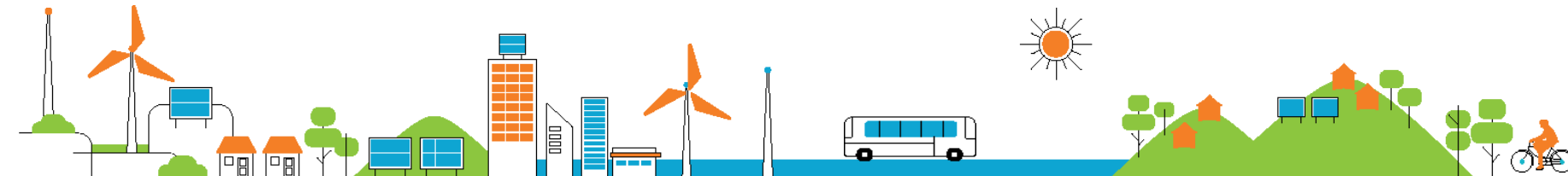


# FP082: Value-addition: Catalytic Funds

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- Shift from “Business as Usual” to Good Practices; Advanced Benefits and Transformational climate positive subprojects based on GCF international climate standards
- Selection subprojects based on:
  - Climate mitigation/adaptation benefits (to be maximized)
  - Bankability (to be improved)
- Necessary critical mass of catalytic funding: Leveraging Private Institutional Commercial (PIC) Funds > 5
- Leveraging allows SGDF to enter sectors with low interest from PIC investors: Sponge Cities; Sanitation; Circular Economy

⇒ SGDF investments: **Targeted** (climate related); **Time Bound** (5 to 10 y.); **Transitional** (refinancing by PIC after 5 to 10 years)



# FP082: GCF Additionality vs. ADB Approved

	ADB	GCF \$100 M	GCF \$180 M
TRANSFORMATIONAL	10%	20%	25%
ADVANCED BENEFITS	50%	50%	50%
GOOD PRACTICES	40%	30%	25%
MITIGATION (MT CO <sub>2</sub> eq Emissions reduced)	25 MT	37.5 MT	50 MT
ADAPTATION (Persons)	2 M (2027)	7.5 M (2040)	10 M (2040)
COST (\$ per MT CO <sub>2</sub> eq reduced)	\$60	\$50	\$30

**Fund Management Carry => Meet Portfolio Targets**

**GCF Funds ring-fenced:** Restricted on Equity & Sub-Funds

**ANNEX**



# Blended Finance

- *‘Blended finance is the strategic use of development finance for the mobilization of additional finance towards sustainable development in developing countries.’*

- Reference: OECD DAC Blended Finance Principles

- **REALITY CHECK: DEVELOPMENT COUNTRIES, ESPECIALLY LDCs HAVE LITTLE CAPACITY FOR PROJECT FINANCE SOLUTIONS:**
- **Blended finance will NOT work if the fundamental economics are not right, and project is NOT financially feasible;**
- **Infrastructure projects in many poorer developing countries lack secure stream of positive cash flow;**
- **Hence the supply of high impact, financially feasible projects is thin on the ground; even more so when considering climate finance instruments and climate rationale approach**

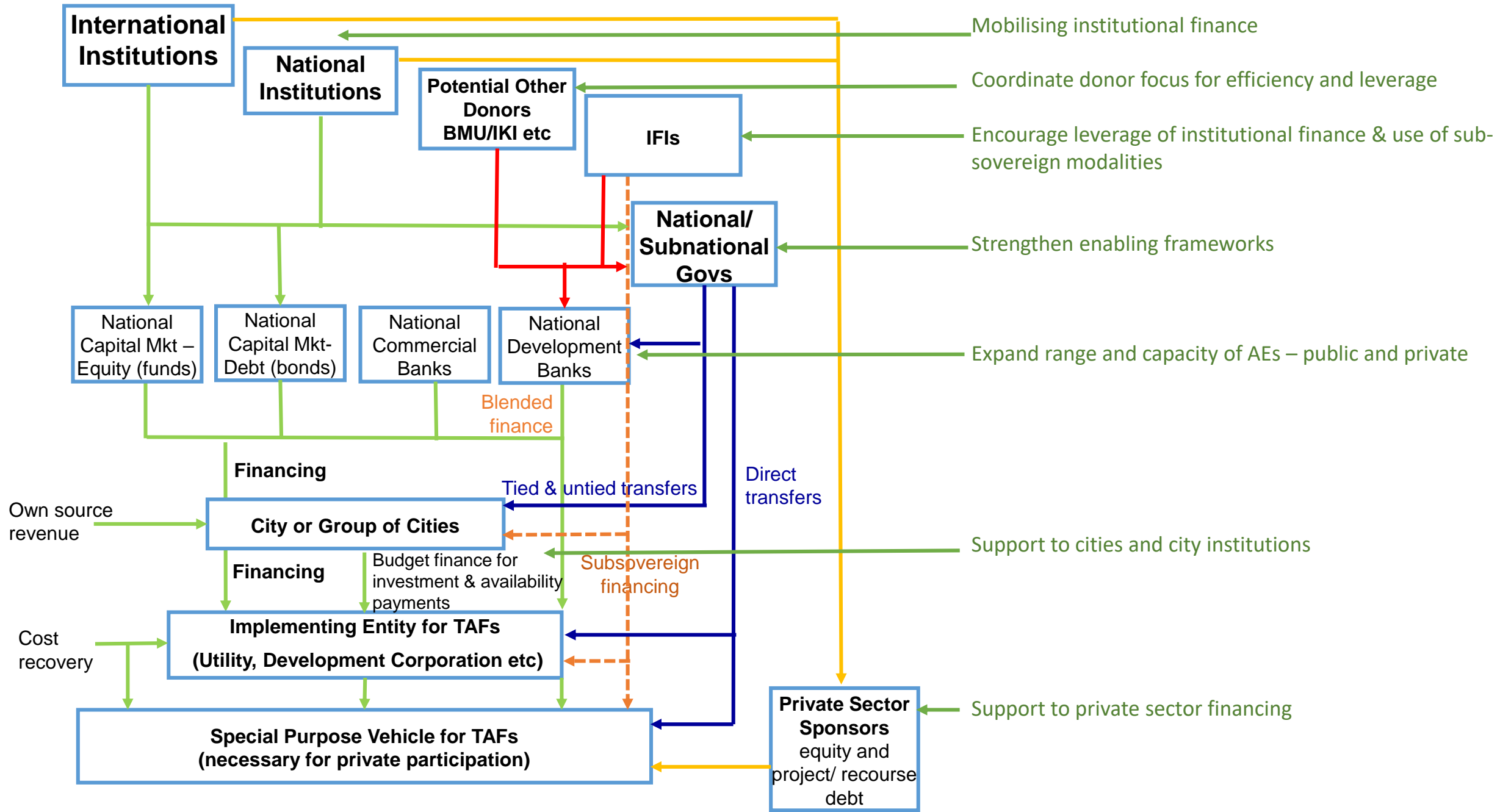
*Current mechanisms for financing resilient, urban and municipal infrastructure in most of the developing countries of GCF interest rely heavily on the (often) financially weak public sector, with the result that **governments’ fiscal positions become the limiting factor (availability of sovereign guarantees) in what can get built and be provided.***

# Specific implications for smaller infrastructure interventions

- World Bank estimates that **less than 4% of the largest 500 cities in developing countries** are considered creditworthy in international markets and **less than 20% are considered creditworthy in local financial markets**;
- **Regulatory barriers**: fewer than ½ of developing countries allow devolved fiscal and/or legislative powers to provincial or municipal administrations; **56% of developing countries do not allow any borrowing capacities to local governments**.
- **Lack of planning and forecasting capacities / skills** (only **20% of the world's 150 largest cities have the basic analytical tools** at their disposal for integrated low emission urban and transport planning);
- Significant structural impediments to **good governance** (fiscal and management transparency, financial planning & management capacities, good practices benchmarking, etc.);

# GCF & CITY FINANCE

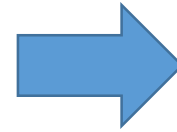
# GCF Urban Action Areas



# Raising to the challenge: addressing market failures & negative externalities

- Human settlements are **vulnerable** to the increasing impacts of climate change such as extreme temperatures and sea level rise, especially in the absence of **resilient infrastructure and planning**;
- These trends are expected to grow unless actions are taken to ensure that cities and urban areas are designed to enhance **productivity, resilience, and innovation**, while reducing the carbon intensity of their economic and social activities.
- Such efforts will not only generate economic benefits, but also address **market failures** such as urban sprawl, congestion, and **negative externalities** of pollution and carbon emissions.

- Green Climate Fund's continuous focus of strategic considerations in the urban sector:

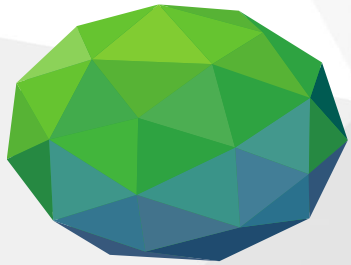


- **Green vs Smart Cities**;
- Pursuing transformative pathways in urban systems
- **Retrofitting megacities**
- Supporting carbon neutral / carbon negative planning, orientation and development of **secondary and intermediate cities**;
- Catalytic and innovative finance

## GCF – MEETING THE DEMAND AND SCALING UP TRANSFORMATIVE CLIMATE ACTION IN CITIES

***Compact, connected, and coordinated cities could deliver up to 3.7 GtCO<sub>2</sub>e/year of savings over the next 15 years and reduce infrastructure capital requirements by over US\$3 trillion***

1. GCF can offer financing opportunities for urban projects which can **de-risk investments and attract private investors**.
2. GCF can support a **range of finance mechanisms** that will leverage institutional change and linkages .



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