



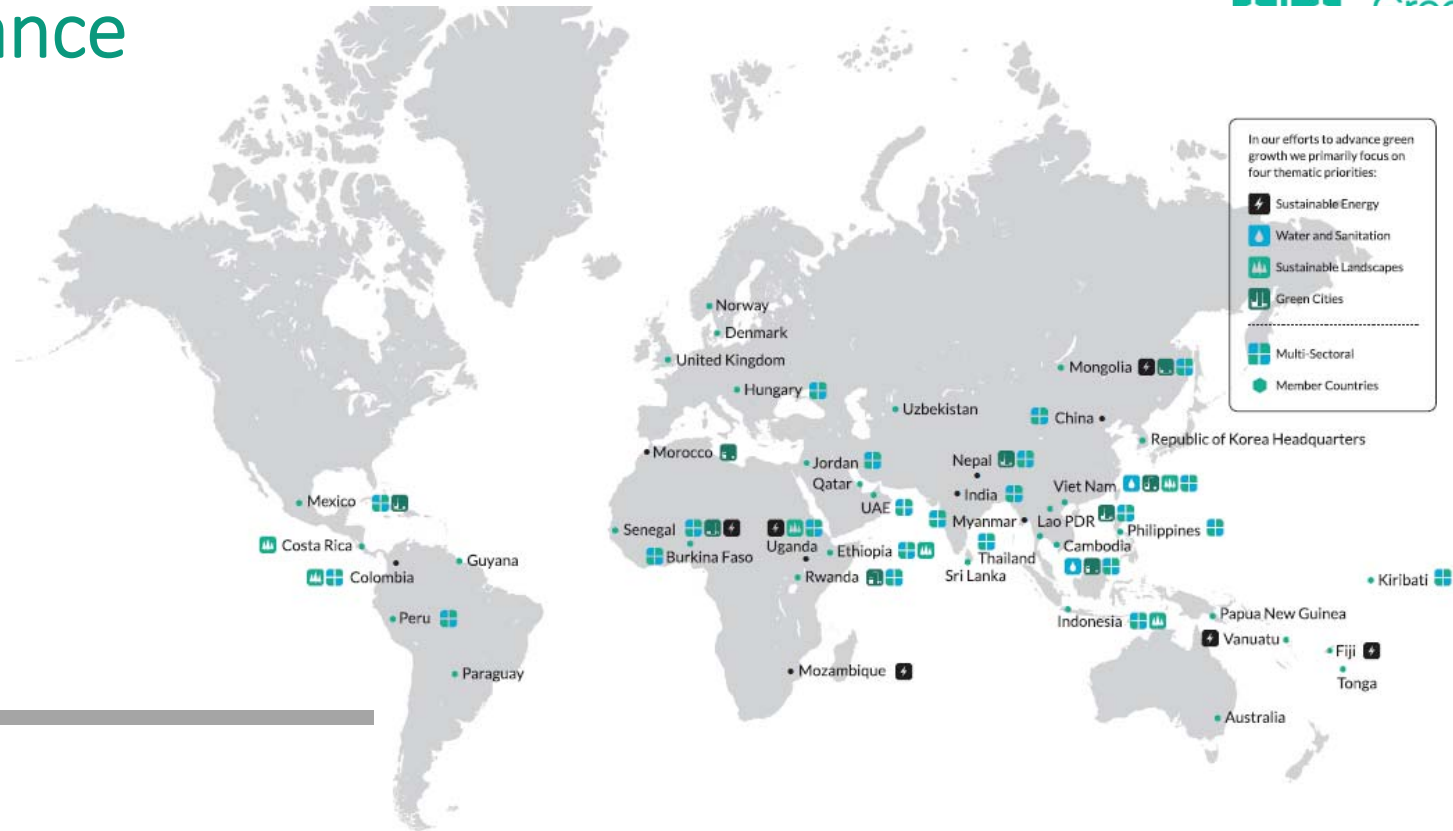
# Low Carbon Smart Cities: GGGI Activities

2<sup>nd</sup> CJK Workshop, 31 July and 1 August



# GGGI at a Glance

Headquartered in Seoul, Republic of Korea, GGGI has 32 Members with operations in 33 countries



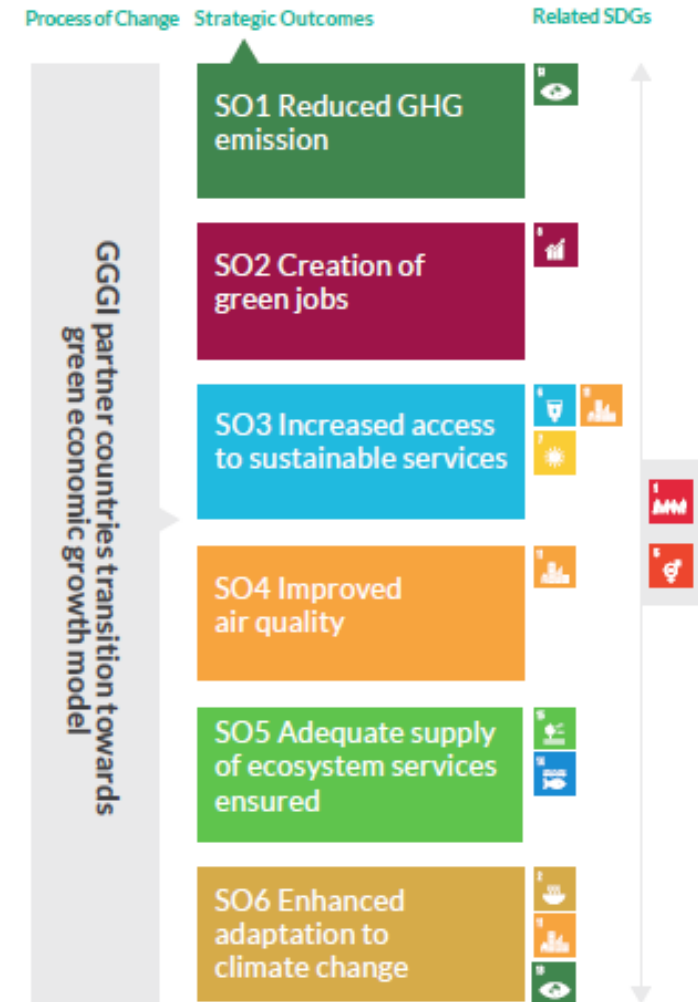
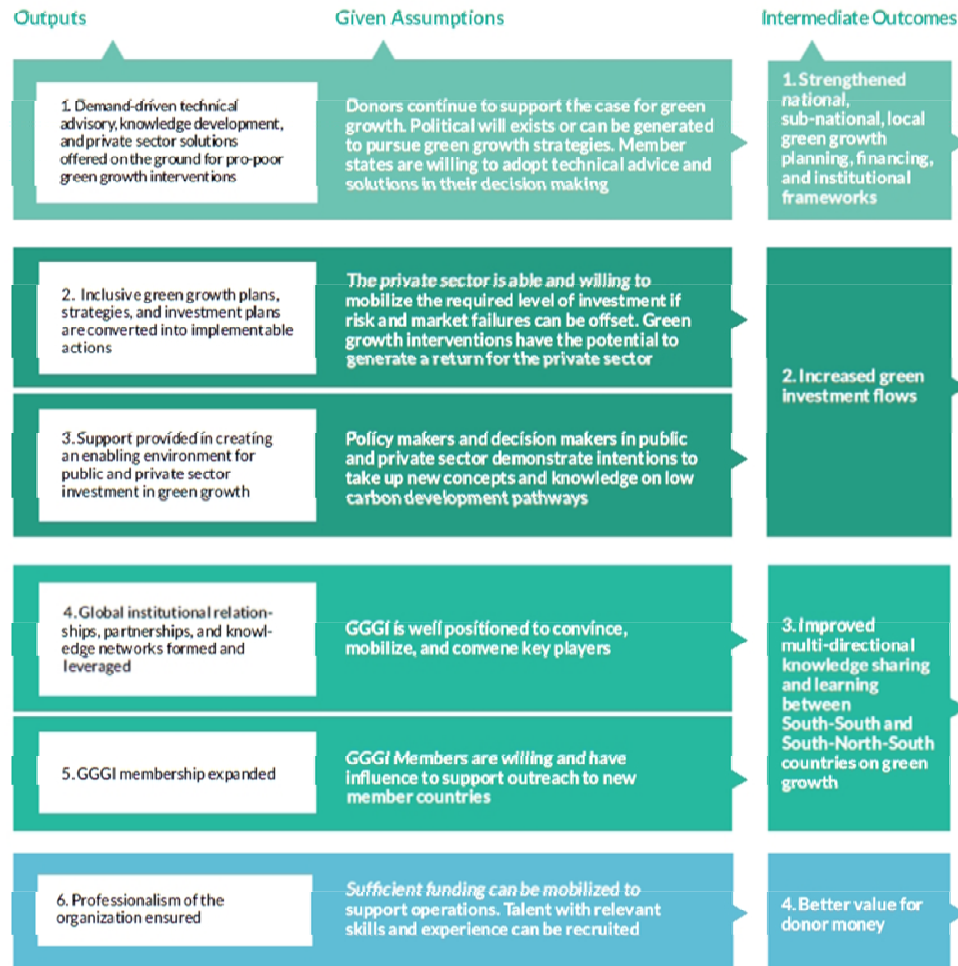
## GGGI's mission

*To help developing country governments transition towards a model of economic growth that is environmentally sustainable and socially inclusive*

# GGGI's Theory of Change



## Our Theory of Change



# GGGI's Activities



- Strengthening policy/regulatory frameworks
- Integrating with existing government processes
- Setting-up institutional structures and coordination mechanisms to implement SDG/NDC
- Building capacity of countries' climate action (finance, diplomacy, M&E)



- Developing and implementing concrete SDG/NDC implementation plans
- Connecting-the-dots and integrating between various strategies, plans and commitments that are already in place
- Developing sectoral policies and incentives



- Developing and strengthening MRV systems in the context of their NDCs
- Developing quality control and quality assurance procedure and building MRV capacity of key stakeholders



- Addressing sectoral policies, gaps and regulatory risks
- Advising to correct market failures and policy failures where relevant to enhance investment conditions
- Designing policy relevant instruments such as tariffs, subsidies, power purchase agreements, etc.



- Facilitating mobilization of domestic/ international resources
- Establishing/ strengthening the National Financial Vehicles
- Supporting the development of bankable projects
- Designing risk-reducing instruments
- Accessing clean technologies (E-mobilities, MSW, Solar)
- Providing carbon trading partnership



- Strengthening country capacity through training programs with tools and methodologies
- Providing knowledge sharing platforms, including multi-stakeholders and private sector

# GGGI's Urban Footprint



# 19

## Membership

Members of GGGI

Countries that have formally expressed intent to join GGGI

## Programs

Countries where GGGI currently has operations

Sustainable Energy Projects

Green Cities Projects

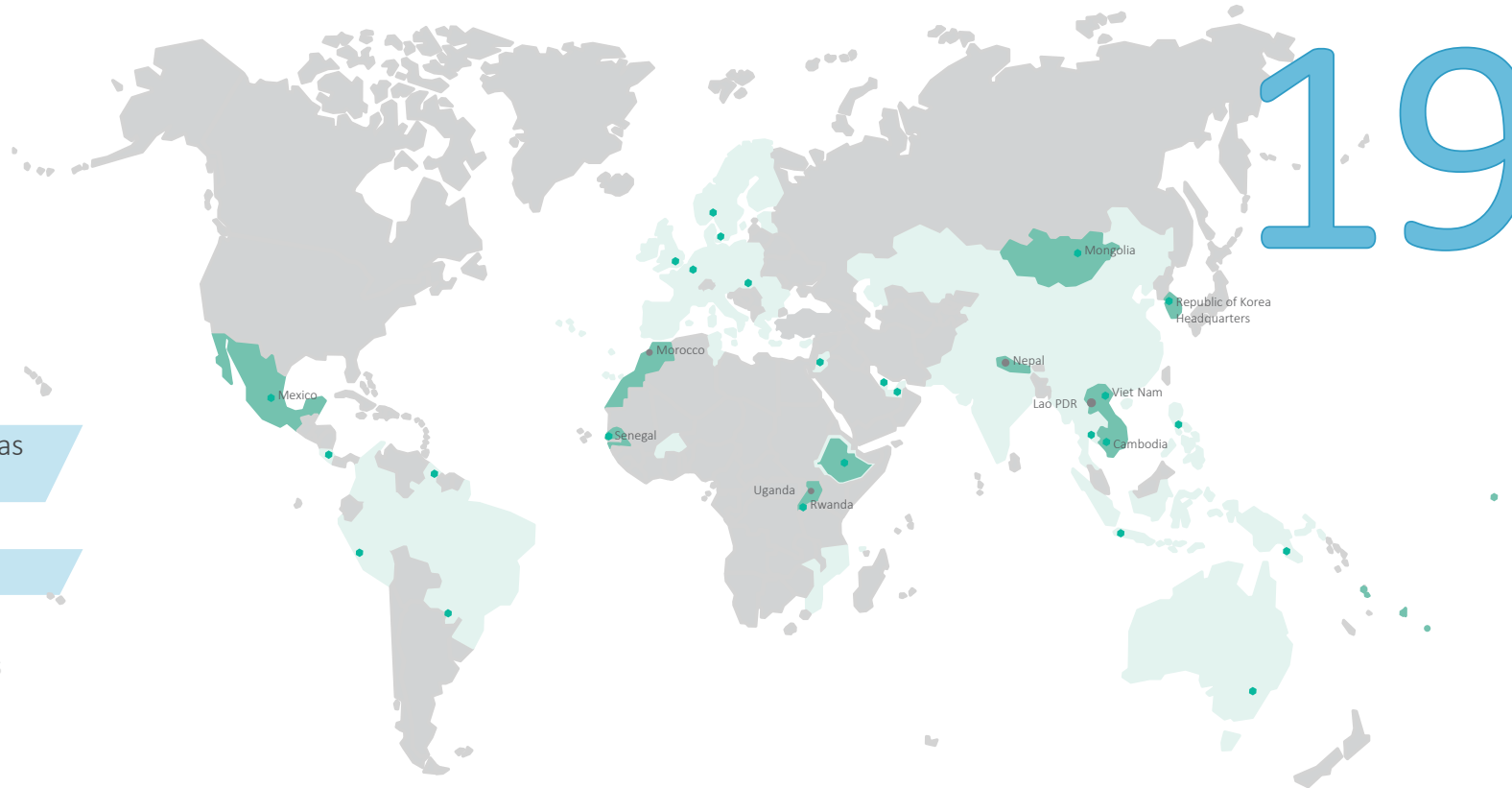
Water and Sanitation Projects

Sustainable Landscapes Projects

Cross Cutting Projects

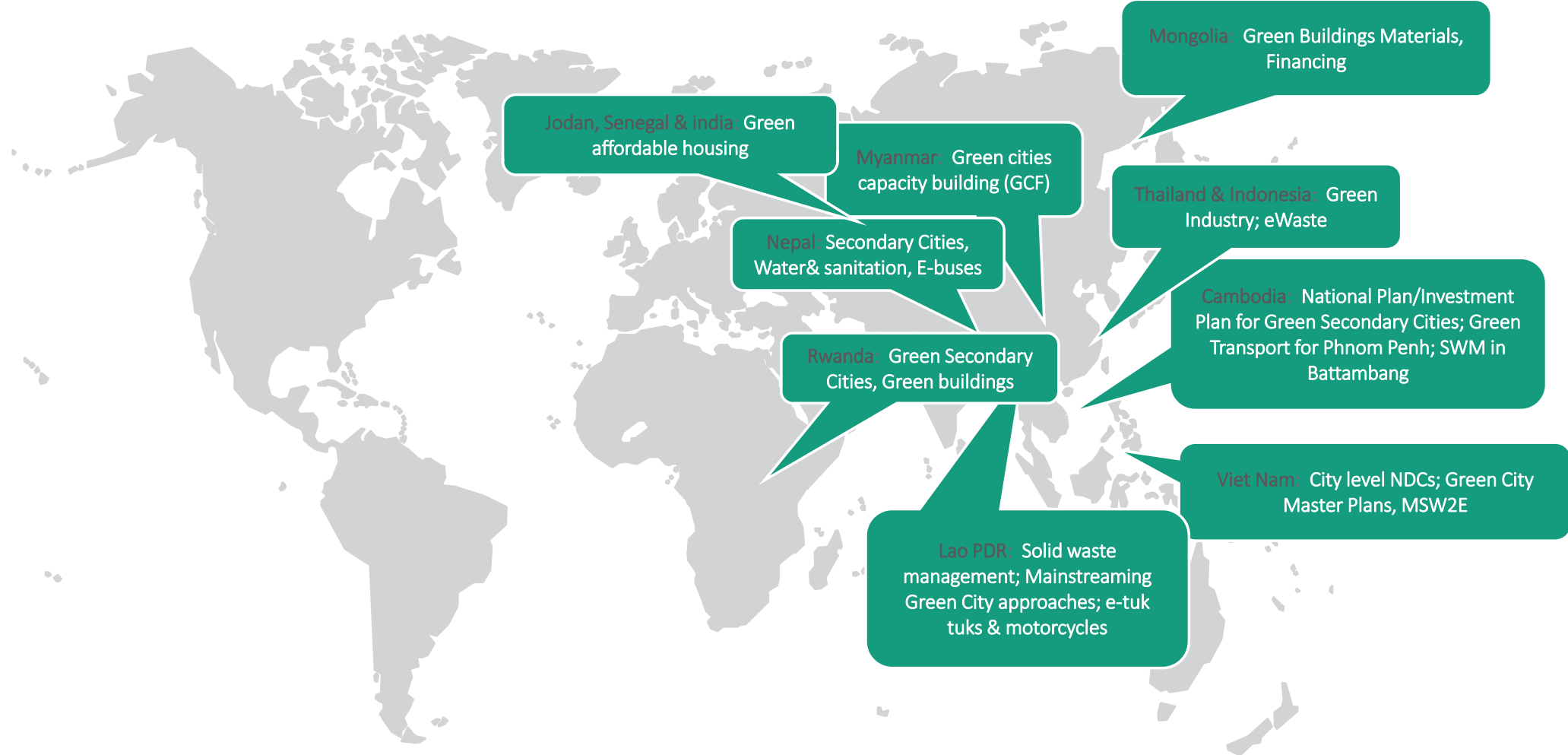
Green Finance

Countries where GGGI has completed programs



Australia, Brazil, **Burkina Faso**, **Cambodia**, China, Colombia, Comoros, Costa Rica, Denmark, **Ethiopia**, European Union, **Fiji**, Guyana, Hungary, **India**, **Indonesia**, **Jordan**, Kazakhstan, **Kiribati**, Republic of Korea, **Lao PDR**, **Mexico**, **Mongolia**, **Morocco**, Mozambique, **Myanmar**, **Nepal**, Norway, Papua New Guinea, Pakistan, Paraguay, Peru, Philippines, Qatar, **Rwanda**, **Senegal**, Sri Lanka, **Thailand**, Tonga, **Uganda**, United Arab Emirates, United Kingdom, **Vanuatu**, **Viet Nam**

# Snapshot of GGGI Green City Activities

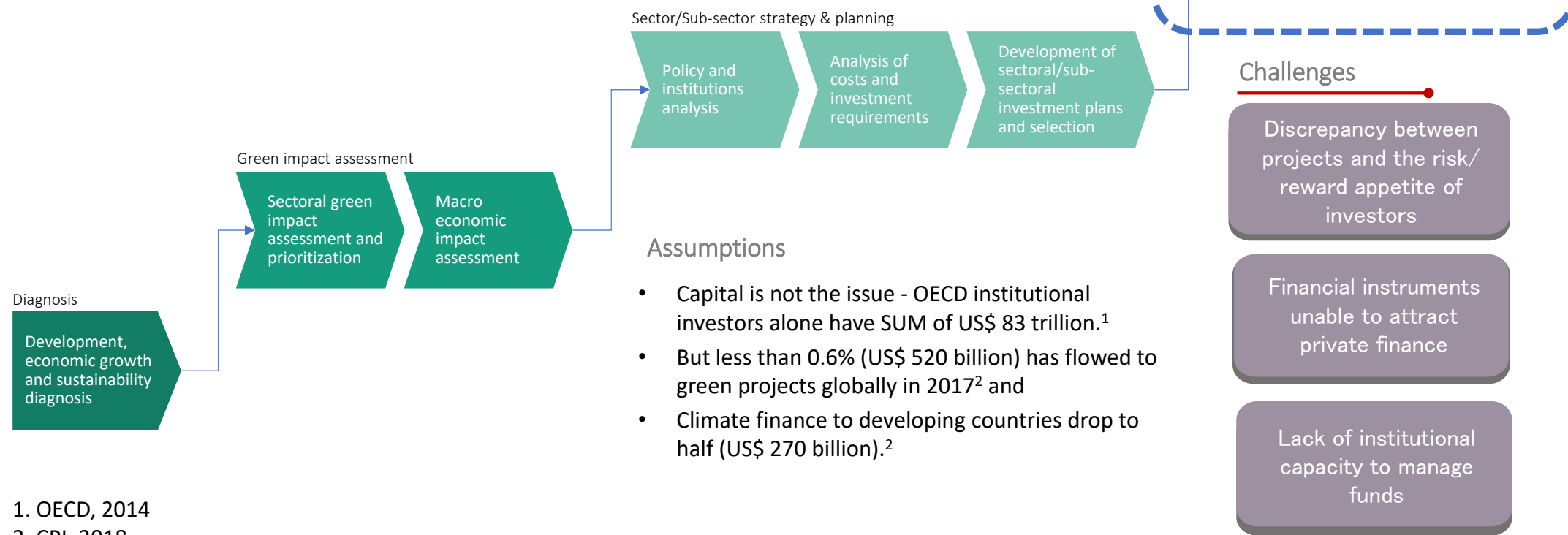




# GGGI Value Chain



- At GGGI, we firmly believe that meaningful change happens – not just through strategies, reports, or policies – but also through bankable ideas that successfully attract public / private investment.
- Our business model is designed on this notion. Every step of our value chain must demonstrate a clear and evident link to successful financing of the proposed idea.



1. OECD, 2014  
2. CPI, 2018

## Why GGGI?

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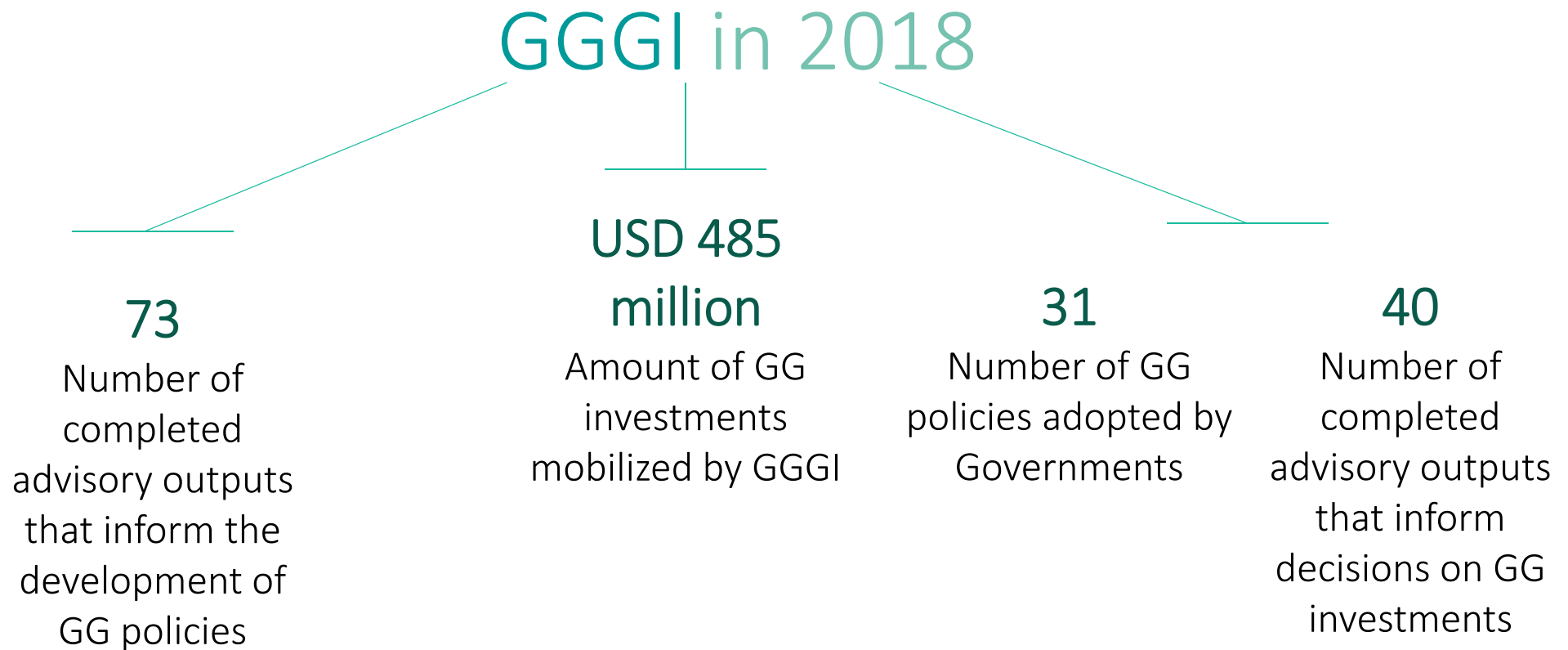
Package of  
consistent  
sequenced  
services

Embedded expert  
staff in partner  
country structures

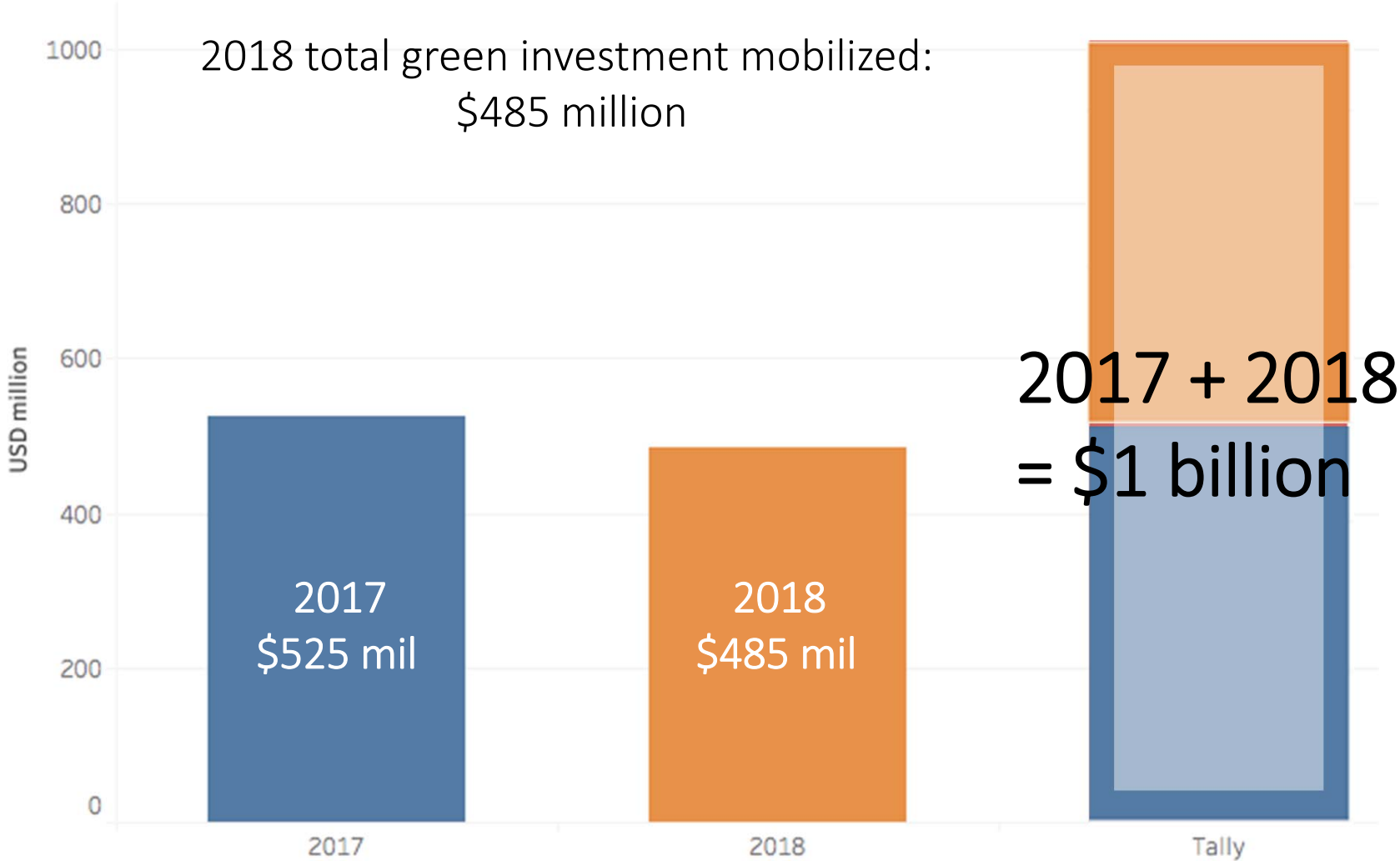
- *Systematic approach along the Value Chain* - from diagnosis/assessment, planning to implementation of green growth.
- *Link* global policy with in-country implementation.
- *Objective, independent, and global* organization, while *embedded in government* as trusted advisor.
- *Develop and implement green growth plans and strategies* adopted by Governments.
- Facilitate development of *green finance projects* and *financing vehicles* aligned with national priorities.
- *Share knowledge and best practices* at international, regional, national and sub-national level to promote green growth approach.



# Key Results



# Investment Mobilized





# Green Cities Approach

# GGGI's urban sector – Priority areas to transform cities



## 1. Mainstreaming green growth into urban planning, management and finance.

- Green (secondary) cities strategic planning.
- Strengthened municipal finances.
- Increased green public spaces.
- Climate-resilient urban infrastructure.
- Green buildings, sustainable low-cost housing.



## 2. Supporting circular urban systems & economies

- Improved solid waste management.
- Waste-to-energy, waste-to-resource.
- Enhance local livelihoods.



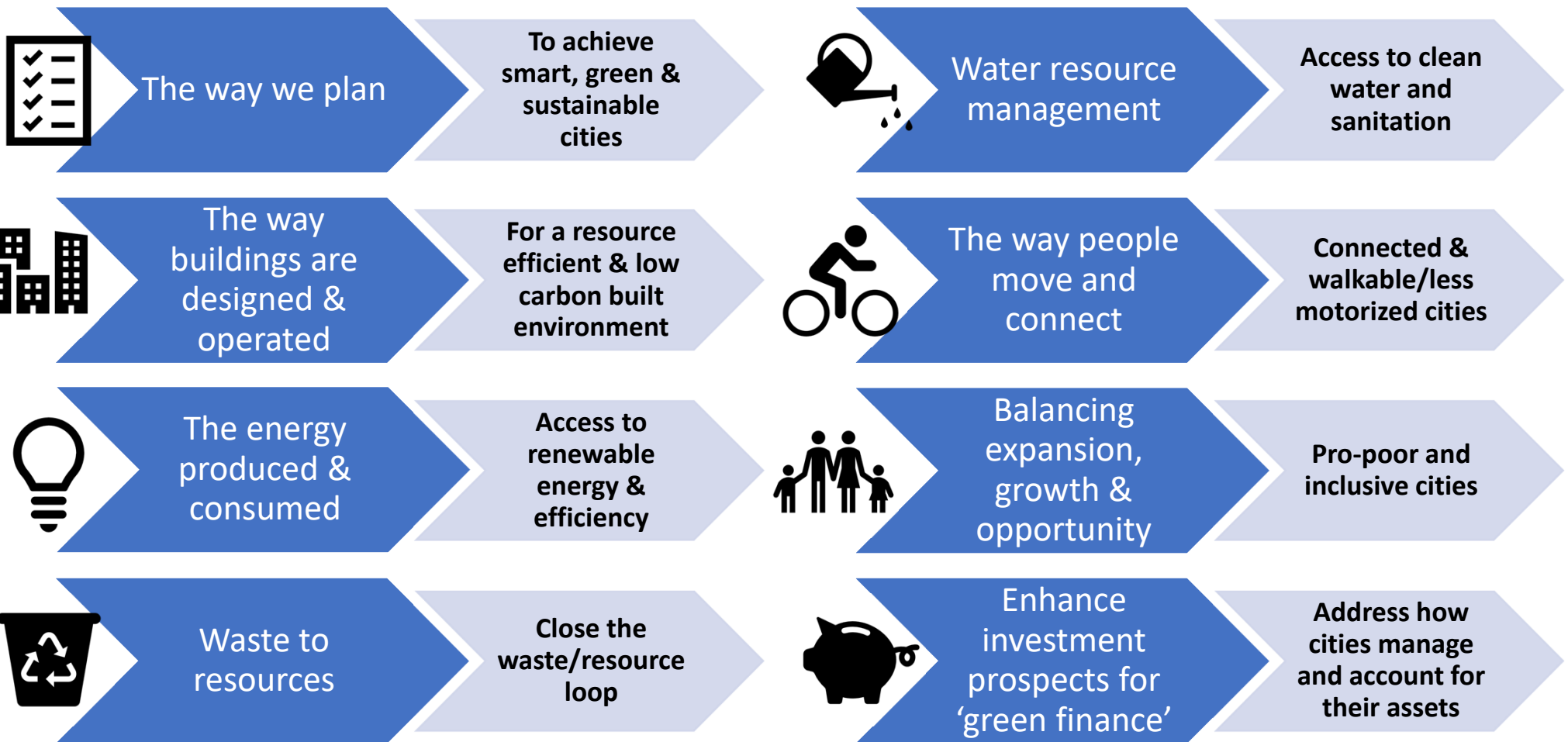
## 3. Sustainable urban infrastructure and transport to support connected & healthy cities

- Climate resilient and adaptive urban infrastructure
- Sustainable ecosystems and ecosystem services in urban & peri-urban areas
- Improved air quality through transport solutions

Aligned to National Priority

A diagram consisting of two stacked circular platforms, the top one green and the bottom one grey. Two large orange arrows point towards the platforms from the top-left and bottom-left. A dotted line connects the magnifying glass icon to the top platform, and another dotted line connects the train icon to the bottom platform.

# Towards Green + Smart Cities: Key Transformations





Global  
Green Growth  
Institute

## Examples: Cambodia, Mongolia and Vietnam



# GGGI in Cambodia



## Green Growth Context

**2009** Cambodia developed a National Green Growth Roadmap

**2011** Cambodia became a member of GGGI as a Korean non-governmental organization

**2012** Cambodia presented committed to a green economy development pathway at the Rio+20 Summit on Sustainable Development

**2012** GGGI converted to an international organization and Cambodia became a founding member

**March 2013** Cambodia released the National Policy on Green Growth and Strategic Plan on Green Growth 2013-2030

**August 2013** Joint Donor Review of GGGI program in Cambodia

**September 2013** Green growth integrated into Rectangular Strategy Phase III  
**October 2013** Cambodia released the Cambodia Climate Change Strategic Plan

**July 2014** Cambodia integrates green growth into the National Strategic Development Plan 2014-2018

**September 2014** GGGI Strategic Planning workshop to set priorities for GGGI Program in Cambodia → agreed to focus on Green Cities Development

**April 2015** Commenced work on the Green Urban Development Program and assessment of other potential areas for cooperation.

**May 2015** established the National Council for Sustainable Development, including the Department of Green Economy

**2016** Developed a National Green City Strategic Planning Methodology, a guideline for policy makers and other key stakeholders to adopt a holistic approach to green city development planning in Cambodia

**May 2017** The Sustainable City Strategic Plan was developed and submitted to the government counterpart for official endorsement.

# Program Focus and Results



|                           | Projects   | Results  |
|---------------------------|--|--|
| <b>Green Cities</b>       | <ul style="list-style-type: none"><li>• Green city plans for Phnom Penh and seven secondary cities</li><li>• Investment priorities identified with the cities</li><li>• Advisors based NCSA, MOI, MPWT</li></ul>   | <ul style="list-style-type: none"><li>• <b>Government adopts the Sustainable City Strategic Plan 2018-2030</b></li><li>• <b>Regulations are submitted for endorsement</b></li></ul>  |
| <b>Sustainable Water</b>  | <ul style="list-style-type: none"><li>• Advised on <b>sub-decree on Urban Waste Water Management</b></li><li>• Supported Government in <b>establishing sub-TWG on wastewater and sanitation</b> (July 2018)</li><li>• <b>DEWATS implementation guidelines</b> drafted.</li><li>• <b>Draft Prakas (implementation guidelines) for article 17 and 22</b> of the sub-decree on Urban Waste Water Management</li></ul> | <ul style="list-style-type: none"><li>• <b>Business model for waste recycling in Battambang</b></li><li>• <b>Prefeasibility study on fecal sludge management in Siem Reap</b></li><li>• <b>At least one waste water investment proposal proceeds to the next stage of approval</b></li></ul> |
| <b>Sustainable Energy</b> | <ul style="list-style-type: none"><li>• Assessment on <b>resource efficiency investment potential in the food and beverage processing sector and financing instruments</b></li><li>• Report on <i>“The Economic, Social and Environmental Impact of Greening the Industrial Sector”</i></li></ul>  | <ul style="list-style-type: none"><li>• <b>Industrial energy efficiency project</b></li><li>• <b>Energy Efficiency Promotion Program (EPPP) contributes to the national energy efficiency target of reducing energy demand by 25% in 2035</b></li></ul>                                      |



# GGGI Mongolia work program 2017-18



## MONGOLIA PROGRAM



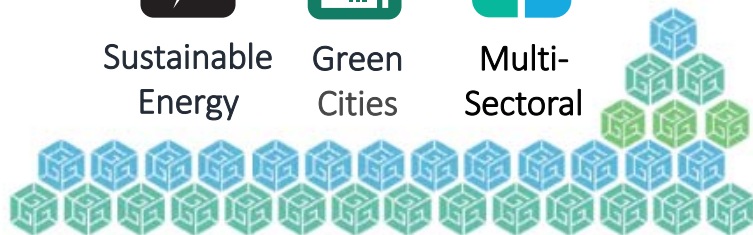
Sustainable  
Energy



Green  
Cities



Multi-  
Sectoral



Green Growth Planning,  
Implementation

Green City Development

Sustainable Energy

Development of a National  
Financing Vehicle (MGFC)



# GGGI Mongolia program main Milestones



**MoU to begin cooperation with Government of Mongolia**



**November 2011**

**Government of Mongolia formally becomes a member of GGGI by ratification of the Establishment Agreement**



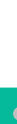
**July 2014**

**GGGI Mongolia Country Planning Framework 2016-2020 approved at the Eighth Session of the Council of GGGI**



**November 2015**

**MoUs signed with Ulaabaatar City, Energy Regulatory Commission, Ministry of Construction and Urban Development**

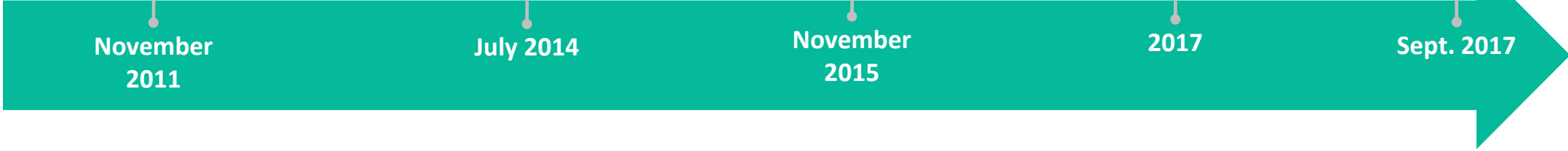


**2017**

**MoUs signed with MET, MoF and MBA on the launch of the Mongolian Green Finance Corporation**



**Sept. 2017**





# Program Focus and Results



## Sustainable Energy

### Projects

- Support the Energy Regulatory Commission (ERC) in the design of an Energy Efficiency Standards and Labelling Regulation.

### Results

- National Energy Efficiency Action Program adopted by Cabinet in September 2017
- Energy Efficient Standards & Labelling Regulation proposed by ERC to Minister of Energy

## Green Cities



- Revision on urban development law
- Determination of UB City NDC
- Green Building Construction Materials database

- Ulaanbaatar City Contribution to national NDC to be adopted by City Council in 2018

## Green Investment



- Development of Mongolia Green Finance Corporation, Mongolia's national green financing vehicle focusing on EE markets.
- Business case development for Low Carbon Small-Scale Heating for Off-grid Buildings.
- Mongolia Green Finance Corporation, launched in September 2017
- Energy efficiency and clean energy (15 designated entities energy audits - USD 50-60mln, Retrofitting of residential buildings in Ulaanbaatar City - EUR 17mln
- Energy efficient, green buildings Public Private Partnerships for 10 education buildings in UB City (USD 10-12mln)



# Viet Nam's Green Growth Landscape



- Green Growth is led by the Ministry of Planning and Investment
- Launched the Green Growth Strategy in 2012
  - 3 Strategic tasks:
    - Reduce the intensity of GHG emissions and promote the use of clean and renewable energy
    - Greening production
    - Green lifestyle and promoting sustainable consumption
  - 17 “Policy Solutions”
    - Sustainable Urbanization, human capital, renewable energy
- Launched Green Growth Action Plan in 2014
  - 66 priorities, covers policy and infrastructure investments
  - Clear on responsibility – linking each action to relevant government body (ministry, city, province, etc.)





# Program Focus and Results



## Projects

## Results

### Cross Cutting

Developing guidelines to prioritize green and socially inclusive loans from SME Development Fund (SMEDF) to be completed by end-2018.

In 2017, GGGI supported MPI on the development of the **Appraisal Handbook for Public Investments** incorporating green growth and socio-economic indicators. The Handbook has been adopted by MPI in 2018 and applied to the following Public Investment projects belonging to “Group A” (above \$450m) and “National Importance Group”.

•Projects worth USD 4.37 billion have been appraised under the inclusive framework (e.g. components of the Long Thanh Airport project, Metro Line 2 in Hanoi and Metro Line 5 in HCM City).  
 •Based on the guidelines, USD325,000 has been allocated by SMEDF as pilot green loans to SMEs in 2019.

### Sustainable Energy

- National Plan on the Development of Renewable Energy 2019-2030
- Policy advise on raising FIT for biomass energy

Provincial Biomass Energy Master Plan for Soc Trang Province 2018-2035

### Green Cities

- **Implementation of Urban Green Growth Indicators in three cities.** Three reports setting a baseline for green growth in three cities will be developed for Da Lat, Yen Bai and Tra Vinh
- **Policy advice on how to mainstream green growth into the National Urban Development Program**
- **Insight brief for NDC urban sector implementation**
- **Urban Green Growth Indicators** approved as a Ministerial Circular by the Minister for Construction in January 2018. This sets the urban green growth indicators that cities must report against on an annual basis, setting the baseline as 2018.
- **Urban Green Growth Action Plan** approved as a Prime Ministerial Decision in January 2018.

# 3 Project Preparation Platforms



● **World Green Economic Organization (WGEO): Dubai, UAE**

Emerging international organization with preference for smart city projects.  
GGGI-WEGO Partnership established in 2018.  
Priority countries: Jordan, India, and Vietnam. Morocco and Egypt.

● **ASEAN Green Finance Catalytic Facility (ACGF): Manila, Philippines**

ADB-led platform together with EIB, AFD, EU, and possibly GCF, with US\$600-900M in committed funds. Preference for green infrastructure projects.  
Letters of Support signed by founding members on April 4, 2019, in Thailand.  
Priority countries: Indonesia, Thailand, Malaysia, Singapore, Philippines, Cambodia, Myanmar, Laos, Vietnam, and Brunei.

● **Asia Infrastructure Investment Bank (AIIB): Beijing, China**

No formal agreement in place with AIIB to date.  
Preference for green infrastructure projects.  
Partnership being explored in context of GGGI projects and funds. Mongolia Green Finance Corporation; sanitation and e-mobility in Nepal; others.  
Priority countries: Mongolia, Nepal, and Vietnam.

# Private Sector Engagements

- Engaging with the private sector in the inclusive green economy transition takes many forms.
- Currently pursuing 4 different pathways in partnering with private sector entities



Climate finance to leverage private FI lending for renewables

Mongolia Green Finance Corporation;  
Access to Clean Energy Fund, India;  
Renewable Efficient Energy Fund, Senegal.



Private debt and equity for individual projects

Vietnam Industrial-Scale Municipal Solid Waste to Energy Project

Distributed Solar Rooftop Leasing Facility for Industrial Parks

Public-Private-Partnership (PPP) Model

Jordan Solar-powered Electric Vehicles for Amman Bus Rapid Transit (BRT) System



# Recommendations



## Areas of collaboration(to be discussed)

- **Dissemination & promotion of research outputs** of CJK, in particular with national and city governments of developing countries
- **Adoption of CJK framework and recommendations** by national and city governments of developing countries
- Design, develop and structure a **portfolio of implementation projects**
- **Generating co-benefits/synergies** between other related activities and climate focused green cities activities

Thank You

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