

Summary Report

1. Background

A series of knowledge sharing events on the green agenda was organized in the margin of GGGI's the 9th Session of the Assembly and 13th Session of the Council (Joint Session) during the last week of October 2020.

The purpose of the events is to provide a forum for participants, who are representatives from governments and donors, partner organizations as well as GGGI country/thematic teams:

- To present GGGI and its Members & Partners' efforts and commitments to green growth solutions, highlighting key achievements and initiatives, and
- To share experiences, good practices, and lessons learned on Members' transition towards green growth and identify common regional perspectives, priorities and solutions.

2. Event Overview

Event title	Green Buildings – Reducing Impact, Enhancing Wellbeing
Date and Time	October 29 th , 2020, 17:00 – 19:00 Korea Standard Time (KST)
Venue	Hybrid (a combination of in-person attendance – usually GGGI HQ staff – and online participants through Zoom)
Format	Webinar – presentations and panel discussions
Number of attendees	74 participants (including 10 speakers)

** Sessional documents, including presentation slides and recordings, are available at the Sway platform: <https://sway.office.com/WMdiTILgEp7SeDCU?ref=Link>

3. Key highlights

1) Significance of green buildings for green growth and sustainable development

Susanne Pedersen, Assistant Director-General of GGGI, opened the session with an overview of the current challenges and opportunities in the building sector and importance of implementing green and sustainable buildings. She underscored that the building industry contributes nearly 40% of energy related GHG emissions, adding that the sector consumes 40% of total global raw materials, 30% of global solid waste volume, and over 50% demolition waste going to landfill.

With the projection of the growth of world building stock is expected to double by 2060, which means most of the building are being/will be constructed in the coming years. There is an increasing trend of consensus/arguments that while the fundamental principles of green buildings are the same, the standard to achieve this is shaped by local realities.



This session on Green Buildings presented GGGI's work in countries to support partners in their efforts and commitments for enhancing the sustainability of buildings through energy and material efficiency, as well as integrating resilience in design.

2) GGGI's approach to green buildings in Member and partner countries

Batzaya Bayasgalan, Project Lead, GGGI Mongolia, presented on the project "Energy Performance Contracting for Residential Retrofitting" that GGGI is implementing in Mongolia, in collaboration with the relevant Ministries and partner organization. The project rationale fits well with the challenges that Ulaanbaatar city has been faced with, the coldest capital of the world, that a number of buildings have significant heat-loss, which affects the households' health and lack of thermal comfort and energy efficiency. The project aims to improve the residential buildings heat losses through retrofitting of 375 building blocks in the city and to boost the private sector participation with the introduction of multiple financing mechanisms.

The benefits of this project include 1) increased thermal comfort and quality of life for residents, 2) estimated energy saving at 50%, 3) building lifespan extension by over 30 years, 4) improved appearance of buildings. 5) increased value of property, and 6) affordable payment scheme for residents. The expected impacts indicate that approximately over 14,700 households get improved comfort and safer buildings and over 1,000 jobs created through local construction companies and manufacturers, among others.

Rwanda, one of the most rapidly urbanizing country in Africa, saw the outlook of the rapid growth of building stock which will be responsible for major source of CO₂ emissions. The Government of Rwanda has taken this seriously and has been working closely with GGGI in terms of developing the Rwanda Green Building Compliance System, which is officially now part of the Rwanda Building Code 2019, as presented by *Dheeraj Arrabothu, Senior Green Building Officer, GGGI*. GGGI has engaged in several initiatives around this with the relevant Ministries and partners, introducing the Greening Existing Public Building Stock and promoting Made in Rwanda and low-carbon building materials.

Bradly Abbott, Project Lead, GGGI Cambodia, presented on green affordable housing in Cambodia, including how green finance can be mobilized to make housing more affordable. He highlighted that the affordability issues for housing in Phnom Penh is severe with households unable to afford decent housing and a rapid expansion of informal settlements in the city and out into marginal lands. He further emphasized that working to address the affordability of housing requires multiple approaches taking into consideration of the following aspects – development and construction efficiency, operations and maintenance areas, and financing cost and access.

Aye Aye Myint, Director General of the Department of Urban and Housing Development, Myanmar, with *Nicholas Taylor, Green Cities Project Lead, GGGI Myanmar* presented on energy efficiency in planning and buildings in Myanmar. In Myanmar, where there is a consensus in the government regarding a need to focus on policy on efficient energy appliances as well as building efficiency, some remarkable policy initiatives have been undertaken, including the development National Urban Policy and the National Housing Policy and a Green Building Code. With GGGI, a Green Building



Guidance project concept is being developed for self-build and public housing upgrades and new building. This aims to provide an accessible “scorecard” system for local authorities and housebuilders to help them understand energy savings and heat reduction advantages.

3) Panel discussions and moving forward

The panel discussions took place around the following questions involving panelists from Rwanda, Myanmar, Indonesia, Mongolia and Australia.

- **Why are green buildings important in your country and what are the key steps towards mainstreaming green buildings?**

Harouna Nshimiyimana, Division Manager, Buildings Regulations Inspections and Audits, Rwanda Housing Authority, pointed out that green buildings are important in Rwanda’s environment preservation and protection; comfort for users; ease of maintenance; and national visions. In Rwanda, a legal framework, such as the Rwanda Green Building Compliance System, was developed to guide the sector/industry, and the government has also been doing capacity buildings activities and awareness campaigns.

As presented in the earlier part of the session, the Myanmar government has been developing and updating the National Building Codes and Standards to protect the health, safety and welfare of the citizens. *Swe Swe Aye, Chair of the Myanmar Green Building Society*, also introduced that the Engineering Society is in the process of developing green building chapter with green building rating and standards.

In Indonesia, various measures such as saving energy and improving energy efficiency through green buildings have been recognized by the government to realize the GHG emission reduction targets of 29% by 2030. *Hariyanto, Director of Energy Conservation of the Ministry of Energy and Mineral Resources of the Republic of Indonesia*, also highlighted that the Indonesian government has put in place policy and regulations to mainstream green buildings.

Munkhbayar Buyan, Director of Building Energy Efficiency Center, National University of Science and Technology, Mongolia, pointed out that since the country heavily relies on coal-based heating system, reducing air pollution through energy efficiency in the construction and building sector is critical. The government is working to establish a green building council under the Ministry of Construction and Urban Development, involving stakeholders from various sectors, and the development of a green building rating system is also being conceptualized.

Usha Iyer-Raniga, Professor of School of Property, Construction and Project Management at RMIT University, Australia, reinforced the points made from other panelists, saying the stakeholders need to work together to comply with minimum standards and go beyond in green buildings. She further stressed the need for capacity building to equip relevant persons such as decision makers, professionals as well as students in the sector with the right skill set to deal with the challenges.

- **In what ways are you leveraging innovations in your country and in your work to promote green buildings?**



In Rwanda, the government has been promoting green buildings through providing a legal framework, recognizing the efforts of local stakeholders (architects, engineers, and firms etc.) and promoting local green building materials and local partnerships.

In Myanmar, the Myanmar Green Building Society is conducting knowledge sharing and awareness programs which include roundtable discussions, technical workshops, seminars, and training programs with relevant stakeholders.

The Indonesian government is encouraging green building implementation by leveraging innovation such as energy conservation through programs like smart lighting and smart building and promoting solar power in buildings.

In Mongolia, although the green building concept is still at the inception stage, courses on green building design are being offered in universities. The government is also becoming more proactive in this matter, approving the green development policy document and promoting environmentally friendly products.

In Australia where the green building movements started back in early 2000, the movement has changed its course into responding to the design principles, rather than just following the principles. A case of Singapore has also been shared - the government has been very proactive in green buildings by investing significant amount of fund in terms of recognizing champions, which then generated competition in the marketplace as well as helped market penetration.

Annex 1. Program details

Green Buildings – Reducing Impact, Enhancing Wellbeing

Overview

Buildings account for a substantial proportion of global GHG emissions which is expected to increase with growing demand for buildings, particularly from rapidly urbanizing developing countries. GGGI works across the building life cycle to leverage strategic entry points to reduce resource intensity of buildings while enhancing the wellbeing of occupants. The aim of this event is to generate momentum in the building sectors among GGGI Members towards Greener Buildings through showcasing results from GGGI green building projects.

Agenda

* Times in Korea Standard Time

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| 17:00-17:05 | <p>Opening & Introduction
 <i>Opening remarks by Ms. Susanne Pedersen, Assistant Director-General, GGGI</i></p> |
| 17:05-17:20 | <p>Improving energy efficiency of residential buildings in Ulaanbaatar City, Mongolia
 <i>Ms. Batzaya Bayasgalan, Project Lead, GGGI Mongolia</i></p> |
| 17:20-17:35 | <p>Promoting green buildings in Rwanda
 <i>Mr. Dheeraj Arrabothu, Senior Green Building Officer, GGGI Rwanda</i></p> |
| 17:35-17:50 | <p>Green Affordable Housing in Cambodia
 <i>Mr. Bradley Abbott, Project Lead, GGGI Cambodia</i></p> |
| 17:50-18:05 | <p>Energy Efficiency in Buildings in Myanmar
 <i>Ms. Aye Aye Myint, Deputy Director General of the Department of Urban and Housing Development, Ministry of Construction, Myanmar</i>
 <i>Mr. Nicholas Taylor, Green Cities Project Lead, GGGI Myanmar</i></p> |
| 18:05-18:50 | <p>Panel discussion
 <i>Moderated by Ms. Christina Cheong, Green Cities Specialist, GGGI</i></p> <p>Panelists:
 <i>Mr. Harouna Nshimiyimana, Division Manager, Building Regulations Inspections and Audits, Rwanda Housing Authority (RHA)</i>
 <i>Dr. Swe Swe Aye, Retired Pro rector-Yangon Technological University / Chair of the Myanmar Green Building Society</i>
 <i>Dr. Hariyanto, Director of Energy Conservation of the Ministry of Energy and Mineral Resources of the Republic of Indonesia</i>
 <i>Mr. Munkhbayar Buyan, Director of Building Energy Efficiency Centre, National University of Science and Technology, Mongolia</i>
 <i>Prof. Usha Iyer-Raniga, School of Property, Construction and Project Management at RMIT University, Australia / Co-Lead of the United Nations One Planet Network's (OPN) Sustainable Buildings and Construction Program (SBC)</i></p> |
| 18:50-19:00 | <p>Panel summary and closing
 <i>Ms. Christina Cheong, Green Cities Specialist, GGGI</i></p> |

Annex 2. Acknowledgements: Organizing and Facilitation Team



Frank
Rijsberman



Mahamadou
Tounkara



Christopher
Dickinson



Christina Cheong



Stelios Grafakos



Donovan Storey



Nathalie André



Hakku Bang



Mihwa Wi



Seungyeop Baek



Hee Kyung Son



Su Jeung Hong



Kyu Hwa Park



Yeonjoo Lee



Mariz Puyo