



# Enabling IBT Through Green Building Certification and Sustainable Finance

How EDGE Enables Private Sector Participation in IBT



**Kushinga L. Kambarami**  
Green & Resilient Buildings Lead - Africa  
Market Building with Products and Toolkits, IFC/World Bank  
**3rd and 4th February, 2026**

# IFC IS MEMBER OF THE WORLD BANK GROUP



## IBRD IDA

International Bank  
for Reconstruction  
and Development



## IDA

International  
Development  
Association



## IFC

International  
Finance  
Corporation



## MIGA

Multilateral  
Investment  
Guarantee Agency



## ICSID

International Centre  
for Settlement of  
Investment Disputes

Loans to middle-income  
and creditworthy low-income  
country governments

Interest-free loans and  
grants to governments  
of the poorest countries

SOLUTIONS IN  
PRIVATE SECTOR  
DEVELOPMENT

Home of the World Bank  
Group Guarantee Platform

Conciliation and  
arbitration of investment  
disputes

# IFC APPROACH TO CLIMATE



## Derisking

Create attractive investment options through blended finance



## Creating Markets

Pioneers in new markets and local opportunities: Solar PV, Wind, Green Hydrogen & Derivatives, decarbonizing the built environment, and reducing methane emissions



## Setting Standards

Craft World-class standards for innovative finance - **green** & **blue** bonds, offering a clear roadmap for investors, combating greenwashing, and enhancing transparency



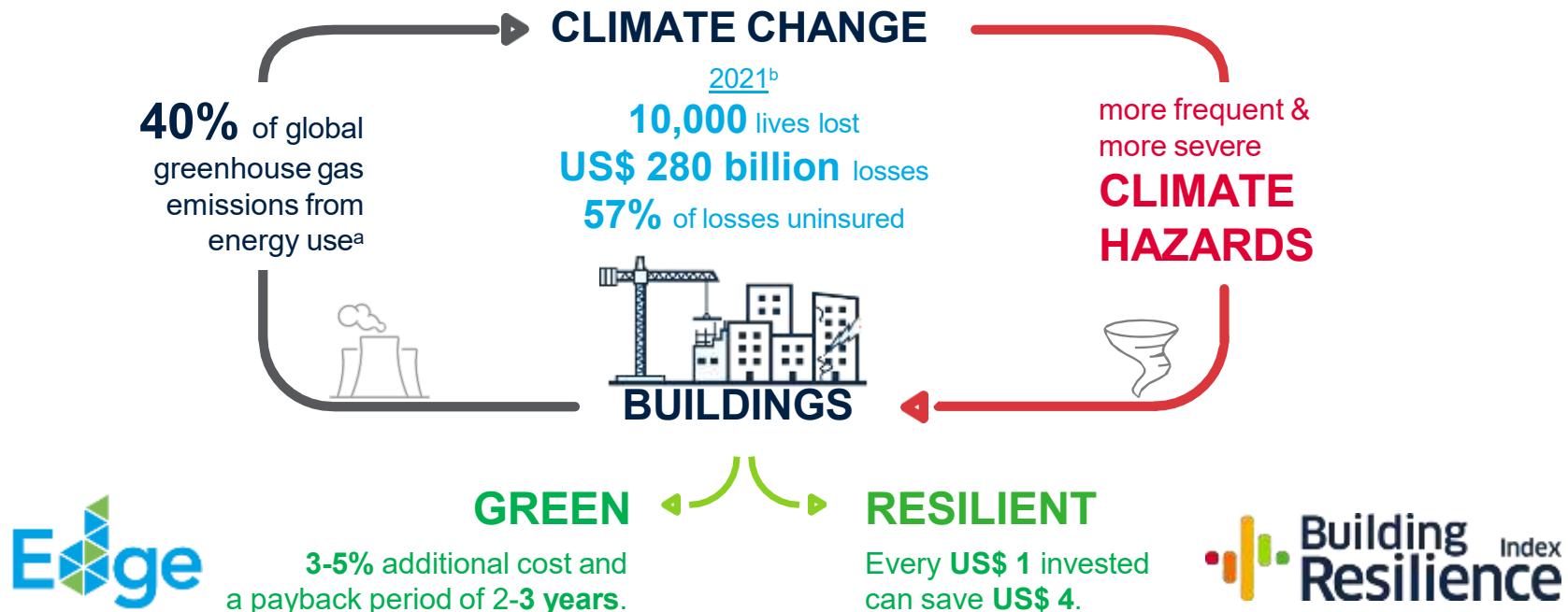
## Mobilizing Capital

Leverage funds from other investors and partners to amplify our impact

# IFC HAS A FOUR-PART STRATEGY TO SUPPORT GREEN, RESILIENT BUILDINGS



# THE ROLE BUILDINGS PLAY IN CLIMATE CHANGE



**FOLLOWING EXPERIENCE OF EDGE** IFC's track record on buildings started with **climate change mitigation** using EDGE. Building Resilience Index complements it by addressing **climate change adaptation**.

# IFC'S HOLISTIC APPROACH TOWARDS ADDRESSING CLIMATE CHANGE MITIGATION & ADAPTATION IN THE BUILT ENVIRONMENT



Green Building Certification System

**(MITIGATION)**

Launched 2013 globally  
2015 in Africa



Verification System for  
Resilience in Buildings  
**(ADAPTATION)**

Launched 2021





# GREEN BUILDINGS

# IFC'S DEFINITION OF A GREEN BUILDING FOLLOWS INTERNATIONAL BEST PRACTICES

8



&

20%

&



IFC APPROVED  
CERTIFICATION

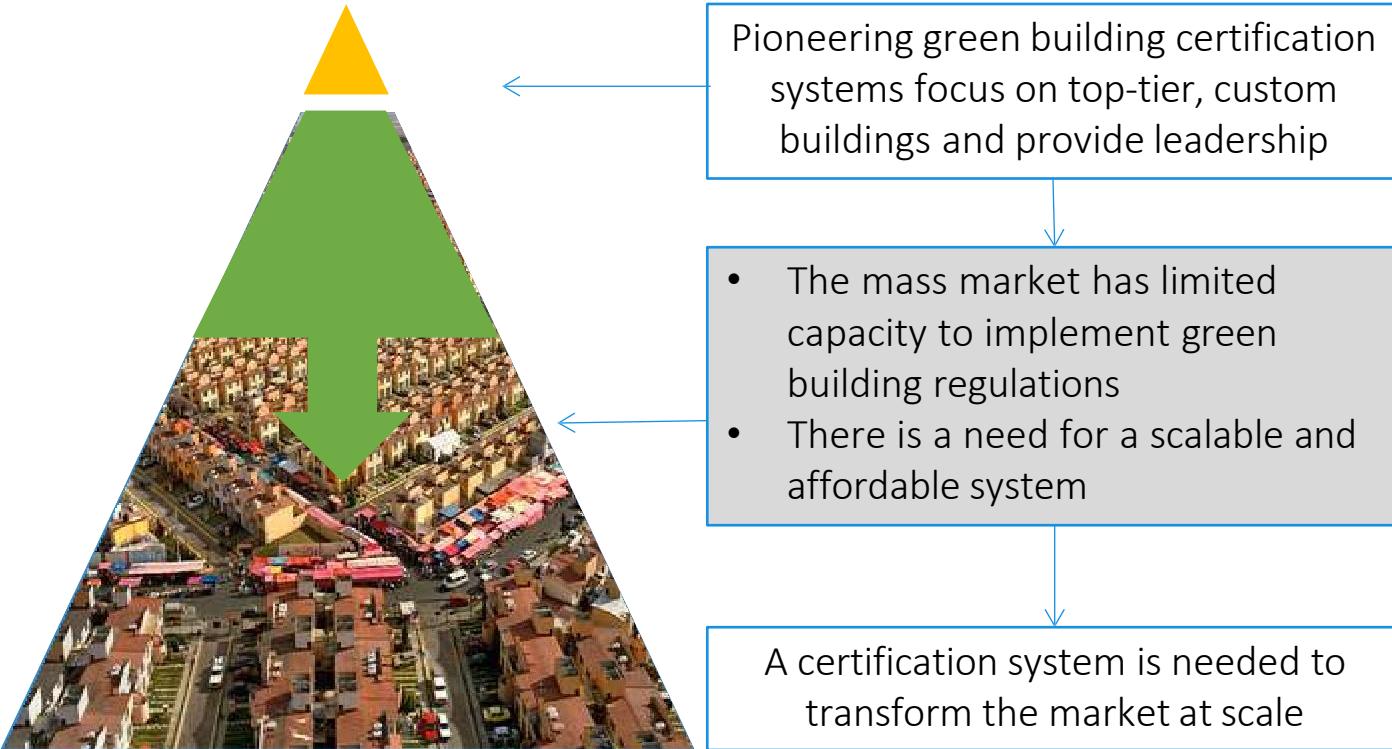
BETTER ENERGY PERFORMANCE  
THAN LOCAL BASELINE

QUANTIFIED  
IMPACT REPORTING

100% OF FINANCE OR RE-FINANCE COUNTED AS CLIMATE

# Why EDGE is relevant to IBTs

## TO MAINSTREAM GREEN BUILDINGS AND TACKLE CLIMATE CHANGE



A metrics-driven, scalable voluntary standard is needed to:

- bring together market players,
- prove the case for building green, and
- reward innovative design.

IFC created EDGE to mainstream resource-efficient buildings in emerging markets.

# EDGE GREEN BUILDING CERTIFICATION: EXPONENTIAL GROWTH AND GLOBAL IMPACT



2015–2025  
A Decade of Impact

**137.7 M**  
CERTIFIED FLOOR  
SPACE (M<sup>2</sup>)

**129+**

COUNTRIES HAVE  
CERTIFIED\* PROJECTS

**11,643**

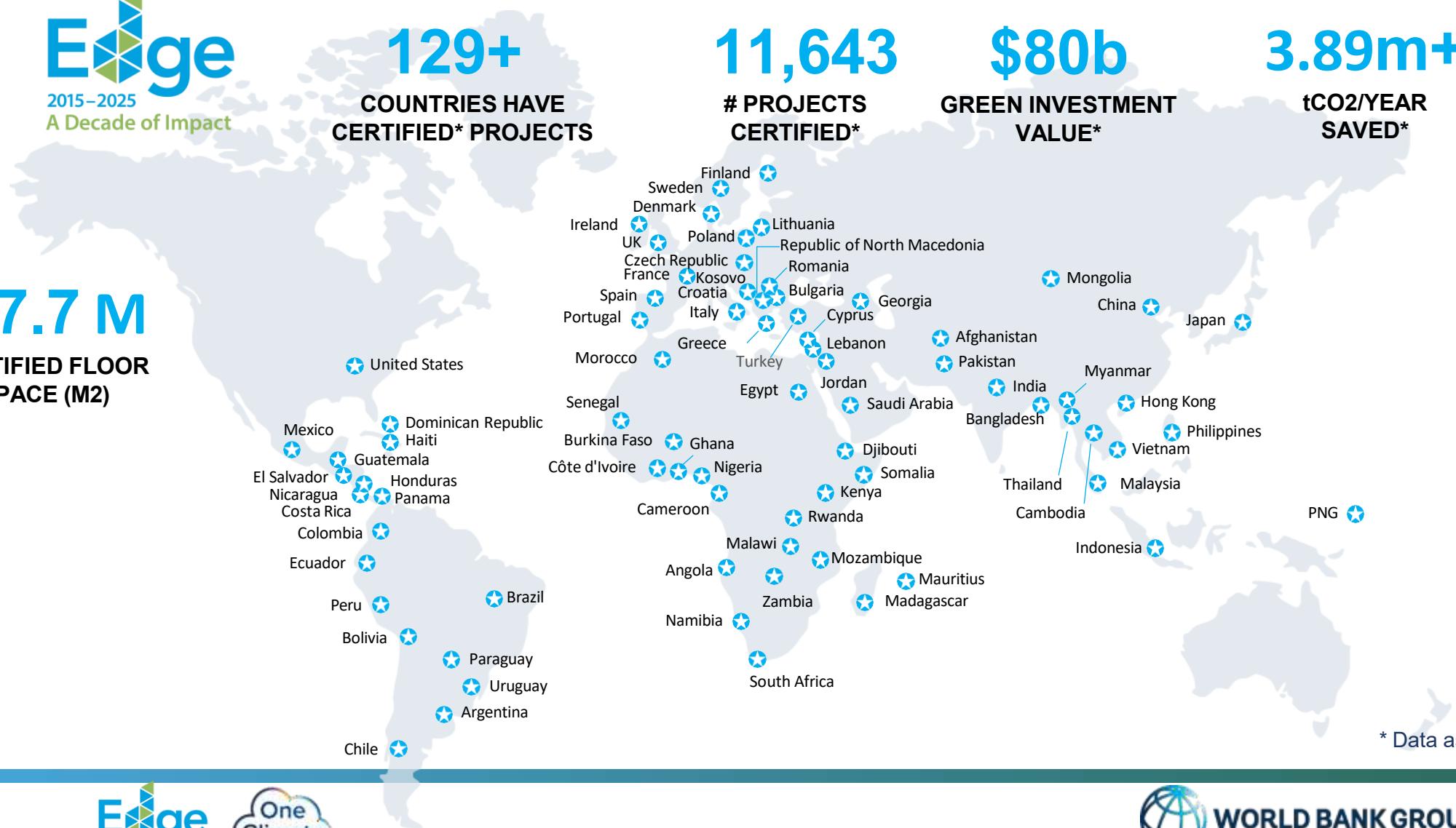
# PROJECTS  
CERTIFIED\*

**\$80b**

GREEN INVESTMENT  
VALUE\*

**3.89m+**

tCO<sub>2</sub>/YEAR  
SAVED\*



# EDGE - EXCELLENCE IN DESIGN FOR GREATER EFFICIENCIES

EDGE is Recognized by all major international green finance standards.

## 1. Free Software



[EDGE Software Demo](#)

## 2. Achievable Standards



*20% minimum Energy, water and materials savings over a local baseline*

## 3. Verified Green Label



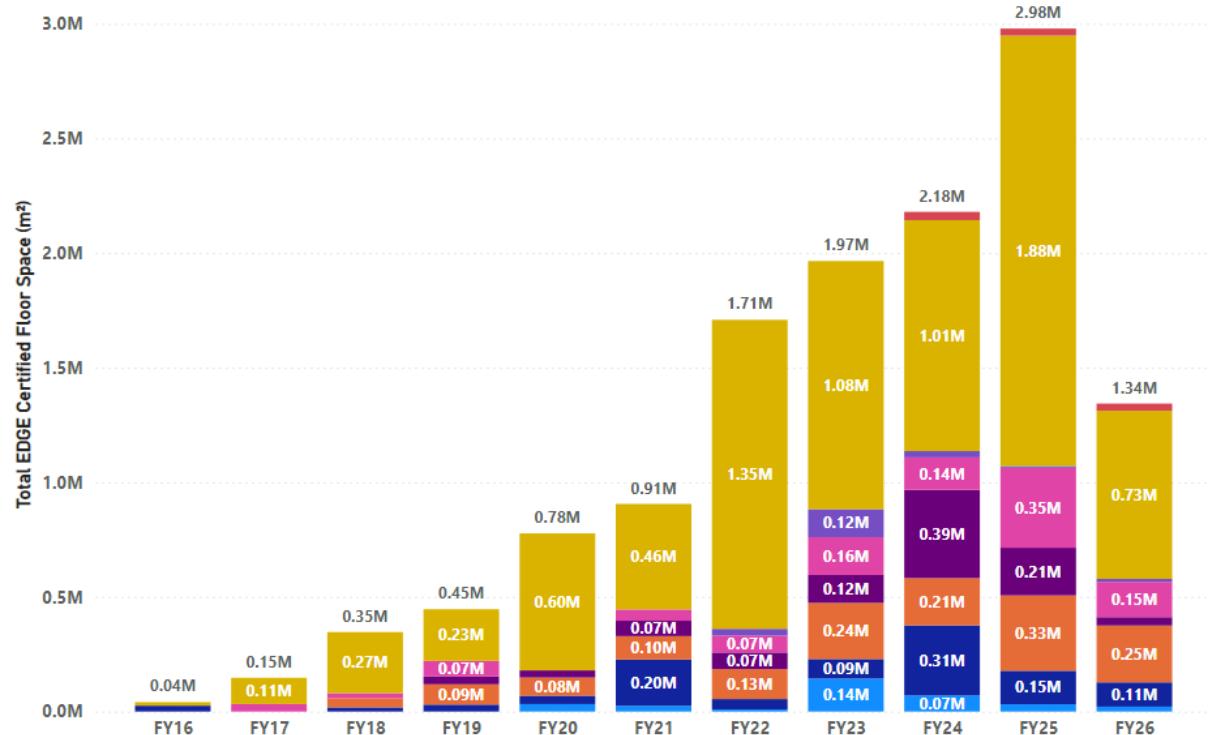
## 4. Simplified Impact Reporting

Energy 36.52%	Water 32.77%	Materials 47.67%
Utility Cost Reduction 9,788.45 \$B/Year	Incremental Cost 49,753.26 \$B/Year	Payback in Years 0.42 Yrs
Embodied Energy Savings 1,056.04 MWh/Year	Energy Savings 506.90 MWh/Year	Water Savings 4,520.42 m³/Year
Operational CO <sub>2</sub> Savings 155.89 tCO <sub>2</sub> /Year	Carbon Emissions 265.92 tCO <sub>2</sub> /Year	

EDGE certification is growing exponentially across sectors and geographies, with total certified real estate assets of over 50 billion USD in value.

Total EDGE Certified Floor Space (m<sup>2</sup>) by Fiscal Year & Country

Country ● Cote d'Ivoire ● Ghana ● Kenya ● Nigeria ● Other Countries ● Senegal ● South Africa ● Tanzania

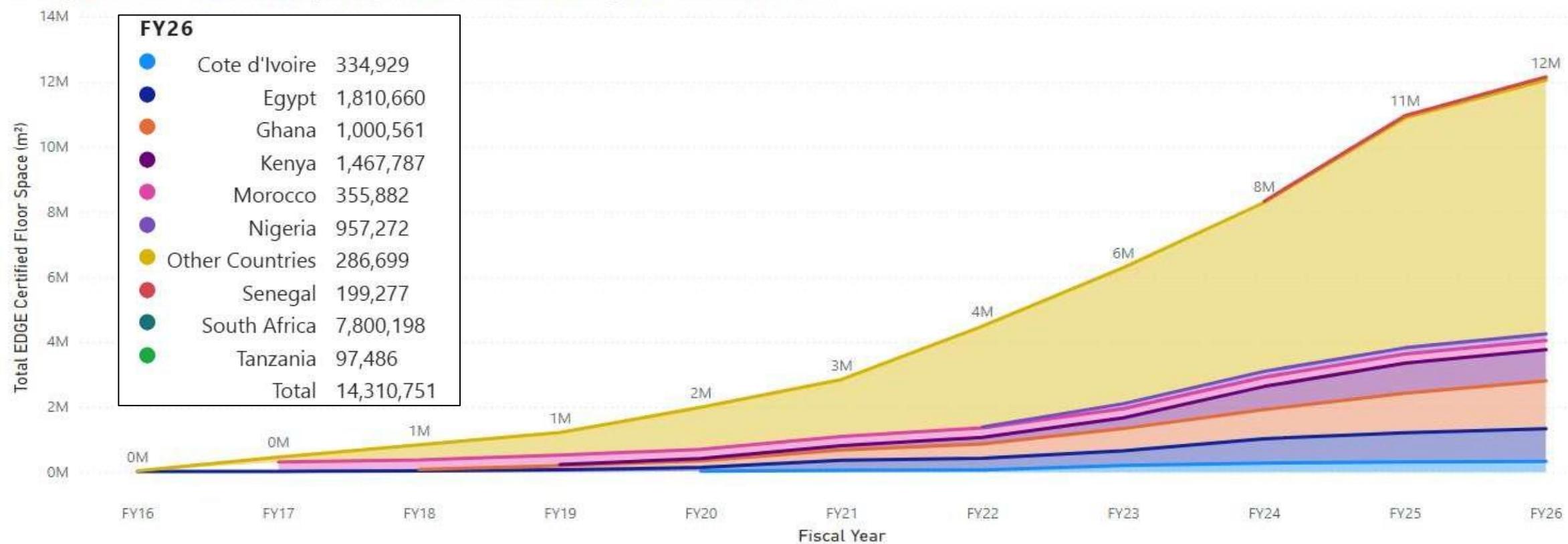


# EDGE GB CERTIFICATION:

## EXPONENTIAL GROWTH IN AFRICA – 2015 TO 2026

Total EDGE Certified Floor Space (m<sup>2</sup>) by Fiscal Year & Country

Country ● Cote d'Ivoire ● Ghana ● Kenya ● Nigeria ● Other Countries ● Senegal ● South Africa ● Tanzania



# IFC IS HELPING FIS TO CREATE INNOVATIVE FINANCIAL PRODUCTS FOR GREEN BUILDINGS

## CROSS-SELLING OPPORTUNITY



GREEN CONSTRUCTION



GREEN MORTGAGES



CAPITAL MARKETS



RETROFITS

Our partner FIs include:



**HSBC**



**standard  
chartered**



**BBVA**



**Santander**



**Fannie Mae**



**OCBC Bank**



**ProCredit Bank**



**DAVIVIENDA**



**Agro's**  
SAPNE AAPKE. SAATH HAMAARA



**BDO**



**Piramal**  
Capital & Housing Finance



**Priorbank**



**XRB  
Group**



**BUSINESS/PARTNERS**



**absa**



**YapiKredi**



**NEDBANK**



**Stanbic Bank**



**International  
Housing Solutions**

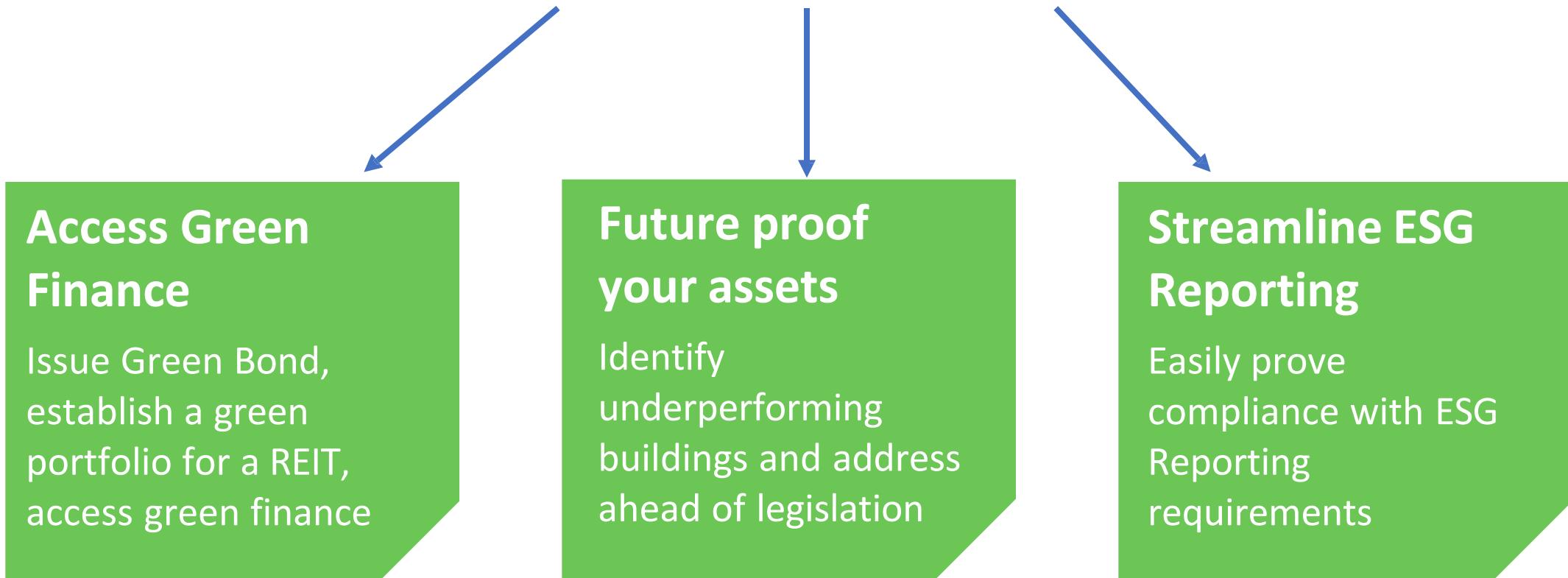


**HDFC BANK**



**CIB**

## Green Building Certification New and Existing Buildings



# EDGE IS GROWING FAST BECAUSE IT'S A TOOL TO TAP INTO GREEN FINANCE

## EDGE aligns with all the Major International Green Finance Standards

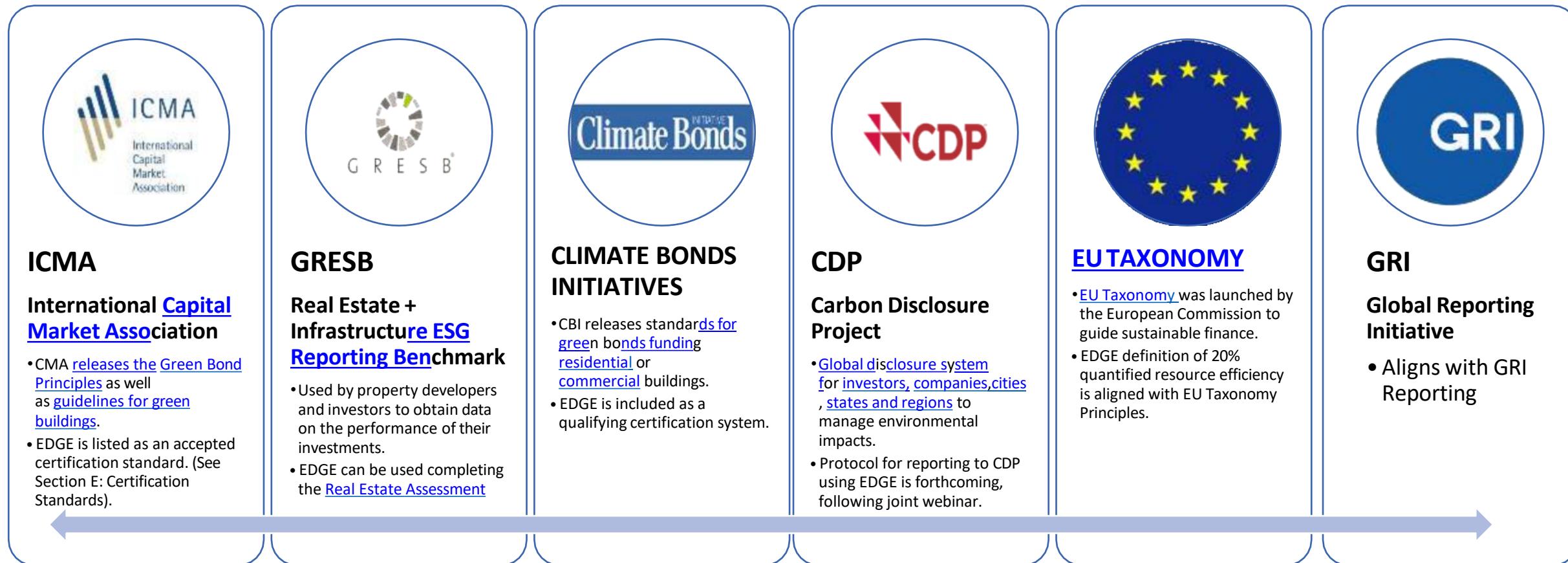




Image credit: iStockphoto.com/longos600

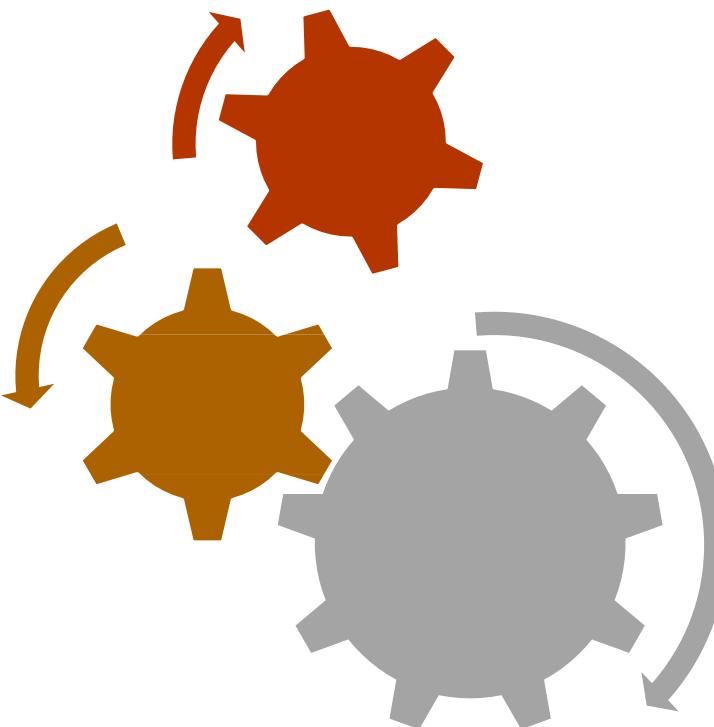
# CLIMATE FINANCE

# Objectives of the Session

- ▶ Understand how Fis, Developers, Government, Stakeholders and Partners can leverage sustainable finance instruments in its funding strategy
- ▶ Explore green and social asset classes
- ▶ Highlight EDGE as a pipeline-building and refinancing enabler
- ▶ Learn how IFC can support you across strategy, structuring and enabling the sustainable finance journey

# SUSTAINABLE FINANCE INSTRUMENTS :

## An Effective Way To Mobilize And Channel Capital For Growth



### Access to Lower-Cost Capital

Sustainable finance enables Clients to attract ESG-focused investors seeking lower-risk and sustainability-aligned investments.

### Support for Sustainable Development Goals and National Development Goals (Such as NDCs)

Aligning with sustainable finance strengthens Client's mandate to improve housing affordability and quality and resiliency supporting climate mitigation and adaptation objectives.

### Enhanced Market Credibility

Adopting sustainability instruments improves Client's reputation and supports its national development objectives

.

### Diversification of Investor Base

Sustainable finance helps Clients broaden its investor base, enhance access to DFIs and capital market and improve its creditworthiness over time.

# WHAT WE DO: FINANCING ALTERNATIVES

Senior Debt Financing with Mobilization	Sustainability-Linked Financing	Structuring a Green Loan/ Bond	Anchor Investment in Bond Offering	Advisory Offerings
<p>Senior debt with a tenor of 6-8 years and grace period of 1-2 years</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> IFC to commit to the financing package post due diligence and internal processing</li> <li><input type="checkbox"/> IFC to syndicate/mobilize from other investors including other IFI and DFIs in its network, providing access to a diversified lender base</li> <li><input type="checkbox"/> The IFC Tranche and potentially other IFI / DFI funds may have a longer maturity than the traditional commercial lenders (up to 1-2 years)</li> </ul>	<p>Corporate loans / bonds which incentivize achievement of beyond-compliance sustainability KPIs</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> As the Sustainability Coordinator, IFC will help determine the most appropriate KPIs for the financing, including threshold and timing (for example GHG emissions reduction)</li> <li><input type="checkbox"/> IFC will help to develop the Sustainability-Linked Financing Framework ("SLFF") describing the KPIs</li> <li><input type="checkbox"/> IFC will also coordinate the review of the SLFF by Second Opinion Providers<sup>1</sup></li> <li><input type="checkbox"/> The use of proceeds is not prescribed, however, IFC would require some of the proceeds to be used towards new capex; some instruments use SDG KPI's or ESG KPIs or third-party sustainability ratings</li> </ul>	<p>Green Loan / Bond with proceeds earmarked for activities that promote climate purpose</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Identify activities for which the proceeds from the bond will be used for greening assets.</li> <li><input type="checkbox"/> IFC to help with the green bond process, including provision of technical support such as tools to measure and report impact and necessary training.</li> <li><input type="checkbox"/> The issuance can be via private placement or a public bond. In case of a public issuance, the minimum issue size would be US\$300m and the issuer would need to undergo a ratings process.</li> <li><input type="checkbox"/> IFC has in-depth knowledge of impact investors who participate in Green Bonds and can catalyze such investors along with it</li> </ul>	<p>Direct financing via purchase of a substantial portion of the bond issuance*</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> IFC to commit to subscribing to a bond issuance, which can be communicated to prospective investors during the roadshow.</li> <li><input type="checkbox"/> Like a partial underwriting, an IFC anchor investment ensures a successful issuance</li> <li><input type="checkbox"/> IFC's public endorsement may help to boost subscription levels and contribute to pricing tension</li> <li><input type="checkbox"/> The issuance can be via private placement or a public bond. In case of a public issuance, the minimum issue size would be US\$300m and the issuer would need to undergo a ratings process.</li> </ul>	<p>Potential IFC Advisory Services engagements</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> IFC financing can be complemented by IFC Advisory Services offerings to support sustainability efforts and develop decarbonization roadmaps</li> <li><input type="checkbox"/> Determine the scope of the engagements on key sustainability efforts of the Group</li> </ul>

# AN OVERVIEW OF RELEVANT DEBT INSTRUMENTS



## Green Bonds & Loans

These instruments are any type of bond/loan for which the funds will be applied **exclusively** to finance or re-finance, in part or in full, eligible **green projects**.



## Climate Transition Bonds & Loans

This label applies to both use of proceeds and sustainability-linked instruments. Used for issuer's who commit to decarbonise and/or engage in activities that are not low- or zero-emission, but have a short- or long-term role to play in **achieving decarbonisation on a science-based pathway and in alignment with the Paris Agreement**



## Sustainable Bonds & Loans

These instruments are used for a mixed portfolio of green and/or social projects that are aligned to eligible categories, established in the reference framework, with the aim of **generating a positive environmental and social impact**.



## Sustainability-Linked Bonds & Loans

These complimentary financial instruments that provide more flexibility in the use of funds. They require issuers to **define and commit to a sustainability trajectory** over a period of years through the **selection of one or more KPIs** and the **setting of associated performance targets**. These KPIs must be quantitative, regularly monitored, and performance externally verified.



## Social Bonds & Loans

These are instruments whose proceeds will be applied **exclusively** to finance or refinance, in part or in full, eligible **social projects for target groups**.

# ELEMENTS OF A GSS+ BOND STRUCTURE

High-Level Elements	Green Bond	Social Bond	Sustainability Bond	Sustainability-Linked Bond
Earmarked Use and Management of Proceeds	✓	✓	✓	✗
Selection of KPIs and Calibration of Targets	✗	✗	✗	✓
Pre-Issuance External Review	✓	✓	✓	✓
Allocation Reporting	✓	✓	✓	✗
Impact/Sustainability Performance Reporting	✓	✓	✓	✓
Post-Issuance External Review	—	—	—	✓

✓ Mandatory    ✗ Not Applicable    — Recommended

# GREEN BONDS



## Green Bond Principles

Voluntary Process Guidelines for Issuing Green Bonds

June 2021

(with June 2022 Appendix 1)



*“Green bonds enable capital-raising and investment for **new and existing projects with environmental benefits**. The Green Bond Principles (GBP) seek to support issuers in financing **environmentally sound and sustainable projects that foster a net-zero emissions economy and protect the environment**.*

*GBP-aligned issuance should provide **transparent green credentials** alongside an investment opportunity.”*

# RECENT GREEN BONDS / LOANS ISSUED IN AFRICA

Acorn Holding	Equity Bank	Access Bank	Standard Bank	ABSA	Nedbank
Kenya	Kenya	Nigeria	South Africa	South Africa	South Africa
Green buildings	Renewable energy, energy efficiency, green buildings, climate smart agriculture	Renewable energy, flood defence & agriculture irrigation projects	Renewable energy, energy efficiency, water efficiency, climate smart agric, green buildings	Renewable energy, energy efficiency, water efficiency, green buildings	Renewable energy 2020 5 years
2019 5 Years	2020/2021 5 Years	2019 5 Years	2020 10 Years	2021 5 Years	Green buildings 2021 5 years
<b>KES4.3 billion</b> (USD40 million)	<b>Sub-debt Loan USD50 + 165 million</b> (IFC)	<b>Green Bond N15 billion</b> (USD41 million)	<b>Green Bond USD200 million</b> (IFC Anchor)	<b>Green Loan USD150 million</b> (IFC)	<b>Green Bond R1.1 billion</b> (USD120 million) (IFC Anchor)

# Innovative PPP Models Adaptable for IBT and Affordable Housing

## Rwanda – Climate Smart Agriculture

- IFC, the Rwanda Green Fund, and MINAGRI launched a US\$335 million CSA investment plan.
- Targets climate-resilient irrigation, soil health, and agri-finance for 170,000 farmers across 83,250 hectares.

→ Source: IFC Press Release (2025)

## Nepal Climate Resilience PPP via Agribusiness Firms (IFC + PPCR)

- IFC and the Pilot Program for Climate Resilience supported climate-smart farming practices (water management, resilient seeds)
- Extension through private agribusiness supply chains
- Later replicated in Bangladesh

→ Source: CIF/IFC Impact Story

## South Asia – Climate Smart Agriculture

- IFC has invested \$800+ million in CSA with examples including:
  - Jain Irrigation (India) — efficient irrigation systems
  - Hindustan Coca-Cola — water-smart supply chain
  - Olam International — climate-resilient value chains
  - Mountain Hazelnuts (Nepal/Bhutan) — agroforestry & resilience

→ Source: IFC Climate-Smart Agriculture Report

## Colombia – Housing PPP

- Triada Low-Income Housing (LIH) Program — IFC Mezzanine Finance
- IFC provided up to US\$10 million in mezzanine financing for 5–10 low-income housing projects in Bogotá and Cali.

→ Source: IFC Disclosure (Triada LIH)

## Kenya – Affordable Housing PPP Advisory

- IFC engaged as advisor on Kenya's national Affordable Housing PPP.

→ Source: Affordable Housing Institute / IFC Project Page (2023)

## Affordable Housing PPP Knowledge Sharing (IFC + PPP Center)

- IFC and the Philippine PPP Center jointly conducted a Knowledge Sharing Session on green, resilient, inclusive affordable housing PPPs in 2023.
- Over 107 participants from national agencies and LGUs attended.

→ Source: PPP Center Media Release (2023)



# CASE STUDIES OF GREEN BUILDINGS THAT USED IBT

## Case study: 14 Trees is certifying homes with EDGE



### Project Statistics

- The Mvule Gardens by 14 Trees development is one of the first EDGE certified, 3D-printed residential development in Africa.
- Homes feature Reduced window to wall ratio, reflective paint for roof and external walls, roof and wall insulation, and energy-saving lighting for internal and external spaces, In-situ concrete floor slab for floor, steel sheets on timber rafters for roof, timber weatherboard on timber studs and in-situ reinforced wall for external walls, plasterboards on timber studs and in-situ reinforced wall for internal walls.
- IBT Technology – 3d Printing of structure.

Predicted Savings of  
EDGE Certification

**42%**

Energy Savings

**24%**

Water Savings

**69%**

Less Embodied Energy in Materials

Case study:  
**Casa Colmenar is certifying homes with EDGE**



### Project Statistics

- Casa Colmenar is a rest cabin in the city Huamantla, in the state of Tlaxcala.
- Homes feature Reduced window to wall ratio, insulation of roof, insulation of external walls, energy efficient, refrigerators and clothes washing machines, energy-saving light bulbs – internal spaces, energy-saving light bulbs – external spaces and sensible heat recovery from exhaust air – efficiency.
- IBT technology – timber window frames, cement fibre boards on metal studs for internal walls.

Predicted Savings of  
EDGE Certification

**43%**

Energy Savings

**61%**

Water Savings

**85%**

Less Embodied Energy in Materials

## Case study: Unity Homes is certifying hundreds of homes with EDGE



**Predicted Savings of  
EDGE Certification  
Unity Homes**

**66%**

Energy Savings

**20%**

Water Savings

**38%**

Less Embodied Energy in Materials

### Project Statistics

- In 2022, Unity homes in Tatu city become one of the early adopters for EDGE certification
- Homes feature efficient glass, insulated walls and roofs, solar hot water, low flow plumbing fixtures and more, at an affordable price
- IBT Technology – Aluminum Formwork

## Case study: Universidad del Medio Ambiente is certifying schools with EDGE



### Project Statistics

- Homes feature Reduced window to wall ratio, reflective paint/tiles for walls, external shading devices, insulated roofing and external walls, natural ventilation for classrooms, energy-saving lighting, solar hot water collectors and solar photovoltaics.
- IBT Tech: compressed stabilized soil blocks, timber window frames

Predicted Savings of  
EDGE Certification

**53%**

Energy Savings

**89%**

Water Savings

**68%**

Less Embodied Energy in Materials

## Case study: Urban Nirvana is certifying homes with EDGE



### Project Statistics

- 335 Rhabta is a bungalow, originally built in 1967, that has been renovated to modern standards, relying on natural lighting, natural ventilation, solar PV powered energy needs, LED lighting, rainwater harvesting, low-flow plumbing fittings, and re-use of existing materials wherever viable
- Homes feature efficient glass, insulated walls and roofs, solar hot water, low flow plumbing fixtures and more, at an affordable price

### Predicted Savings of EDGE Certification

**46%**

Energy Savings

**64%**

Water Savings

**61%**

Less Embodied Energy in Materials

## Case study: La Vista is certifying homes with EDGE



### Project Statistics

- La Vista Villas is a real estate project of luxury villas with a sea view, located on the island of Phuket on the top of a mountain in Chalong district, Thailand.
- Homes features include Reduced Window to Wall Ratio, External Shading Devices, Insulation of Roof, Insulation of External Walls, Variable Refrigerant Volume (VRV) Cooling System, Energy-Saving Light Bulbs – Internal Spaces, Energy-Saving Light Bulbs – External Spaces
- IBT technology – auto-claved aerated concrete blocks

Predicted Savings of  
EDGE Certification

**54%**

Energy Savings

**29%**

Water Savings

**36%**

Less Embodied Energy in Materials

# EDGE website has a library of case studies in Africa, Which can be used for promotion or proof-of-concept



[Peridot Parkland Estate \(NGA\)](#)  
Homes by EchoStone



[Atlantic Tower \(GHA\)](#)  
Offices by Wahhab Estate Co.



[Douala Grand Mall \(CMR\)](#)  
Retail by Actis, Craft Development



[ALP North \(KEN\)](#)  
Warehouse by ALP



[Antananarivo Airport \(MDG\)](#)  
Airport by Bouygues and Colas



[Waterfall Park \(ZAF\)](#)  
Homes by IHS and SSI Group



[Britam Tower \(KEN\)](#)  
Offices by Britam



[Novare Great North \(ZMB\)](#)  
Retail by Novare



[Komfo Anokye Hospital \(GHA\)](#)  
Hospital by ABP



[Tema Port Terminal \(GHA\)](#)  
Port by MPS

# Closing and Q&A

A photograph of a wind farm at dusk or dawn. In the foreground, the dark silhouette of a wind turbine is prominent against a lighter sky. In the background, a long line of wind turbines stands on a hillside, their blades catching the light. The overall scene is dark and atmospheric.

**Kushinka L. Kambarami**

Green & Resilient Buildings Lead – Africa

[kkambarami@ifc.org](mailto:kkambarami@ifc.org)