



# GREEN BUILDINGS MARKET INTELLIGENCE NEPAL COUNTRY PROFILE



*Creating Markets, Creating Opportunities*

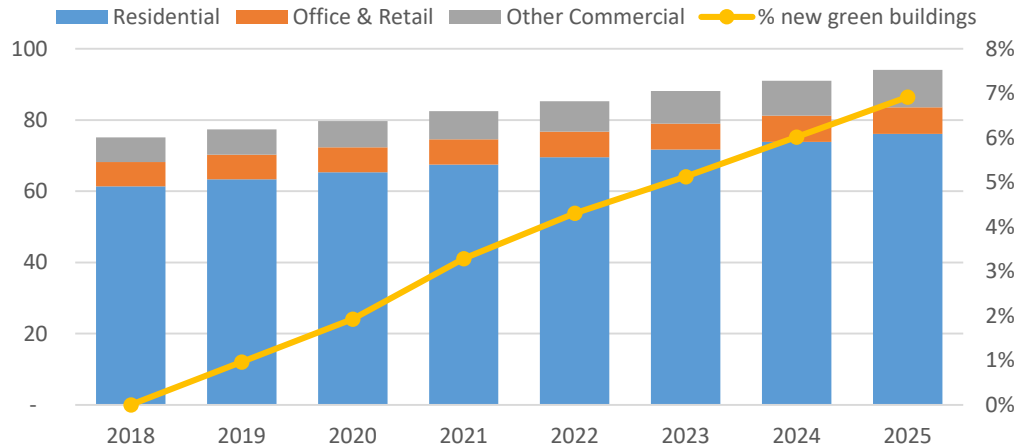


# NEPAL: COUNTRY SUMMARY



## MARKET GROWTH

Building Stock (million m2)



## OTHER FACTORS

- The housing sector is responsible for 18% of total urban employment.
- An additional 1 million houses will need to be built to meet demand in the next decade.
- Nepal suffers from a lack of masons and construction workers.
- Need for earthquake resilient construction.



## CLIMATE POLICIES (NDCS)

- Primary green building has been funded by the Switch Asia project and incorporates standards developed for 'Green Homes'.
- IFC and Netherlands-based development bank FMO invested \$6 million in a sustainable, green business hotel in Kathmandu.



## MARKET STATUS

- The largest sources of real estate development will come from institutional/assembly, education, and multi-unit residential as urban areas are reconstructed.



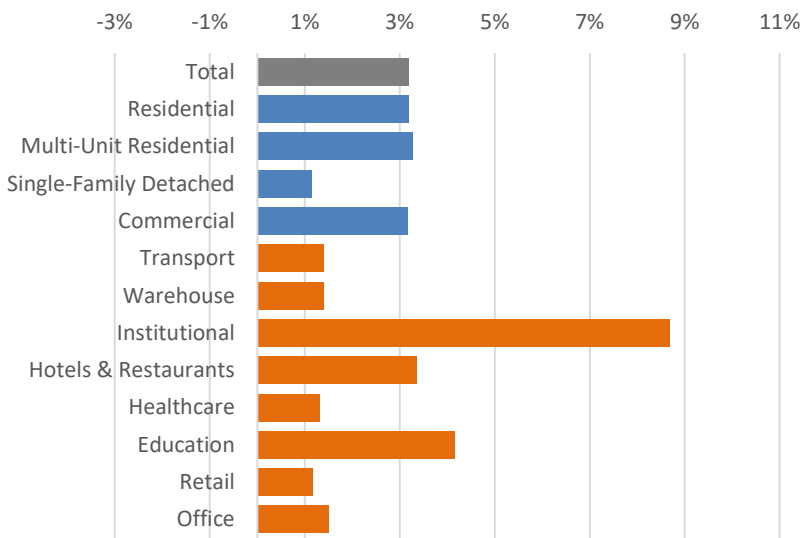
## GREEN BUILDING PROGRAMS

Nascent green market but an existing tradition of sustainable building as evidenced by country's medieval housing, which consume little energy and use land efficiently.



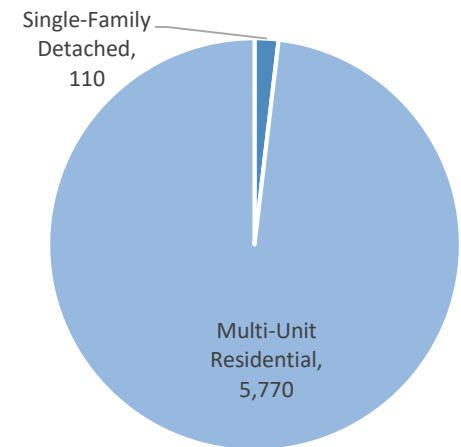
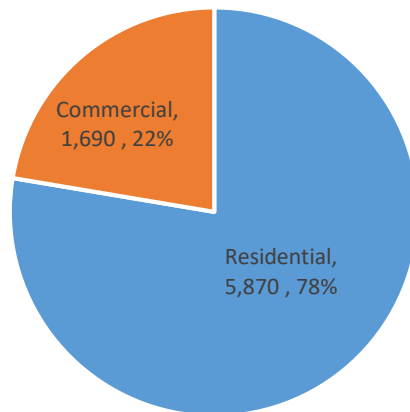
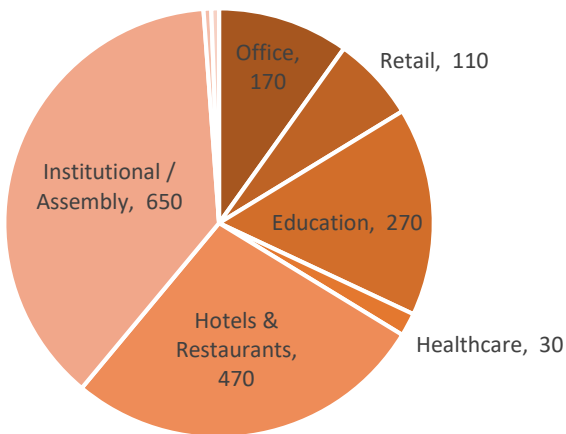
# TOURISM AND HOUSING ARE KEY DRIVERS OF GROWTH

## MARKET GROWTH BY SUB-SECTOR (CAGR)



- Nepal IS expected to have real GDP growth of 7.5% in 2017 due to rebuilding and agricultural growth.
- Allocated more than 26% of its FY18 budget to capital expenditure prioritizing post-earthquake reconstruction.
- The government has identified the use of green building materials for post-earthquake reconstruction in its Post Disaster Needs Assessment, Rapid Environmental Assessment, and Post Disasters Recovery Framework.
- **Planned reconstruction of about 600,000 buildings, repair/retrofitting of more than 250,000**, and growing population means investment opportunity of \$2.7 billion in residential and \$650 million in commercial sectors.

## TOTAL MARKET SIZE, 2025 (USD MILLION)





# GREEN GROWTH WILL BE DRIVEN BY HOUSING AND HOTELS

“This push for green buildings is being pursued across sectors, with the **tourism and hospitality sector leading the way** with a \$6 million investment by IFC and FMO, the Netherlands-based development bank, in a sustainable, green business hotel in Kathmandu. This model will be replicated across the country.”

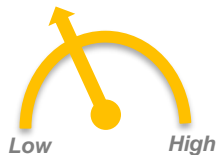
Climate Investment Opportunities in South Asia  
IFC 2017

\$3.4 billion in green buildings to green the planned reconstruction, repair and retrofitting of earthquake-damaged buildings, and additional building stock to meet the demands of a growing urban population

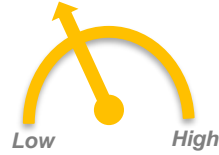
## GREEN MARKET SUPPORT RATING



GOVERNMENT



ENVIRONMENT



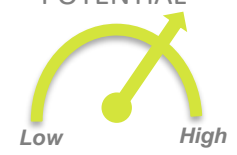
FINANCING



CURRENT GREEN MARKET



GROWTH POTENTIAL





# UNDP IS LEADING THE WAY ALONGSIDE LOCAL POLICYMAKERS

- Government recognizes two-three out of 90 constructions designs that feature the use of sustainable building materials.
- Department of Urban Development and Construction formulated **Guidelines for Green Building Technology.**
- Nepal's NDC emphasizes need for green homes
- \$3.4 billion investment opportunity for green buildings.
- Tourism and the hospitality sector are leading green building.
- Construction industry is pushing for the use of green building materials in reconstruction.

The United Nations Development Program created and promoted 'Green Homes' under its Switch Asia program. Green Homes utilize compressed stabilized earth blocks, which are more efficient as conventional mud bricks without being more expensive



Government of Nepal

**National Reconstruction Authority**

The National Reconstruction Authority is leading standards and guidelines for green construction.






# LEARN MORE ABOUT EDGE CERTIFIED PROJECTS IN SOUTH ASIA



## KOLKATA WEST INTERNATIONAL CITY

Location: **Kolkata, West Bengal**  
Developer: **Shapoorji Pallonji Group**  
Sector: **Multi family Residential**  
Size: **> 600 units**

Predicted Savings of EDGE Certification:




-  27% Energy Savings
-  35% Water Savings
-  36% Less Embodied Energy in Materials



## SPRINGHILL CONDOTEL AT JIMBARAN HIJAU

Location: **Bali, Indonesia**  
Architect: **Grounds Kent Arsitek (GKAI)**  
Sector: **Commercial - Hotels**  
Size: **8,232 m<sup>2</sup>**

Predicted Savings of EDGE Certification:

-  21% Energy Savings
-  21% Water Savings
-  37% Less Embodied Energy in Materials

Case studies from other countries: <https://www.edgebuildings.com/projects/>



## PROJECTS CAN CHOOSE BETWEEN TWO EDGE CERTIFIERS FOR FAST, EASY, AND AFFORDABLE CERTIFICATION



CERTIFICATION	PRICE (PER M <sup>2</sup> , EXCLUDING PARKING)	MINIMUM
0-25,000 FLOOR AREA (SQM)	\$0.27	\$2,250
25,000-50,000 FLOOR AREA (SQM)	\$0.22	\$6,750
50,000-75,000 FLOOR AREA (SQM)	\$0.17	\$11,000

\*Price per m<sup>2</sup>; Project appoints an auditor



**SGS**

thinkstep

PROJECT TYPE	CERTIFICATION	DESIGN AUDIT	FINAL AUDIT	TOTAL
Residential (one unit type)	\$2,100	\$3,600	\$3,650	<b>\$9,350</b>
Commercial (single end use)	\$2,100	\$3,600	\$3,650	<b>\$9,350</b>

\*Price per type of project; Auditor fee is included

Details and registration forms can be found on the EDGE program website:  
<https://www.edgebuildings.com/certify/other-countries/>



# EDGE EXPERTS IN THE REGION CAN HELP PROJECTS NAVIGATE THE CERTIFICATION PROCESS

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# RESEARCH METHODOLOGY

## COUNTRY LIST

- IFC chose countries that correspond to the [Climate Investment Opportunity Report](#) (CIO Report) as well as countries of strategic interest for IFC.
- IFC plans to release additional country analysis, pending resources.

## TOTAL MARKET OVERVIEW

- Building stock was sourced from the [Global Building Stock Database](#) and confirmed by country experts, if possible.
- The research team found local prices for capital construction expenses, or used global proxies otherwise.
- Market sizing was executed for new construction and did not focus on retrofits.

## SNAPSHOT OF THE CURRENT GREEN MARKET

- Main source of information was the [Green Building Information Gateway](#), confirmed by local green building council reports, if such existed.
- The research team focused on properties certified as green.

## GOVERNMENT POLICIES

- Main information was sourced from [IFC's Climate Investment Opportunities Report – South Asia](#).
- Additional information was found using various searches as well as government websites.

## PROJECTIONS FOR GREEN PENETRATION

- Based on the total market growth, snapshot of the current green market, and the enabling environment of government policies, the research team projected green penetration per each of the sub-sectors.
- Weighted average of combined sector data produced the final penetration number.
- The analysis focused only on new construction, and focused only on certified properties.
- As tools for retrofits take off in the market (including IFC's EDGE product), analysis may be amended to include the retrofit market.
- Market potential may be different from numbers reported in the CIO Report, as a more conservative estimate was used for business planning purposes.

## OTHER

- Information for green building councils was sourced from [World GBC website](#).
- Case studies were presented only for IFC's EDGE green building software and certification system.
- However, lists of all green certified projects in a given country can be found through the [Green Building Information Gateway](#).
- Finally, pricing for EDGE certification was included to illustrate that green certification is affordable and achievable in emerging markets.



# ACKNOWLEDGEMENTS

## **DONOR ACKNOWLEDGEMENT**

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## **COLLABORATION ACKNOWLEDGEMENT**

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