GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT

MEXICO

2023

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ACKNOWLEDGEMENT

This report was prepared as part of the UK-IFC Market Accelerator for Green Construction (MAGC) Research Program. The preparation of this assessment was based on 69 surveys of Mexican private sector companies including developers, real estate investors (i.e., funds, REITs, and/or corporate landlords), financial institutions, building experts (i.e., architects, engineers, contractors, and Green Building experts), and policy makers. Substantive contributions were received from Joel Sánchez Briseño of IFC's Mexico EDGE team. A special thank you is extended to Corinne Figueredo, IFC EDGE Operations Manager, who provided guidance for the study.

About IFC

IFC — a member of the World Bank Group — is the largest global development institution focused on the private sector in emerging markets and developing economies. We work in more than 100 countries, using our capital, mobilization capacity, expertise, and influence to create jobs and raise living standards, especially for the poor and vulnerable. In fiscal year 2023, IFC committed a record $43.7 billion to private companies and financial institutions in developing countries, leveraging the power of the private sector to improve people's lives as economies grapple with the impacts of global compounding crises. For more information, visit www.ifc.org.

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GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: MEXICO

Buildings account for one-third of global final energy use and one-fifth of energy-related greenhouse gas (GHG) emissions. Green Buildings can be a solution to reduce energy use and GHG emissions of buildings and contribute to low carbon economic growth. However, market failures and barriers (e.g., lack of supportive policies, information asymmetry between builders and buyers regarding the efficiency of a building, and lack of information about, experience with, and awareness of Green Buildings) result in the continuation of conventional approaches to constructing buildings.

The UK-IFC Market Accelerator for Green Construction (MAGC) aims to boost the uptake of greener construction practices and technologies in developing countries. As part of this initiative, the MAGC Research program gathers, analyzes, and disseminates new evidence to develop, improve, and promote approaches to green construction and market transformation.

The scope of MAGC Research includes a series of stakeholder assessments intended to understand the perceived motivations and obstacles to the growth of Green Buildings in selected emerging markets.

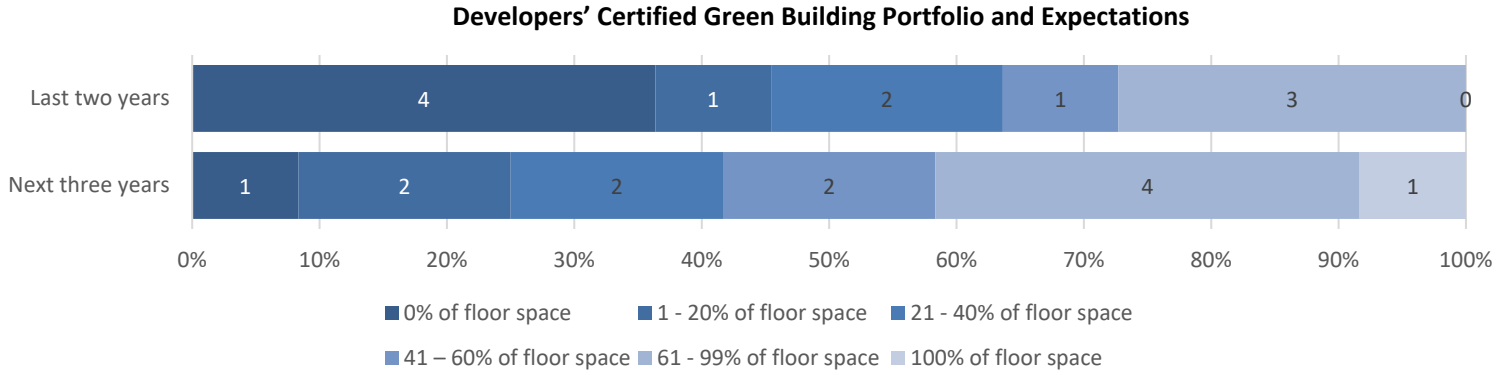
This report was conducted as part of the MAGC Research Program in 2022-2023. The stakeholder assessment is intended to be representative, but not exhaustive. It aims to provide actionable insights and contribute to the understanding of the Green Building market in Mexico, shedding light on awareness, motivating factors, perceived obstacles, construction cost and performance estimates, and decision-making paradigms of each stakeholder group.

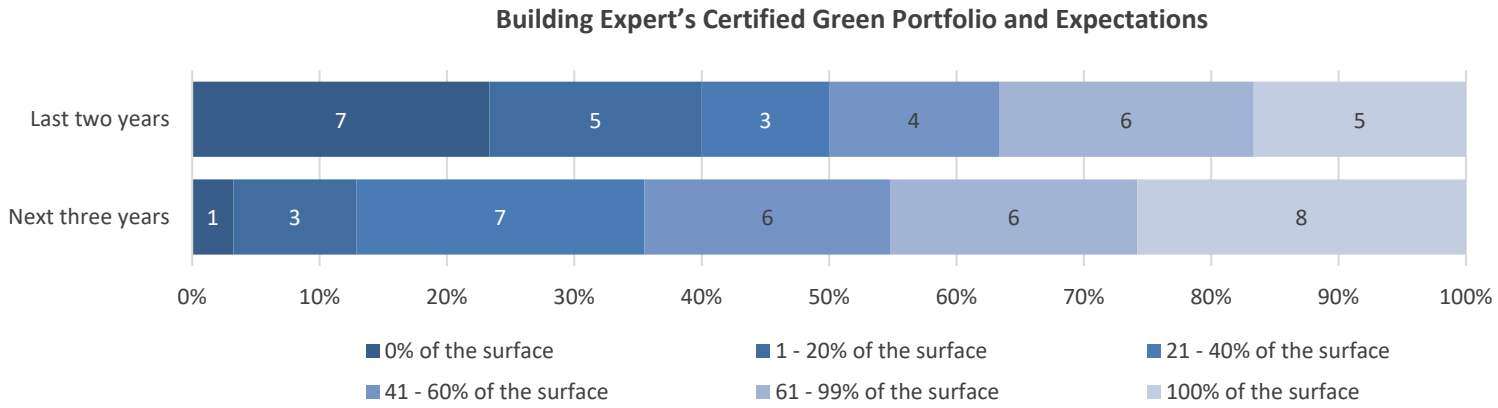
The Mexico stakeholder assessment was conducted through the SurveyMonkey online survey platform. 69 stakeholders responded to the survey, representing six stakeholder groups: developers, DFIs, financial institutions, building experts (i.e., architects, engineers, contractors, and Green Building experts), and policy makers.

GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: MEXICO

Portfolio: This assessment finds that Mexico has a growing Green Building market, with the majority of developers and building experts reporting having Green Building portfolios during the last two year and planning to increase them over the next three years.

These findings are aligned with the IFC's Green Building Market Maturity Snapshot for Mexico*, which indicated that as of 2020 the Green Building market was underdeveloped but strengthening.

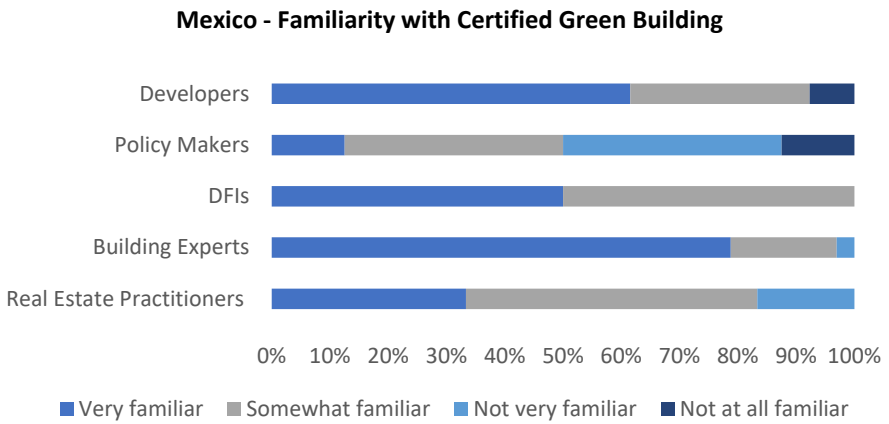




*IFC. 2021. Mexico Green Building Market Maturity Snapshot 2020.

GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: MEXICO

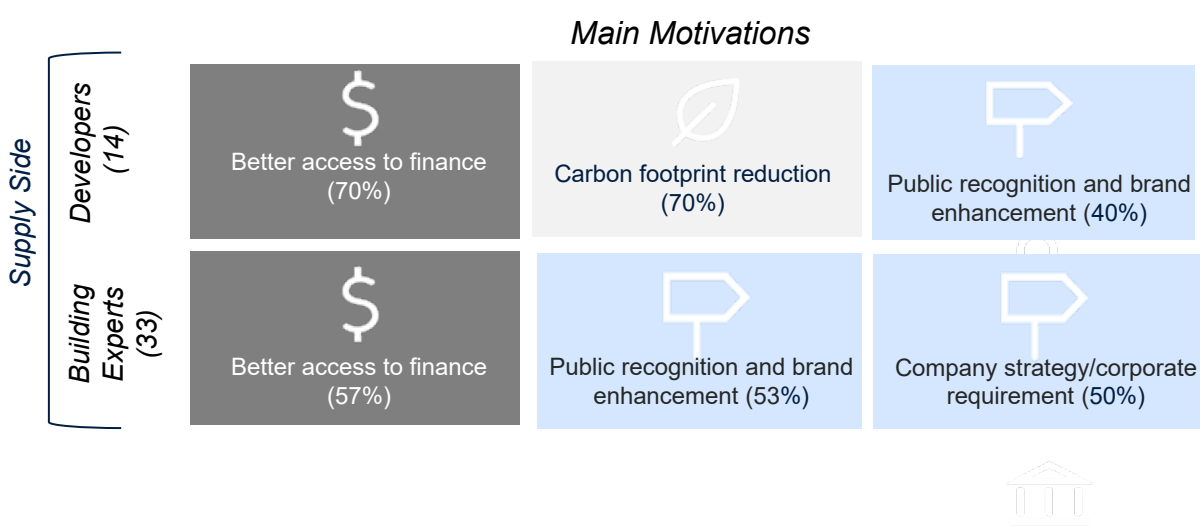
Familiarity: Respondents in Mexico indicated mixed familiarity with Green Buildings: building experts (97%) and developers (93%) were identified as groups most familiar with certified Green Buildings. Conversely, policy makers (50%) reported the least familiarity with Green Buildings.

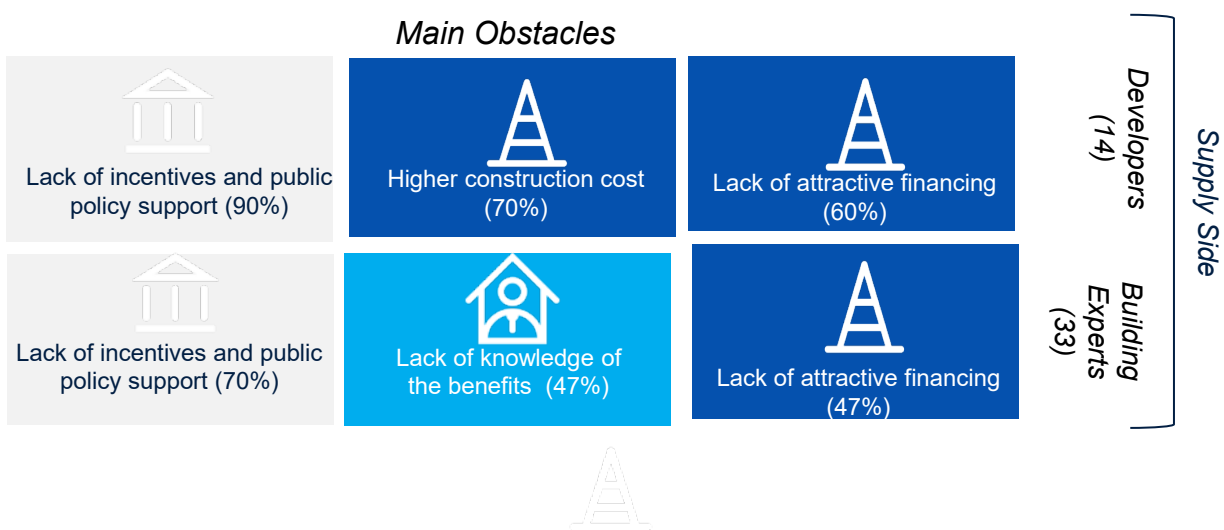


Motivations: On the supply side, according to the survey the main motivating factors for Green Buildings are better access to finance (70% of developers and 57% of building experts) in addition to the decreased carbon footprint (70% of developers) and public recognition/brand enhancement (53% of building experts and 40% of developers).

Obstacles: On the supply side, the lack of incentives and public policy support is considered the major obstacle to the expansion of certified Green Buildings in Mexico (90% of developers and 70% of building experts), followed by perceived high construction cost (70% of developers) and lack of attractive financing (60% of developers and 47% of building experts).

GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: MEXICO





Motivation categories:

- Advantage of Green Buildings
- Availability of finance
- Availability of supply
- Better financing terms
- Company strategy
- Environmental sustainability
- Government policy
- Increased demand for Green Buildings

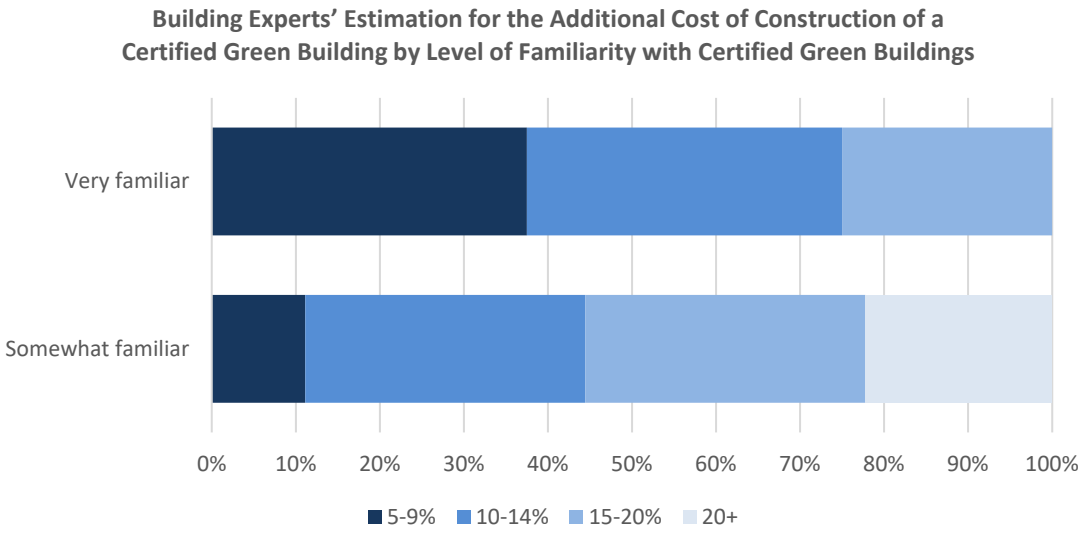
Obstacle categories:

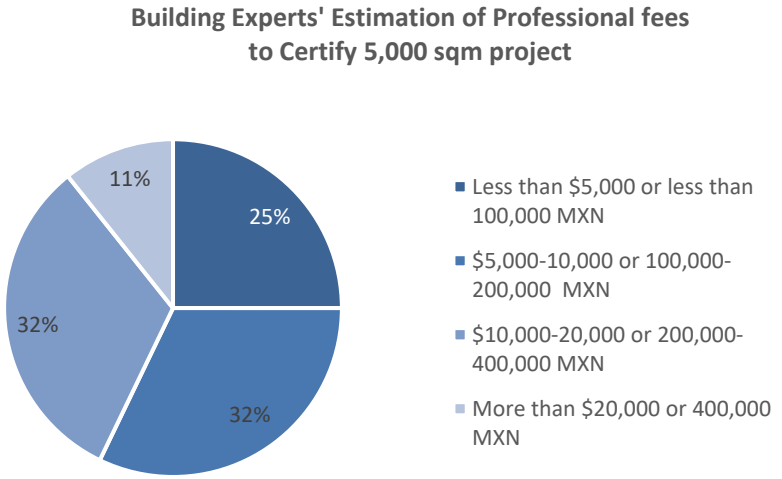
- Unclear business case
- Knowledge
- Financial obstacle
- Company strategy
- Risk
- Government policy
- Disadvantage of Green Buildings
- Capacity
- Availability of supply
- Availability of financing

GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: MEXICO

Estimations of the additional cost of construction by building experts appear to decrease with the level of familiarity with Green Buildings. While this could mean that better knowledge may allow companies to find more cost-effective solutions, it could also signal that in the absence of information, developers that are less familiar with certified Green Buildings could further overestimate the additional cost of green construction.

Regarding the cost of certification, the estimation of the professional fees required to certify a 5,000 sqm project varied significantly across building experts, again suggesting a large knowledge gap.





GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: MEXICO

Conclusion:

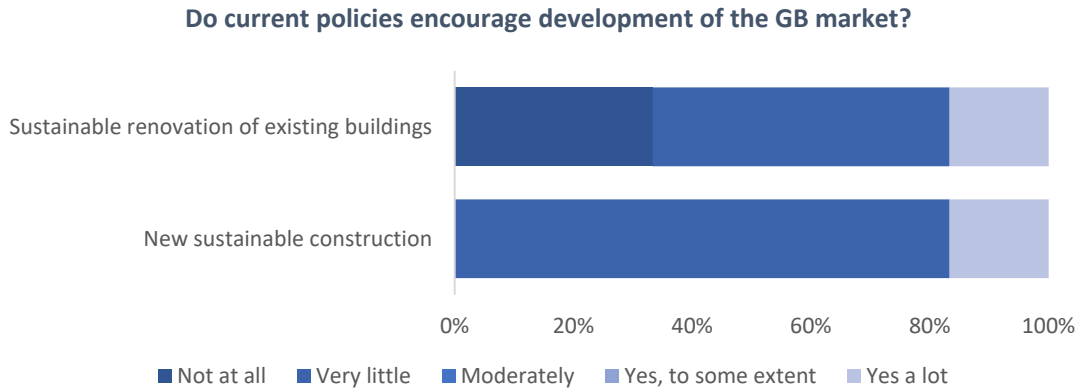
- The importance of Green Buildings in Mexico is expected to grow for all stakeholders.
- Building expert and developer respondents in Mexico consider better access to finance, decreased carbon footprint, and public/brand recognition as the main motivating factors for Green Building construction. Conversely, both stakeholder groups consider the lack of incentives and public policy support and the lack of attractive financing as the main obstacles for the development of the Green Building market in Mexico.
- The high cost of Green Building certification is also mentioned as an obstacle by some respondents. However, survey responses suggest that the cost of Green Building certification is likely substantially overestimated by building experts. Also, 47% of surveyed building experts cited the lack of knowledge about the benefits of Green Buildings as another obstacle to the development of the market. All this suggests that the information gap regarding the cost of Green Building construction in Mexico is still very large, and that further knowledge dissemination efforts are needed to reduce it.

ANNEX

Policy Makers

Responses: 8

Surveyed policy makers consider that Green Building development is an important part of Mexico's response to climate change, with 75% indicating it is very important, and the remaining 25% saying it is important. The survey gathered mixed views on whether current public policies (e.g., regulations, incentives) encourage the development of the certified Green Building market in Mexico.

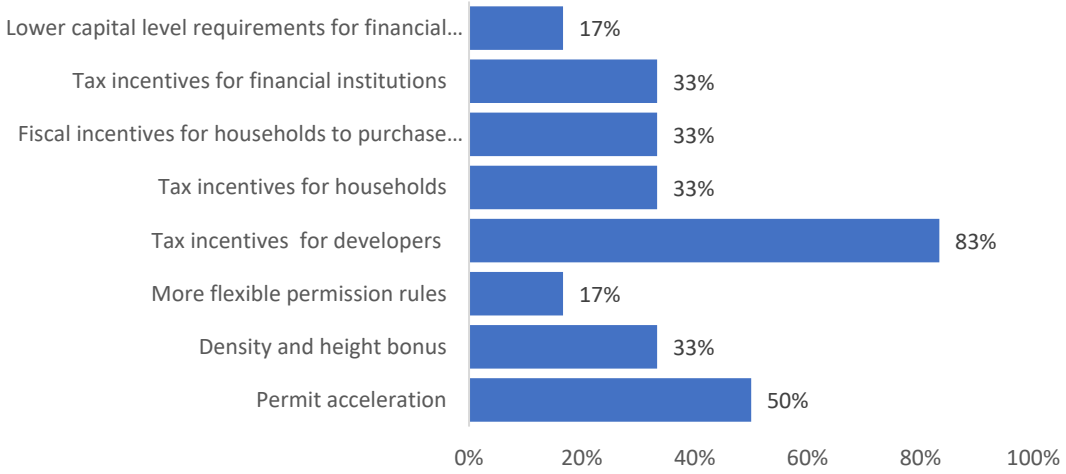


Despite the consensus that public policies encourage the development of the Green Building market, the enforcement of these policies appears to be lacking, with 50% of the respondents estimating that there is limited or no enforcement of Green Building regulations in Mexico. All respondents consider voluntary Green Building certification to play a factor. Half of policy makers believe that fiscal incentives for certified Green Buildings (tax breaks, grants), national green building code, and Nationally Determined Contributions (NDCs) mentioning the role of the Green Building sector are the top accelerants in the certified Green Building market.

Public policy actions as accelerants in the certified Green Building market

- Fiscal incentives for certified Green Buildings, 67%
- Mandatory sustainable building certifications for new buildings, 67%
- Non-fiscal incentives for certified sustainable buildings, 67%
- Tax incentives for certified sustainable buildings, 50%

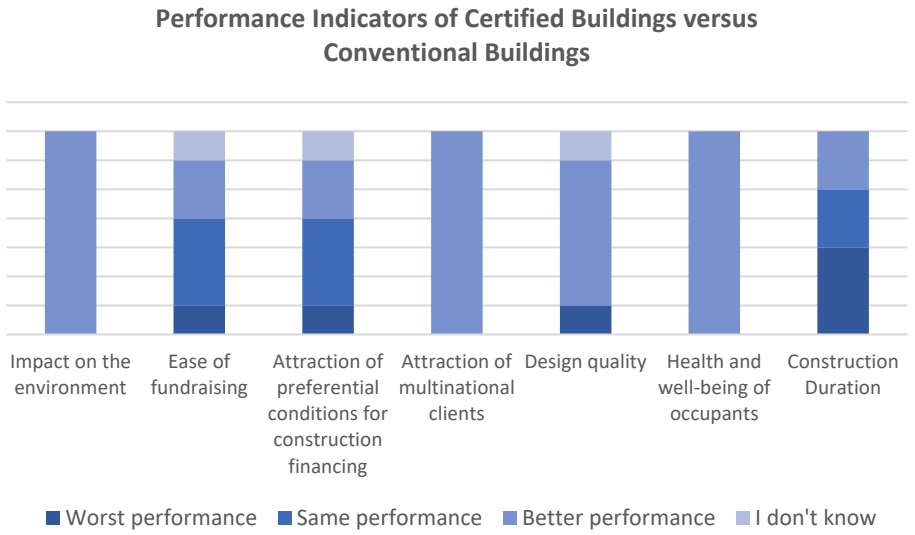
67% of policy makers estimated that fiscal incentives, mandatory certifications and non-fiscal incentives, each contribute to the role of the Green Building sector. Primary incentives that policy makers believe would accelerate the certified Green Building market are presented below



Policy Makers

Responses: 8

The majority of policy maker survey respondents consider that certified Green Buildings always perform better than conventional buildings in terms of impact on the environment (75%) and that certified Green Buildings have a better impact on the health and well-being of occupants (88%). Policy makers' views on other performance indicators can be summarized as follows:



50% of policy makers indicated that greater access to finance was the main motivator for the development or investment of certified Green Buildings. Similarly, 50% of policy makers indicated that a lack of incentives and public policy support, high construction cost as well as absence of technical capacity, were the main obstacles to developing Mexico's certified Green Building market.

Main motivators in developing the certified Green Building market

- Greater access to finance, 50%*
- Carbon footprint reduction, 33%
- Government regulations or incentives, 45%

Main obstacles in developing the certified Green Building market

- Lack of incentives and public policy support, 50%
- Absence of technical capacity, 50%
- Higher construction cost, 50%

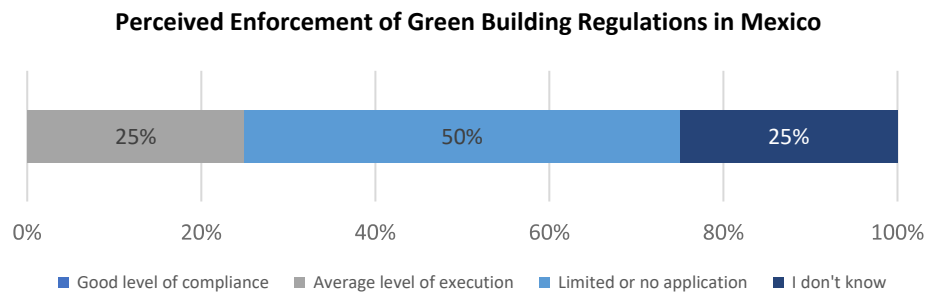
**Financial Motivations include better construction/mortgage terms and increased access to financing/profitability.*

Development Finance Institutions

Responses: 4

Development finance institutions (DFIs) respondents were comprised of multilateral, bilateral, or national development institutions or subsidiaries set up to support development in Mexico. Only one of the four DFIs surveyed indicated that their institution supports the development of the Green Building market in Mexico by providing financing to developers. Furthermore, this institution does not require any Green Building certification as a prerequisite to obtaining financing. Only one of the DFIs not supporting the development of the Green Building market at present time plans to provide support in the future.

3 of the 4 DFIs that respondent to the survey indicated that the construction of Green Buildings was very important or important in addressing climate change, and all DFIs indicated that they were very or somewhat familiar with Green Buildings. From an enforcement perspective, two DFIs reported a moderate perception that Mexico has a good level of enforcing Green Building regulations, while the remaining two reported perceived limited to no enforcement.



DFI respondents are of the opinion that increased investor demand, increased access to financing, higher profitability, risk management, and increased marketability are major factors currently supporting the development of the certified Green Building market.

The main obstacles highlighted by the respondents included the high cost of certification, lack of incentives and support of public policy and lack of demand from end users. DFI stakeholders believe that institutional investors, real estate developers and development financial institutions are the most influential stakeholders when it comes to developing the Green Building market in Mexico.

Key actions that DFIs believe would increase the uptake of certified Green Buildings in Mexico are incentives (both financial and non-financial) and mandatory Green Building certification.

Financial Institutions (FIs)

Responses: 3

FIs survey targeted a relatively small group of stakeholders that provide mortgage and construction loans in Mexico. All FIs surveyed raised a high level of concern given the potential climate risk in their real estate portfolios. All FIs indicated that transition risk (e.g., public policy, market preferences, norms, and technology) was a major risk. Currently, 2 of the 3 respondent Fis reported providing financing for Green Building projects. All three FIs require green certification to approve a Green Building loan.

Two of the respondent FIs predict that the highest Green Building finance growth potential is likely to take place within Green Building construction finance (residential and commercial) and not within the repurposing and retrofits of existing buildings into Green Buildings. One FI predicts green mortgages to have highest Green Building finance growth potential.

Two FIs responded that their loan portfolios for certified Green Buildings are expected to increase in the next three years, ranging from three to 50%. FIs have implemented, inter alia, the creation of a definition for Green Building projects, a Green Building Finance and Asset Policy, a dedicated marketing and outreach strategy for developers and property buyers and a partnership with an internationally recognized Green Building certification system.

According to respondent Fis, to date the most important factors in the increase of certified Green Buildings include influence of real estate developers and investors. Two of the three FIs real estate developers to be the most influential stakeholder in the development of the Green Building market in Mexico. Most FI respondents also consider developers and local governments to be highly influential.

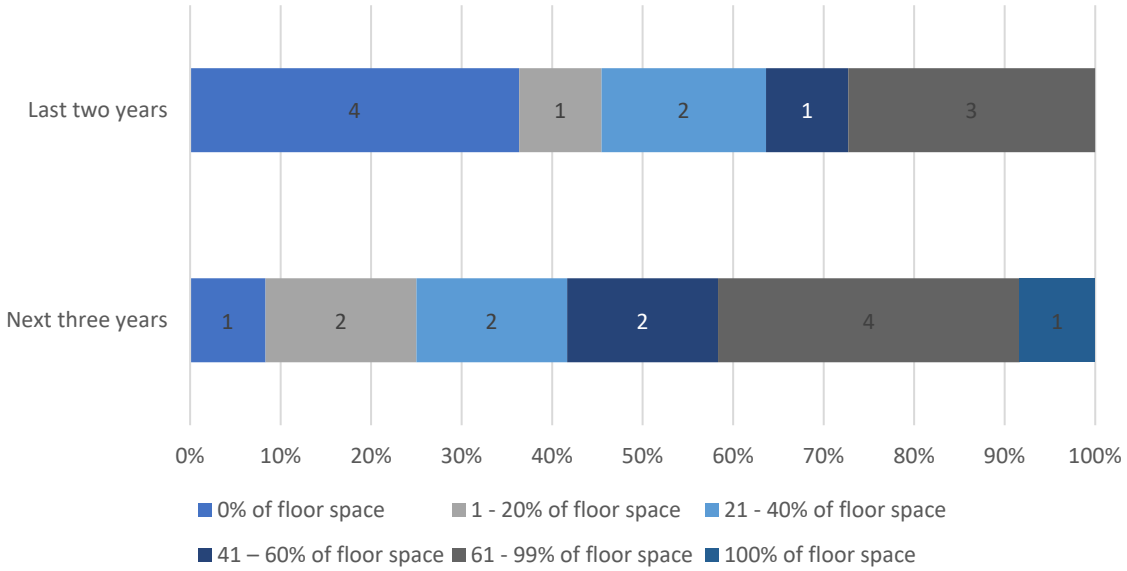
However, 2 out of the 3 respondents indicated that the lack of incentives and public policy support, the lack of a clarity on benefits of certified sustainable buildings, and insufficient demand of certified Green Buildings are the main three obstacles to increasing the financing in Green Buildings.

Developers

Responses: 14

Out of 14 developer respondents, 93% consider themselves to be either very familiar (62%) or somewhat familiar (31%) with Green Buildings. 94% of developer respondents stated that they currently have certified Green Buildings in their portfolios., and most developers intend to increase their share of certified Green Buildings in their portfolios over the next three years.

Developers' Certified Green Building Portfolio and Expectations



Middle income residential (55%), offices (27%), hotels (27%), and high-income residential (27%) are the most popular in terms of certified Green Building developments. The anticipated increase in green certified floor space is predominantly driven by the increased marketability, carbon footprint reduction, and public recognition and brand enhancement.

Most developers feel that lack of incentives and public support (90%), high construction cost (70%) and lack of attractive financing (60%) are the main obstacles to increasing the share of certified Green Buildings in their development portfolios.

Main motivations to certify green

- Better access to finance, 70%
- Carbon footprint reduction, 70%
- Public recognition and brand enhancement, 40%

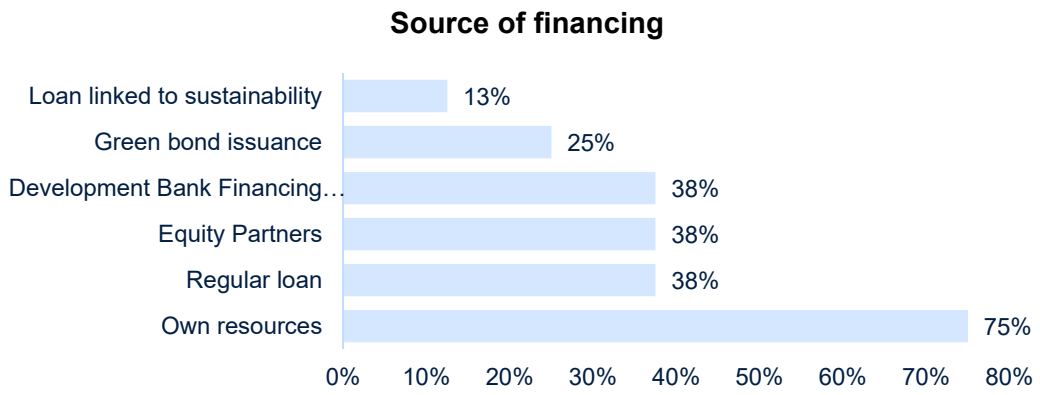
Main obstacles to certify green

- Lack of incentives and public policy support, 45%
- Higher construction cost 70%
- Lack of attractive financing 60%

Developers

Responses: 14

The majority of developer respondents report using their own resources (75%) followed by regular loan, equity partners, and development bank financing (38%) each to finance their developments.



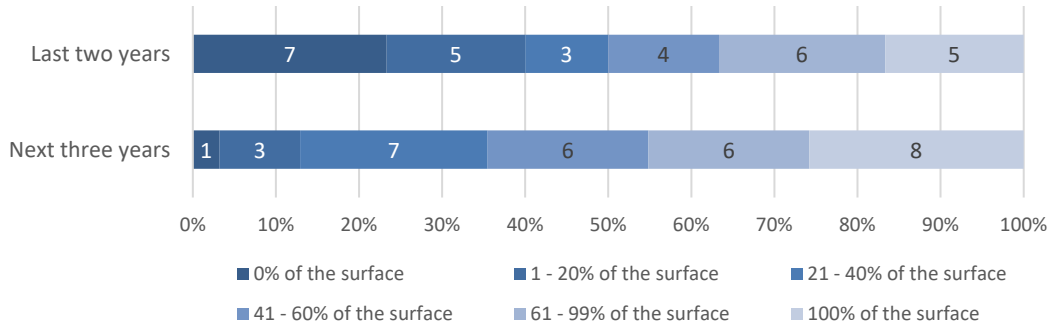
44% of developer respondents consider that current regulations at least moderately facilitate the development of the Green Building market. However, 33% of developer respondents reported a perception of limited to no enforcement of Green Building regulations in Mexico.

Building Experts

Responses: 33

Green Building familiarity among designers and Green Building consultants is strong. The majority of building experts (97%) report being very familiar (79%) or somewhat familiar (18%) with green buildings. The graph below summarizes the certified Green Building floor space in the current portfolios of designers and Green Building consultants and their projected increase in in the next three years.

Building Expert's Certified Green Portfolio and Expectations



Respondents indicated that they use EDGE Expert certification most widely (97%), followed by LEED (55%). Stakeholders indicated that their decision regarding which certification system to use was largely guided by the cost of certification (73%), speed and simplicity of the certification (53%), followed by the reputation of the certification system (50%) and the company specific requirement (33%). The three most popular property segments to develop and certify green for designers and Green Building consultants include hotels, offices, and high-income residential building.

Main real estate sectors for certified Green Building development

Building Experts

Responses: 33

Feedback from designers and consultants indicates that the main obstacles to greater growth in the certified Green Building market included the lack of incentives and public policy support (70%), Lack of knowledge of the benefits of certified sustainable buildings (47%) and lack of attractive financing (47%). Conversely, the primary motivations for developing certified Green Buildings better access to finance (57%), public recognition and brand enhancement (53%) and corporate strategies (50%).

Main obstacles in developing the certified Green Building market

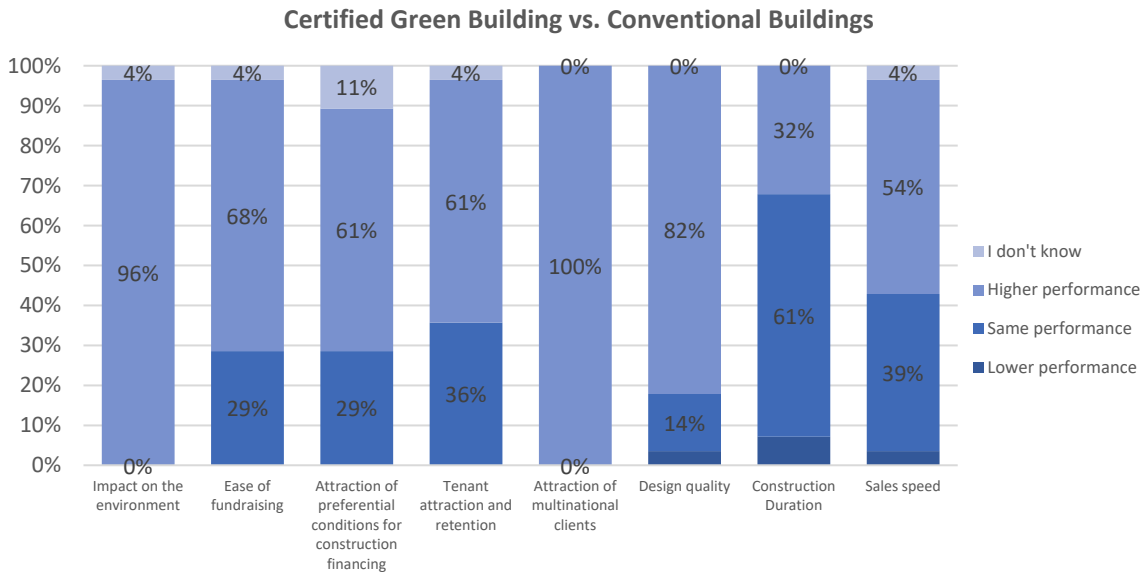
- Lack of incentives and public policy support, 70%
- Lack of knowledge of the benefits, 47%
- Lack of attractive financing, 47%

Main motivators in developing the certified Green Building market

- Improved access to finance 57%
- Public recognition and brand enhancement, 53%
- Company strategy/corporate requirement, 50%

Certified Green Buildings are expected to perform better than conventional buildings in terms of impact on the environment and attracting multinational clients. Furthermore, the surveyed stakeholders estimated that certified Green Buildings perform better in all other categories except for availability of construction material and sales speed.

Regarding the cost of construction, 100% of stakeholders familiar with certified Green Buildings estimated that the construction cost of a certified Green Building ranges between 3-4% more, while 27% estimated that the construction cost to be additional 1-9% and 10-20% each. Regarding utility cost, 40% of stakeholders familiar with certified Green Buildings estimated the cost of utility bills to be between 10-14% less, while 20% of the stakeholders the cost of utility bills to be between 15-20% less.

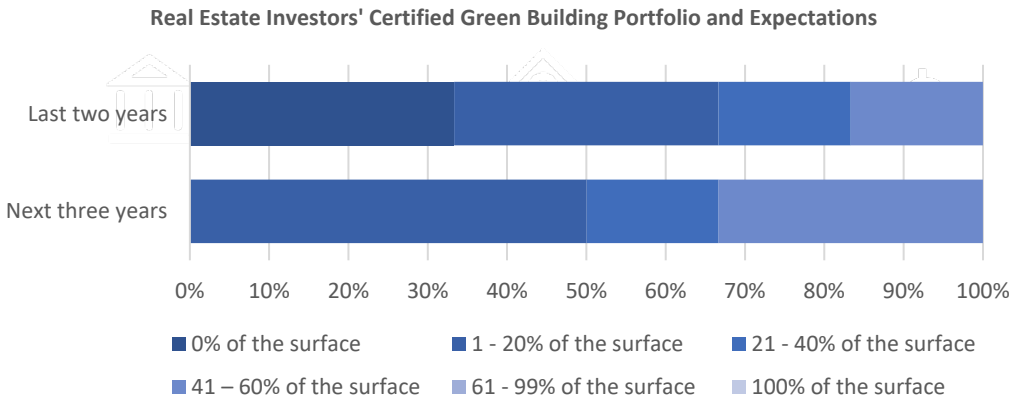


72% of building experts estimated the actual savings (accrued or realized) by a certified Green Building, as compared to predicted savings, to be higher. However, 15% estimated that savings are the same, while 11% predicted savings to be lower.

Real Estate Investors

Responses: 7

Real estate investors surveyed consisted of real estate investment trusts, and insurance companies. The majority of real estate investors (83%) reported to be either very familiar (33%) or somewhat familiar (50%) with certified Green Buildings. Similarly, 33% percent of real estate investors report that certified Green Buildings make up over 20% of their investment portfolios, while 17% reported that Green Buildings constitute 60% of their portfolio holdings. Furthermore, 50% of real estate investors anticipate growth in the share of certified Green Building floor space in their portfolio in the next three years.



Real estate investors expect certified Green Buildings to perform better than conventional buildings in terms of impact on the environment and attracting multinational clients.

Institutional investors indicated that the higher construction cost of Green Buildings (67%), lack of demand from end users (67%), and lack of support for public incentives and policies (33%) are the main deterrents to increasing their share of certified Green Buildings in their portfolios. The most popular certification rating system used to certify assets is LEED, with 83% of respondents having used it at least once. EDGE followed LEED with 50 % of respondents having used it at least once. The certification tool was primarily chosen because of type of building to certify(50%) and the reputation of the rating system (50%).

20% of institutional investors estimated that certified Green Buildings could cost up to 9% more in terms of construction cost compared to conventional buildings, whereas 80% estimated that the cost of construction is the same. 60% percent of survey participants anticipate a rise in utility bills, with increases reaching as high as 14%. Specifically, three equal subsets of this group, each comprising 20% of the respondents, predict the hikes to be within distinct ranges: 3-4%, 5-9%, and 10-14%, respectively. 100% of institutional investors also estimated property value/sales price would be the same. 20% of respondents indicated that the Internal Rate of Return (IRR) was likely to increase up to 9%, and 80% expected it to the be the same. 100% respondents expect occupancy rate remain the same.

Meanwhile, 20% of surveyed view that these regulations are enforced in the country. Institutional investors viewed fiscal incentives, policy to develop greater expertise in sustainable buildings in the workforce and development of national strategies for sustainable project finance including sustainable building finance for new buildings as primary potential accelerants to growing the Green Building market in Mexico.

METHODOLOGY

The stakeholder assessment surveys were conducted through the online survey platform SurveyMonkey. The anticipated time to complete each survey was 10 – 15 min. The Mexico survey was open for responses from December 2022 to April 2023.

Related but separate surveys were designed for each stakeholder group, each of which considers sector-specific questions related to the Green Building market. The surveys focused predominantly on Green Building familiarity, motivations and obstacles, performance, regulations, and incentives, finance, and source of information.

The number of target survey responses intends to provide a representative, but not exhaustive, assessment of each stakeholder group in each selected Green Building market. However, in some cases obtaining contact information and/or eliciting responses from stakeholders proved challenging, and the target number of responses could not be achieved. In addition, in some cases stakeholders only provided answers to some survey questions. Therefore, the number of responses on which each analysis featured in this report is based can vary.

The target and actual number of surveys for each stakeholder group is presented in the table to the right. Additional information regarding the number of responses on which an analysis is based on is provided throughout the report.

Stakeholder Group/Subgroup		# Target Surveys	# Actual Surveys
Developers	Developers	20	14
Policy Makers	Municipal	10	8
	Regional		
	National		
Development Finance Institutions	Multilateral DFIs	5	4
	National DFIs		
Financial Institutions	FIs (Banks)	5	3
Real Estate Investors	Funds	15	7
	REITs		
	Other RE funds		
	Corporate landlords		
Building Experts	Architects	50	33
	Engineers		
	EDGE experts +Other GB consultants		
	Contractors		
Grand total		200	69

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