



**Sustainable
Construction**

Definition

Drivers and Barriers

**Objectives to
promote action**



POSITION PAPER SUSTAINABLE CONSTRUCTION

This document seeks to explain the concept and relevance of Sustainable Construction in projects, how it requires natural resources and how it impacts the environment and the quality of life of people, which has become a relevant factor to consider given the current times and the new requirements that this entails. It also seeks to address the difficulties and elements to consider when building in a sustainable manner. Finally, this document recommends actions to facilitate the knowledge of this concept and the ways in which it can be applied in the field of construction.

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Introduction

The activity of the construction throughout the life cycle of a work or project is highly demanding of natural resources, raw materials and energy and impacts in an important way the environment and the people's quality of life. Energy use in buildings and for building construction represents more than one-third of global final energy and contributes to nearly one-quarter of greenhouse gases (GHG) emissions worldwide (Global Alliance for Building and Construction - GABC).

The growth of the population, which mostly lives in urban areas, will continue accentuating in the medium term and will cause construction activity to grow significantly in the coming years, which translates into growing demands for natural resources and energy. "A growing population, as well as rapid growth in purchasing power in emerging economies and developing countries, means that energy demand in buildings could increase by 50% by 2050, while global building floor area is expected to double by 2050, driving energy demand and related GHG emissions for construction" (GABC).

Construction activity has not massively incorporated technologies that make better use of resources and reduce environmental impacts at the speed which other sectors of the economy have done, except for isolated experiences that are generally more widespread in more developed countries.

For all of the above, our sector has ample spaces to improve and to contribute, and can and must assume a very important role of commitment to the future in these matters.

CICA was incorporated as a member of the Global Alliance for Building and Construction: "GABC members acknowledged that the buildings and construction sector can contribute significantly to achieving climate goals and the common objective of limiting global warming to well-below 2 Celsius (2°C)".



What is Sustainable Construction?

Sustainable Construction can be defined as any action or initiative that is incorporated into a work or project, in any of its stages, which translates into: savings in consumption of resources and energy, contributions in decreasing the footprint of water and carbon, improving the indoor environmental quality of homes and buildings and achieving lower impacts during the construction stage.

In this way, the objective of Sustainable Construction of a building or an infrastructure is the reduction of its environmental impacts and achieving a greater quality of life for users.



What holds back and what drives Sustainable Construction?

There are numerous barriers to first design, then build and finally operate, works that incorporate elements and technologies that allow to obtain in their useful life cycle, better performance and lower energy consumption and environmental impacts.

One of the main ones is that many times the analysis of the work or project is not carried out in its global context, by approaching the subject from the earlier stages of project and design.

Another important factor is the different realities of countries (climatic, levels of development, cultural, types of energy sources available and their costs, existence and depth levels of laws, subsidies, etc.), which makes it very difficult to generate models, or to have regulations, etc., that might be applicable *urbi et orbi*.

Among the reasons that stimulate or encourage the incorporation of actions in the field of sustainable construction, there are among others: economic, legal and regulatory, corporate image, responsibility for the future, demand of the end user, existence of subsidies, requirements of financing sources, etc.

For the above, it is important to first understand the reasons for the slow introduction of improvements in the sector and then recommend action plans and efficient public policies that encourage the mass adoption of best practices in the activity.

“The building sector offers the largest cost-effective GHG mitigation potential, with net cost savings and economic gains possible through implementation of existing technologies, policies and building designs” (GABC).



Objectives and fundamentals to take into consideration to promote actions

The objective of the working group will be to identify, disseminate and promote the use of best practices in all sizes of the works, which encourage and improve the level of Sustainable Construction according to the wishes and demands of society.

On the one hand it is necessary to improve and make the regulations more demanding, which is the right solution when there are market failures that make it impossible for a correct convergence between the efficient assignments of the market and the wishes of the people.

On the other hand, it is considered of greater importance to promote alternative paths to regulation, which present larger areas for improvement and greater possibilities of lasting on their own over time.

Among the alternative roads are, for example:

- Review the contractual and bidding models;
- Provide the market with transparent information on the impact of the work and the assessment of negative externalities for society in order to assign correct prices;
- Promote business models that can appropriate certain environmental benefits in such a way that there is interest in achieving it;
- Promote tax incentives for works that make efficient use of resources and reduce impacts.

For its part, the massive application of these practices in turn produces the education of users, which encourages demand and generates greater incentives for companies to compete in the market.

Finally, this search for alternatives to incorporate the best possible practices, must necessarily take into account the different realities of the countries.



Actions

- Encourage and promote the analysis and assessment of projects and works in their entire life cycle, thus allowing the incorporation of actions, tasks and elements that contribute to Sustainable Construction in all stages. Recognize that the earlier the team's intervention in an integrated design and construction process, the better is the result and the lower the costs to achieve that result. And when there is a greater initial cost, it is more than amply recovered during use.
- Promote contractual models that incorporate standard bidding procedures and conditions for the inclusion of actions, elements and tasks of Sustainable Construction (requirements for certification, assessment of expected energy consumption during the useful life of a project, of analyzing the present global value);
- Promote actions that allow the basic information about the impact of each project or work to be transparent to the market, both during the construction stage, but especially during the entire useful life of the buildings or infrastructure;
- Promote business models that can take advantage of environmental benefits so as to generate the interest of using them and to show the real benefits that can be informed and recognized by the market;
- Disseminate all aspects related to Sustainable Construction, showing good practices and examples of projects and works with undeniable economic, environmental and social achievements, to demonstrate that doing Sustainable Construction is a very good business by itself. Dissemination is a tool that allows education and spreading of good practices in all sizes of works;
- Promote certification systems carried out by recognized independent entities. Certification systems and models help pushing and ordering the way. Certifications also contribute to the "education of the demand";
- Promote the granting of loans with better conditions to those projects that present advantages in Sustainable Construction, since they improve profitability and reduce risks;
- Promote transparency and accountability at the country level in this matter;
- Disseminate the local regulatory aspects, laws, norms, ordinances that stimulate the projects to include these matters;
- Disseminate aspects and international regulatory concepts, requirements of general treaties (UNO), or bilateral treaties (free trade agreements, for example);
- Highlight those subsidy policies that support and push in the right direction.



Final considerations

The emphasis and depth of what actions should be promoted in each country or region and the mechanisms to achieve that these implementations are effective, will depend on the "state of the art" in which each one of them is in that region or country; that is to say, the context of the multiple realities and great differences that exist in different countries must be taken into account as a primordial element.

In the same way, the prioritization of these measures must consider the successes and results obtained in previous implementations in comparable countries and regions in their levels of development and other characteristics.

In general, what is involved is how to combine all or some of these actions and according to the reality of each country or region (climate, degree of development, type of public policies, legislations, energy costs, etc.) to push the path to Sustainable Construction.



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