

Forum: ECOSOC
**Issue: The question of guidelines for sustainable
new builds and architecture**



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Introduction:

To reach sustainability is becoming and will remain one of the biggest and most important goals in any working field, such as architecture as well. It is becoming a cliché by now but the newer products and building, the more the earth is/will be polluted.

Wood, concrete, and other stones are all cheap and firm, but most of all they produce so much waste and a lack of the product itself. As population increases, so does the demand for residence, but there is not an endless amount of wood, or concrete. In the issue, there are many parties involved, both MEDC's and LEDC's as MEDC's need to invest in the LEDC's to help them with the creation of new materials that are more sustainable. This research report seeks to create guidelines towards this issue and hopes the UN Economic and Social Council will remain involved in resolving this ongoing pattern.

Definition of Key terms

Sustainable design: The process of creating buildings, products, and structures that satisfy present needs while preserving the capacity of future generations to satisfy their own needs. This is done by reducing negative impacts on the environment, maximizing efficiency of resources, and encouraging social equity.

Environmental impact :The impact of human activity on the environment, such as climate change, deforestation, habitat destruction, and pollution of the air and water.

Green building: The method of designing, building, and maintaining buildings with an eye to the environment and its resources, focussing on reducing waste and emissions, using sustainable materials, and using less water and energy.

Renewable energy: Energy produced from resources including sun, wind, geothermal, hydro, and biofuel that renew themselves naturally over a relatively short period of time.

Water conservation: Reducing consumption, upgrading infrastructure, and utilizing sustainable water sources are all ways to use water resources responsibly and effectively.

Material sourcing: The process of choosing and procuring materials for building construction with an emphasis on reducing environmental effect and fostering social responsibility.

Passive design: The process of creating structures that use orientation, insulation, ventilation, and shading techniques to create natural heating, cooling, and lighting systems rather than mechanical ones.

Net zero buildings: Structures that, often through the use of renewable energy sources and energy-efficient design principles, annually create as much energy as they use.

Biophilic design: The technique of introducing natural patterns and features into the built environment to enhance human health, happiness, and productivity by encouraging relationships with nature.

Energy efficiency: The process of using less energy to accomplish the same task, through waste reduction, technological advancement, and behavioral modification.

LEDC: Less economically developed country: they are defined by having less GDP and are more susceptible to environmental and economic damage.

MEDC: More economically developed country: more industrialized countries that are overall more developed (not necessarily only GDP).

NGO's: Non-governmental Organizations are nonprofit organizations without any government dependence. Examples are UNICEF and Greenpeace.

Background:

As a result of fears about the effects of the building sector on the environment and the demand for more robust and sustainable structures, the subject of sustainable new building and architectural design has come to light. Sustainable building techniques focus on reducing the negative effects of structures on the environment while enhancing the health, happiness, and efficiency of the building's inhabitants.

Although the concept of sustainable design has been around for a while, it has recently attracted more attention as the effects of climate change have become more spoken of.

The architecture sector contributes significantly to the emission of greenhouse gases

worldwide, and building operations have a large negative influence on the environment due to deforestation, water use, and garbage production.

Architects, engineers, constructors, and politicians have been developing and incorporating regulations for sustainable new construction and architecture to solve these issues. These standards offer a foundation for creating buildings that are economical with resources, environmentally conscious, and energy efficient.

The idea of green building is one of the main forces behind sustainable new construction and architecture. A broad method for building design and construction known as "green building" places a focus on the use of environmentally friendly methods, energy-efficient systems, and sustainable materials. Green construction techniques work to lessen a structure's negative impact on the environment while enhancing the health and welfare of its residents.

In recent years, there has been a greater emphasis on creating net-zero energy buildings, which create as much energy as they use on a yearly basis. Net-zero energy buildings are often intended to be very energy-efficient and integrate renewable energy sources such as solar panels or wind turbines.

The use of sustainable materials is another essential part of sustainable new construction and design. Sustainable construction materials have a lesser environmental effect than conventional materials and are produced and manufactured in an environmentally responsible and sustainable manner. Bamboo, recycled steel, and recovered wood are examples of sustainable building materials.

Another important aspect of environmentally friendly new builds and architecture is passive design. The utilization of natural heating, cooling, and lighting systems in buildings rather than mechanical systems is referred to as passive design. Orientation, insulation, ventilation, and shading are examples of passive design principles.

LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method) are two grading systems and certifications available for sustainable new construction and design. These rating systems provide a framework for analyzing building environmental performance and can assist in the development of sustainable design and building methods.

Despite the increased interest in sustainable new construction and architecture, some problems remain. One of the most significant challenges is the cost of sustainable new builds and architecture, which can be more expensive than traditional construction methods. This can be a hurdle to adoption, especially for low-income housing and other projects.

There are also legal problems with sustainable new construction and architecture. Building rules and regulations can differ greatly among jurisdictions, making it difficult to set clear recommendations for sustainable building techniques.

Furthermore, there is a need for increased public awareness and education about sustainable construction and architecture. Many individuals may be unaware of the benefits of sustainable design or may be opposed to change, making universal acceptance and execution of sustainable construction methods challenging.

Thus, the question of guidelines for sustainable new builds and architecture is a significant and current subject that is growing in response to concerns about the environmental effect of building and the need for stronger and more environmentally friendly architecture. Sustainable design and construction approaches aim to reduce the negative environmental effect of buildings while increasing the health, well-being, and productivity of building inhabitants. Despite the challenges of sustainable new construction and architecture, there is growing energy behind these methods, and they are likely to become more important in the coming years.

Major parties involved:

The question of guidelines for sustainable new builds and architecture has developed as a result of the need for more environmentally friendly structures. The architectural sector largely contributes to carbon emissions, and establishing sustainable standards is crucial for minimizing these emissions. The United Nations has taken the lead in addressing this issue, with the UN Environment Programme, or UNEP, promoting sustainable building approaches through initiatives such as the Global Alliance for Buildings and Construction. Other international organizations advocating sustainable architecture involve the World Green architecture Council and the International Union of Architects.

Many countries have created their own sustainable building codes and regulations, with some even offering financial incentives for environmentally friendly construction practices:

Germany: Germany has been a leader in these issues approaches with a focus on energy-efficient structures and renewable energy sources.

Denmark: Denmark has also been a leader in encouraging these processes, with a focus on low-carbon structures and materials.

The United States: The United States has been engaged in promoting sustainable building and construction approaches through various programs such as the Energy Star program and the LEED certification system.

Architects, builders, politicians, and non-governmental organizations (NGOs) are all interested in sustainable building methods and have taken local and worldwide initiatives to promote them. Despite progress in encouraging sustainable design, there are still challenges such as a lack of awareness, inconsistent regulation, and economic constraints.

The United States: Being the world's largest economy and one of the leading emitters of greenhouse gases, plays a critical role in sustainable construction methods.

China: China has a tremendous influence on the environment and sustainability as the world's greatest producer of greenhouse gases.

European Union: The EU is dedicated to lowering greenhouse gas emissions and has put in place a number of policies and laws to encourage sustainable construction practices.

United Nations: The UN has an important role in promoting global sustainability, and it has created a number of projects and guidelines for sustainable construction techniques.

Brazil: As one of the world's largest population countries and a prominent participant in the construction sector, Brazil has the potential to have a substantial effect on sustainable building standards.

Relevant UN treaties, resolutions, and reports:

<https://unfccc.int/process-and-meetings/the-paris-agreement> (Paris Agreement, 2015)

https://unfoundation.org/blog/post/how-orlando-is-building-a-model-city-around-the-sdgs/?gclid=Cj0KCQjwqLOiBhC7ARIsAleetVBt0QLLwBr46sueb8_02vI4i0surd4kTTjLsPEE53N5xnwk1Uz8nmMaArp7EALw_wcB (SDGs, 2015)

<https://sdgs.un.org/goals/goal11> (SDGs, 2015)

<https://www.unep.org/resources/report/global-status-report-2018> (UNEP, 2018)

<https://unece.org/DAM/env/pp/documents/cep43e.pdf> (UNEconomical Commision of Europe 1998)

<https://unglobalcompact.org/what-is-gc/mission/principles> (Global compact)

Previous attempts to solve the issue:

The Sustainable Buildings and Climate Initiative of the United Nations

Environment Programme: This campaign kicked off in 2006 with the goal of encouraging the development and implementation of policies and measures to minimize greenhouse gas emissions from buildings. It required coordination among governments, private-sector organizations, and NGOs. While the initiative has made some headway, it has been condemned for not being daring enough and for lacking the funds it needs to achieve those goals.

The Energy Performance of Buildings Directive (EPBD) of the European Union:

This 2002 regulation forces all buildings, both new and old, in the EU to fulfil minimum energy performance criteria. It also contains procedures for certification of energy performance and frequent inspections. While the EPBD has improved building energy efficiency, execution and compliance in some countries have been difficult, and there is still an opportunity for development in areas such as air circulation and the quality of indoor air.

Net Zero Carbon Buildings Commitment of the World Green Building Council:

This commitment, which was released in 2018, consists of signatories pledging to guarantee that all buildings they own, occupy, or create will be net-zero carbon by 2030. It is backed by a variety of tools and resources and involves collaboration between enterprises, governments, and non-governmental organizations. While the commitment has been successful in promoting action on sustainable building methods, progress has

been slower than predicted, and stronger policies and incentives are needed to fasten change.

Possible Solutions:

Policy and rules: Governments can make rules that require or reward people to build things in a way that's better for the environment. These policies may include financial aid, minimum requirements for the quality of buildings, and formal agreements stating that a building is sustainable. These guidelines can assist ensure that buildings are developed in an environmentally friendly manner.

New ideas and technology: People may create new products and use new ideas to make buildings more environmentally friendly. They can, for example, develop new building materials, implement energy-efficient systems, and employ digital technologies to improve building performance. When people collaborate, new ideas can be noticed more quickly.

Learning and sharing: To ensure that people construct things in a more environmentally friendly way, those who build things must first learn how to do so. Training programs, workshops, and websites where individuals may exchange ideas and learn from one another are examples of this.

Talking to people: To ensure that people create things in a way that is better for the environment, it is critical to explain why it is a good idea and listen to what they have to say. This can involve things like advertisements, meetings, and conversations with

those who will be using the building. When people communicate with one another, they can create things that benefit everyone.

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