Chapter 12
Sustainability of Green Building Practices in Residential Projects

Subhankar Das
https://orcid.org/0000-0001-7344-4583
Duy Tan University, Vietnam

ABSTRACT

A green building is a sustainable building that has minimal impacts on the environment throughout its life. For the purposes of this report, "green building" is understood to mean construction that makes efficient use of energy and resources in every aspect. This includes the production of building materials, and the design, use, and eventual demolition of a building in any sector (commercial, residential, industrial, public buildings) and at all stages, from new buildings to "retrofitting" or adapting existing ones. The construction sector, which accounts for 10% of global GDP, has direct and indirect impacts on the environment. It produces 23% of global greenhouse gas (GHG) emissions, and buildings are responsible for between 30% and 40% of all material flows. A green building is a sustainable building that has minimal impacts on the environment throughout its life.

INTRODUCTION

In the latest decade, there has been speedy, "improvement of industrialization" on the planet, especially in the making similarly as making countries like India. (Das Sharma, 2008). It assessed that 2030, 60 percent of the Aleut people would live in urban networks. From a viable propelled perspective, the "agreeable common relationship" among urban regions and the urban and commonplace areas are of exceptional critics to the flourishing of who and what is to come. The brisk advancement realized by industrialization has led to the unconstrained improvement of public domains. "The difference in agricultural land to individual home and deforestation has made it difficult to keep up fundamental equality. A speedy augmentation in masses advancement and movement in urban districts has caused far-reaching tainting" (Das Sharma, 2008). In case public networks are not genuinely orchestrated and managed, the nature of the air, the availability of water, waste dealing with, reusing structures and all qualities of the urban condition adding to "human success" will be under hazard.

DOI: 10.4018/978-1-5225-9754-4.ch012

Debilitated prosperity, respiratory illness, and sudden passing have associated with the elements of air sullying in a couple making countries. Focus pay, and states that have been starting late industrialized are experiencing new challenges identified with "increases in automated transport and industrialization, for instance augments in air and water sullying. The World Health Organization (WHO) evaluated that more than "1 billion people in Asia alone introduced to outdoors poisons that outperform the WHO rules, inciting the death of a substantial segment of a million people yearly" (United Nations Human Settlement Program, 2008: 123). Given that air poisons cause critical prosperity perils, and addition affectability in sound people, improving the air quality in urban zones will have constructive prosperity effects of all. Another load in urban networks is lacking waste organization. Deficient gathering and exchange of waste are transforming into extreme stress in urban areas, in perspective on the prosperity perils its stances to the urban masses". The lacking collection and exchange of waste are influencing on the natural network of urban regions and besides the urban condition. The majority of waste collected in making countries includes normal waste, sustenance, wood, coal, etc. "Despite the way that reusing and reuse systems have transformed into an outstanding practice in the making scene, these practices are consistently executed by the easygoing part in elusive conditions". Solid waste organization practices that have executed insufficiently can provoke an "extent of excreta and vector-related diseases" (United Nations Human Settlement Program, 2008: 126).

In urban territories we in like manner find the "heat island sway". The radiation modifies in urban locales impact the temperature dissemination. Sun arranged radiation is expanded and changed into warmth. "Blacktops, dividers, and housetops store warmth and produce longwave radiation to the sky" (United Nations Human Settlement Program, 2008:127). "The city takes any more drawn out to chill than the incorporating vegetated zones. Vegetated zones set aside more effort to cool in light of the way that the sun causes water held on the dirt and leaves to disappear, and shading of the plants keep the ground cool. The urban locales have higher temperatures than enveloping rural districts". This marvel is known as the "heat island" impact (United Nations Human Settlement Program, 2008).

Why Green Building

A green structure is a sensitive structure that influences the earth for an inconceivable length. For the purposes behind this report 'green structure' is grasped to mean advancement that makes capable use of essentials and resources in every point of view". This joins the age of structure materials, and the arrangement, utilize and conceivable pounding of a working in any part "(business, private, mechanical, open structures)" and at all stages, from new structures to 'retrofitting' or changing existing ones. The advancement zone, which speaks for 10% of overall GDP, has prompt and roundabout consequences for the earth. It produces 23% of overall ozone hurting substance (GHG) spreads, and structures are responsible for some place in the scope of 30% and 40% of each and every material stream. Grasping green structure practices would out and out diminishing these normal and resource impacts.

The life-cycle influence is supernatural in the essentials used for warmth, light and cool a structure while it is being utilized. Over its lifetime, the exemplified essentials of structure materials generally comparative influences the air. As demonstrated by the US Green Building Council, "the cost and proportion of the essentials required to build up a crucial, gainful spot of business is basically indistinguishable to that of a for the most part arranged structure, yet there is a colossal qualification in working costs".

"Green structures have diverse favorable circumstances other than the obvious natural ones. The structures are logically pleasing, and people working in them end up being progressively productive,