

Eco- friendly building for sustainable solution

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ABSTRACT

Since global industrialisation in 60's the researchers emphasise to save the environment and sustainable eco-friendly building projects, constructions and minimise the emission of greenhouse gases and later on eco-friendly construction of building/projects gradually become popular in practice in many countries which has become a popular alternative to ecological developments construction industries. Over the past few decades, many researchers and experts have done more research on the green structure. To reduce the major impact of the construction industry on the environment, society and the economy is one of the world's emerging topics regarding eco-friendly construction technology .In this view the world's researchers are in need to minimise the problem of pollution and global warming grows rapidly in around the world keeping progressive development technology for sustainable and low cost construction of building /projects. Major climate change has also been noted and experience globally due to the propagation of Green House Gases (GHG's) such as carbon dioxide, dioxin, NO₂ , SO₂ etc. The motto of this paper is to focus on new emerging technology and measure for eco-friendly constructing material to help reduction in the impact of environmental degradation, and produce ecological sustainable buildings for the human being and for our environment.

INTRODUCTION

The term "eco-friendly building" usually describe buildings which are designed constructed built and operated to have a optimal effect on the surroundings each interior and exterior. Most of the discussions among people are going on about inexperienced building to accept if there not ecologically designed even then it is acceptable if internal environment of the building is acceptable to occupants. However, in these discussions various specific recommendation regarding site allocation quality of soil & water, design, construction methodology, construction and its material etc. Projects construction described as ecological construction focus on indoor air quality but demonstrations often focus on indoor air quality. The measurement systems developed for testing of eco-friendly construction are mostly based on design of buildings /projects in view of cross ventilation and sun light

In developed countries like the United States of America, Russia, Australia, UK, have frame out strict law and regulations of respective governments to achieve the ecological development and sustainable buildings/projects of their nations. Builders of These countries are more concern to use of cements in construction of projects. Whoever PLC (Portland cement) to be used for sustainability of projects and about 10% reduction in emission of greenhouse gases e.g. Corban dioxide, dioxin, NO₂, SO₂ etc. In compare of these developed countries, the developing countries like china Sri-Lanka Pakistan India and so on are far away achieving sustainability and eco-friendly structures development. Reason behind it is lack-ness of awareness among the people about this emerging international problems in these developing countries. With respect to the developed countries in the world, the research and studies work are also far away in these developing countries. In present scenario the construction industry is setting up sustainable development goals using the building materials to built buildings/ impact on the environment.

Hence they focus on classification of materials on their impact on the environment and their life cycle impact regarding construction and use/ maintenance followed by site allocation, soil condition, water quality and atmospheric situation. The selection of sustainable building materials could contribute significantly to healthy indoor environment and promote wellbeing. However, the climatic condition is also a considering factor to determine the type of building materials utility. Major factor in the material selection for building/projects construction is also based on culture choice. The building materials and human wellbeing is play important roll as moods and wellbeing are affected by various factor of built environment as allocation, lighting, access to nature, colour, indoor air quality, noise, thermal comfort, space etc.

In even small town. The sustainable and financial studies in context with Indian culture & style of life, the designers have a newly ecological design to built low cost eco-friendly luxurious bungalow in small town of India. The study in this particular indicates that residential building/mansion have been designed & constructed with eco-friendly building In developing countries like India, china, have a big abundance of land and people desires to built a luxurious mansion materials which are low cost sustainable and a green shape in a small town inside the kingdom of Maharashtra and Kerala in India where as India known as country of villages with a second largest population in the world. The fast progressive development of the economic system and society, two major issued like shortage of strength and environment degradation is being faced by people in current society.

The ecological building also known as the green building /sustainable buildings define both in shape and utility of methods which might be resource efficient and environmentally responsible in context of lifestyles cycle relate with planning to design, production, operation, protection and demolition. This need the close cooperation in between designers, builders, engineers and users at all stages of projects. The ecological building is growing again fulfils concerns about low cost architecture, utilization, durability and comfort. In such case, three dimensions of sustainability namely, the planet, people and profit across the supply chain requires to considered. The Indian green building council (IGBC) is establish by the confederation Indian Industry (C I I) IN 2001 with the vision/motto to do a “A sustainable environment for all”. In this context the major building material as cement has been divided and codified in 15 types as per their property and purpose/use with respect to condition of soil and atmosphere.

GOAL AND OBJECTIVES

The objectives of the ecological building concept is to built buildings that require maintenance resources during construction and operation with high level of strength/ sustainability. The ecological properties emphasize mainly reduction in cost, reuse and recycle without affecting the atmosphere.

METHODOLOGY

This research is oriented around the study and improvement of the eco-friendly building construction techniques with a solution to save our planet from pollution and global warming. In addition to this goal is also create the awareness among the people globally about the benefits and savings long term costs on eco-friendly green buildings. The structural methodology is based as below.

1. Selection of location and investigation regarding soil, water, atmospheric situation etc.
2. Audit on thermal variation, geographical condition, waste production, availability of electricity, water intake inside the project/ building decided for construction.
3. Design of rain water harvesting plant, fire fighting arrangement/ disaster management.

4. Design and construction of sewage water filter.
5. Biogas plant design.
6. Research on traits or grey water.
7. Preparation of synthetic grey water.

LITERATURE SURVEY

The literature survey is mainly required for this research is emphasis two objectives as under:

1. Eco logical development and eco-friendly buildings.

Human activity has increased concerns for sustainability even extra in present times. The ecological design is not limited to energy efficiency measures but it is also include utilization of resources and effect on the neighbourhood & employers working conditions (Roy and Gupta2008).difference type of production and production sectors, building and builders occupies the prime location as the maximum contributor to pollutants and herbal useful resource consumption. (levineet.al.2007, plank 2008). The consequences of creation can manage at the surroundings to enhance the quality of the constructed environment in terms of fitness and environmental factors. The idea about eco-friendly building has many interest and aspects of sustainability emphasizing minimal environmental impacts through a holistic, method to land and constructing materials and production methodology.

2. Requirement of eco-friendly buildings

The awareness about impact of technology and population growth on the earth has increased. Most of the people moving towards town/city due to extensive increase inside the production of buildings and towers, and booming in the city financial system. Humans started to amplify their efforts to reduce their environmental effects and buildings started to be recognised as participation in global electricity utilization, land fill waste and minimizing green area. eco-friendly building practises are not new phenomena. a hand full of buildings integrating ecological design components have already been constructed as early because the overdue 19th and 20th century.

CONCLUSION

This paper study mentioned all the technological and economic aspects with reference to eco-friendly buildings around the world. With this recent case study of a small residential bungalow in a small Indian town may attract at least researchers from all around the global specially and also the planer and users regarding new homes are remodelling their old houses with simple modification and altering it to greenery are eco-friendly building with respect to economic aspects and addition to it for saving up environmental factors. The goal of this research is mainly based on three issues namely – i) the definitions and scope & solution of the eco-friendly building. ii). The advantages and cost consequences of the eco-friendly buildings and iii). The means & measure to achieve the eco-friendly buildings. However this research is focuses on environmental components of sustainability /ecological ability consisting of electricity consumption, water efficiency, effluent disposal /sewage water treatment and minimal green house gas emission and also with their technical solutions . In addition to this, the awareness among the people to be spread out about eco-friendly building. concept along with uses of building materials according to location , soil condition and quality of water available , electricity availability and economic aspects etc. and benefits of eco-friendly buildings and saving hour surroundings with respect to

environmental factors . The awareness among people may also be spread out about the use of building material as per the allocation and uses of building /projects sustainability consisting electricity intake, water efficiency and greenhouse gas emission and also with their technical solutions. In addition to that awareness among the people should the spread out about the eco-friendly building concepts and its long term benefits. Now a days the present situation is that human beings in country like India ignoring about this condition due to lack ness of awareness.

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