

Land of Black Gold Focuses on Green Buildings

Meena Janardhan

DUBAI, July 19 (IPS) - In a country where oil and natural gas resources are abundant and appear limitless, it would seem that environmental consciousness would take a backseat. But in the United Arab Emirates (UAE), the 'green' bug has wormed its way into most sectors, and the latest to join the bandwagon is the construction sector.

Experts and authorities in the UAE are actively considering and promoting the concept of 'green buildings' and soon that may become the buzzword for the future.

"Green buildings ensure the creation of environmentally sound and resource-efficient spaces by using an integrated approach to design. The end result is a healthy and comfortable environment that reduces operation and maintenance costs," Kavitha Daniels, a Dubai-based architect told IPS.

"The concept is slowly gaining ground in the U.A.E and I am sure we will soon see many of these 'green' features getting slowly assimilated into future designs here," she added.

According to experts, a green building imposes minimal impacts on the environment while enhancing user comfort and productivity. The main features of these environmentally friendly structures include the use of energy-efficient materials and construction practices, efficient equipment for lighting, renewable energy sources and efficient waste management systems.

The benefits include minimised destruction of natural areas, reduced air and water pollution, limited waste generation and increased user productivity.

In the light of fast depleting energy resources and environmental pollution, incorporation of green architectural practices is becoming extremely essential.

Studies conducted by the Geneva-based Intergovernmental Panel on Climate Change indicate that in 1990, residential, commercial and institutional building sectors consumed 31 percent of global energy and emitted 1.9 giga tonnes of carbon and by 2050, this share may rise to 38 percent and 3.8 giga tonnes, respectively.

"By the way we live, we can minimise our impact on the environment so that we do not impinge on the safety and sustainability of our future generations," said Habiba Al Marashi, chairperson of the Dubai-based Emirates Environmental Group, in an interview with IPS.

"Sustainable architecture is one of the many ways by which we can measurably minimise the impact of our growth on the ecosystem. I would like to urge our designers and builders to look inwards towards our architectural traditions and heritage to seek solutions to make a truly greener and progressive UAE," she added.

Al Marashi stressed the importance of green buildings and said they are an essential part of sustainable development in not just the construction industry but also in overall regional development.

"By taking into account factors such as energy-efficient devices and recycled and recyclable construction material, environment- friendly architecture ensures that the limited physical resources available to us are used to satisfy our needs," she pointed out.

Added Al Marashi: "This does not create a scenario of permanent depletion, which deprives future generations of their rightful share."

While leading experts in the UAE's architecture and design community have called for the creation of an urban design review board to usher in more eco-friendly buildings, the financial costs, however, can be a stumbling block.

But in the long-run, said Sougata Nandi - a Dubai-based energy conservation and management expert - the investment would be worthwhile.

"Though green buildings cost at least over six percent more than conventional ones, the benefits far outstrip the investment. The pay-off is that a green building could consume up to 50 percent less energy," Nandi, a manager in the Union Properties Group, told IPS.

Translating that amount into monetary terms, Nandi said residents and commercial establishments in Dubai could save around 388 million dirhams (105 million U.S. dollars) annually in energy costs - equivalent to one-fifth of the current 1.94 billion dirhams (530 million U.S. dollars) spent yearly by commercial and residential sectors in the emirate.

In spite of being an oil-rich country, UAE authorities are seriously pursuing the use of renewable energy sources. And, as demands for property construction spiral skywards, the time for the 'green' concept to take root seems ripe.

"It is a process that will take some time, but we are slowly gaining ground," said Mario Seneviratne, director of the Dubai-based Green Technologies Company.

"Most architects and engineers in the UAE are either advertently or inadvertently incorporating one or more of the five prerequisites for a green building - sustainable sites, energy efficiency, water-use efficiency, environment-friendly materials and indoor environmental quality," Seneviratne told IPS.

"It is now our task to get them to incorporate all five aspects into one building and develop a holistic approach," he added. "There is some initial reluctance, of course, but that will soon be overcome when they realise the benefits."

The green options in the holistic integration with buildings are just unlimited in this region, where sunshine and wind are abundant.

Solar energy could be used for electricity generation in heating and cooling. Locations with high winds could have rooftop generators for the generation of electricity. And technologies could be employed to convert liquid and solid waste generated in a building into bio-gas and bio-fertilisers.

"Water, a costly commodity here, can be conserved as well. Holistically, the UAE stands to benefit all-round through the adoption of these green standards," said Emirates Environmental Group's Al Marashi.