ABSTRACT

TITLE:	Sustainable Urban Building: Technologies of Today and the Possibilities of Tomorrow
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ABSTRACT: With the rapid growth of today's population, it is progressively becoming more difficult to find a suitable place for everyone to live. In the past the majority of the world's population lived in rural areas dependent on agriculture and subsistence. Over the past 100 years, however, there has been a steady migration of the world's population from rural areas to urban cities. According to the Population Reference Bureau, it is expected that 70 percent of the world population will be urban by 2050. With unprecedented urban growth and the overwhelming pressure the growing population is putting on the environment, it is necessary to start revamping existing buildings and planning large scale sustainable urban development. This paper will examine current sustainable building technologies along with future possibilities to illustrate that sustainable cities for the growing population are necessary and economically practical. There is no question that energy efficiency in existing buildings and new buildings is one of the lowest-cost ways to save immense amounts of energy. Buildings account for about 40 percent of our energy consumption, and existing buildings will be the primary infrastructure for many years to come. So these building are the prime place to be looking for energy savings. Cost-effective energy-reduction strategies could yield anywhere between 25 and 50 percent (Zakaria, 2008). Energy consumption is a big issue, but it is only one small piece of sustainable building pie. Sustainable building takes into account every aspect of a building before construction even starts, form the environment around it, to what direction it faces. Currently, the leading force of sustainable building is the LEED certification program run by the U.S. Green Building Council. Beyond LEED there are many innovative projects that are currently underway or proposed for the near future. Such projects include urban "Sky Farming," homes that can be grown from trees native to the local ecosystem, super efficient stackable block homes, and much more.