

Activity 2: Achieving the Sustainable Development Goals

By:

Ghanim Kashwani

Task:

I would now like you to do some more research about the Sustainable Development Goals. The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. These 17 Goals build on the successes of the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – often the key to success on one will involve tackling issues more commonly associated with another.

You can find out more about the goals at <http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

I would like you to select one or two of the goals and conduct some research into how globally, or on an individual nation basis we are working to address them. If you find examples of how the goals are being tackled, leave some notes/ links to your sources in the discussion forum provided.

Answer:

As a Chartered Civil Engineer, CEng MICE, I select to talk about Goal # 9, Industry, innovation and infrastructure. For example, as civil engineer I usually engerge other engineers to use innovative and green materials in in their structures. The volume of concrete used in global infrastructure represents huge flows of material between natural systems and human systems. Global use of concrete for construction projects exceeds 12 billion tons per year. To support this amount, cement production in the year 2001 totaled 1.65 billion metric tons (van Oss 2002). Rates, compositions, and spatial distributions of such important flows are major determinants of the degree to which societies are sustainable. While concrete infrastructure continues to grow worldwide, evidence suggests that the performance of current

infrastructure systems is deficient in terms of the SEE dimensions of sustainability. The unsustainability of current infrastructure systems, coupled with the anticipated rapid growth of new ones, lead to an obvious need for improvement. Recent research suggests the possibility of substituting concrete with advanced cementitious composites that have superior mechanical performance. Introducing huge volumes of a new material is likely to have profound impacts in each of the three dimensions of sustainability. These impacts occur throughout an infrastructure system's life cycle, which encompasses resource extraction, materials processing, construction, use, maintenance and repair, and end-of-life management. Reinforced concrete's limited durability is responsible for significant amounts of infrastructure repair. Its brittleness has caused numerous and catastrophic failures of buildings and bridges in recent earthquake events. Alternative technologies promise to improve the performance of concrete-related materials. One such technology involves the family of engineered cementitious composites (ECC). Given the demand for infrastructure systems worldwide, the potential application of ECC could be enormous.