Construction: use waste for building

As construction work in India soars and the pressure on stone and other natural resources mounts, the Bureau of Indian Standards has called for good-quality building materials to be made from waste products. A proof of concept for this waste valorization has been developed by the Indo-UK Centre for Environment Research and Innovation (IU-CERI; see www.gre.ac.uk/iu-ceri).

IU-CERI has identified agricultural and industrial wastes from India that can be converted into value-added products such as construction materials by using carbon dioxide and commercial low-carbon technology (P. J. Gunning et al. Proc. Inst. Civil Eng. Construct. Mater. 164, 231–239; 2011). These products meet European specifications for lightweight aggregates.

Implementing this technology will help to utilize India’s abundant wastes from agriculture (more than 800 million tonnes), mining and industry (more than 400 million tonnes). These sectors will benefit from economic gains and smaller carbon footprints. Other likely benefits include diversion of waste from burning or landfill, sustainable production of construction materials, and more-consistent supply chains in regions with sparse natural resources.

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