

**GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION No. 4464
TO BE ANSWERED ON 30.03.2022**

LOW CARBON BRICKS

**4464. SHRI VINAYAK RAUT:
SHRI SATYADEV PACHAURI:
DR. (PROF.) KIRIT PREMJBHAI SOLANKI:
SHRI ARVIND GANPAT SAWANT:**

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान और प्रौद्योगिकी मंत्री be pleased to state:

- (a) whether it is a fact that construction industry produces 70-100 million tons of construction and demolition (C&D) waste every year;**
- (b) if so, whether the Government considers developing a technology for producing energy efficient wall material and low carbon bricks using the C&D waste to promote sustainability;**
- (c) if so, the details thereof;**
- (d) whether the Government considers resolving the problem associated with disposal of C&D waste; and**
- (e) if so, the details of the action taken thereof?**

ANSWER

**MINISTER OF STATE (INDEPENDENT CHARGE) OF THE
MINISTRY OF SCIENCE AND TECHNOLOGY & EARTH SCIENCES
(DR. JITENDRA SINGH)**

विज्ञान और प्रौद्योगिकी तथा पृथ्वी विज्ञान मंत्रालय के राज्य मंत्री (स्वतंत्र प्रभार)
(डॉ. जितेंद्र सिंह)

- (a) Yes Sir. The construction industry produces 70-100 million tons of construction and demolition waste every year.**
- (b) & (c) Yes Sir. Department of Science & Technology (DST) through Clean Energy Research Initiative has supported a project for Research & Development (R&D) in developing a technology to produce “energy-efficient walling materials and low carbon bricks using the Construction and Demolition (C&D) waste”. These are called Low-Carbon bricks, do not require**

high temperature firing and avoid use of high energy materials such as Portland cement.

DST through Waste Management Technologies (WMT) program is also developing a technology to recycle C&D waste into an energy efficient reinforced soil walls.

Council of Scientific and Industrial Research-Central Building Research Institute (CSIR-CBRI) is engaged in the cutting edge R&D for utilization of construction and demolition (C&D) waste. CSIR-CBRI has been working on C&D waste with prime focus on recycled aggregates to develop various type/grades of concrete, bricks, blocks and tiles etc. Various building products such as bricks, paver blocks etc. have also been developed using C&D waste.

(d) & (e) Yes Sir. It will reduce the quantity of C&D waste going to landfills. A start-up company (Verdant Building Alternatives) with technical assistance from IISc, has been registered to produce and market low-C bricks in Karnataka. However, bricks made up from construction and demolition waste could be utilized for construction of new buildings as per Energy Conservation Building Code requirement. Such bricks need to adhere technical parameters as per the code.

CSIR-CBRI technology of “Process/ know how “Development of value added building components like paving blocks, bricks and tiles using recycled aggregates” has been transferred to an industry for commercialization.
