GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS
RAJYA SABHA
UNSTARRED QUESTION NO. 1380
ANSWERED ON - 11/02/2026

UTILISATION OF CROP RESIDUE FOR BIO-BITUMEN AND CIRCULAR ROAD CONSTRUCTION

1380. SHRI S NIRANJAN REDDY:

Will the Minister of ROAD TRANSPORT AND HIGHWAYS be pleased to state:

(a) whether Government is aware of the recent technological breakthrough developed by CSIR-Central Road Research Institute (CRRI) and CSIR-Indian Institute of Petroleum (IIP) to convert crop residue into bio-bitumen for road construction;

(b) if so, whether such bio-bitumen could help reduce India's dependence on imported conventional bitumen and;

(c) whether Government proposes to support the large-scale commercialisation, field trials and adoption of bio-bitumen by the National Highways Authority of India (NHAI), State PWDs and local bodies; and

(d) if so, the details of the planned implementation framework, policy support, standards and regulatory approvals?

ANSWER

THE MINISTER OF ROAD TRANSPORT AND HIGHWAYS

(SHRI NITIN JAIRAM GADKARI)

(a) to (d) Government has sanctioned two (02) research projects, one each to Indian Institute of Technology, Roorkee, and Council of Scientific & Research Institute CSIR-Central Road Research Institute (CRRI) New Delhi in collaboration with CSIR-Indian Institute of Petroleum (IIP), Dehradun to evaluate crop residue-based bio-bitumen in the laboratory and to assess the long-term performance of pavement constructed with bio-bitumen. So far, three pilot test sections on National Highways have been laid to assess suitability of bio-bitumen in road construction. Envisaged benefits of bio-bitumen are reduction in bitumen import, reduced Green House Gas (GHG) emissions and opportunity for farmers/Micro, Small and Medium Enterprises to generate revenue and provide employment.

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