

GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS
RAJYA SABHA
UNSTARRED QUESTION NO - 2834
ANSWERED ON – 12/08/2026

DEVELOPMENT OF ROADS IN KUSHINAGAR

2834. SHRI RATANJIT PRATAP NARAIN SINGH:

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

(a) the year-wise and State-wise details of the total kilometres of road constructed using green technologies or materials since 2021 in Uttar Pradesh;

(b) the year-wise and State-wise details of the road projects which have integrated rainwater harvesting systems or any other green technologies since 2021 and the steps taken by Government to increase the development of climate-resilient roads particularly in Kushinagar;

(c) whether any incentives are provided to contractors and builders using sustainable road construction techniques, if so, the details thereof; and

(d) whether Government has undertaken any life cycle assessment studies on the carbon impact of traditional vs. green road construction, if so, the details thereof?

ANSWER

THE MINISTER OF ROAD TRANSPORT AND HIGHWAYS

(SHRI NITIN JAIRAM GADKARI)

(a) and (b) The State/ Union Territory (UT)-wise details of National Highways (NHs) projects awarded since 01.04.2021, including in Kushinagar in the State of Uttar Pradesh incorporating green technology / material and / or integrated rainwater harvesting systems, and length constructed is annexed.

The Government has taken various policy reforms and initiatives to promote climate resilient roads as sustainable development through use of ecofriendly construction materials and use of green technologies in NH works. Various sustainable and recycled materials, such as Bamboo Crash Barrier, Fly Ash / Pond Ash are being used in embankment and structural works, Reclaimed Asphalt Pavement (RAP) in bituminous layers, and Construction and Demolition (C&D) Waste / Recycled Aggregates are used in suitable highway works as per technical specifications. The use of plastic waste in bituminous mixes, natural textiles (such as Jute/ Coir etc.), sustainable materials including Slag, Bio Bitumen / Molasses, Crumb Rubber and other recycled or industrial by-products are promoted as per feasibility and guidelines to improve pavement performance to address environmental concerns.

(c) NH Projects are generally implemented on Engineering, Procurement & Construction (EPC) / Hybrid Annuity Model (HAM) / Build-Operate-Transfer (BOT) mode where contractor / concessionaire carry out their own design in accordance with applicable manual, standards / guidelines / codes, etc. and then these are reviewed / approved by Authority

Engineer (AE) / Independent Engineer (IE) before its actual use in a NH project. Various kinds of sustainable road construction techniques are used in different NH projects in embankment / different pavement courses / different concrete items, etc. depending upon availability, suitability and feasibility of use.

Further, guidelines have been issued on Value Engineering and use of new / alternative materials and technologies towards sustainable development, which allows Contractors / Concessionaires to propose value-engineered alternative designs, materials and technologies, subject to prescribed technical and approval requirements. Further, as per the applicable guidelines, savings accruing from approved value-engineering practices may be retained by the Contractor / Concessionaire, subject to the prescribed conditions.

(d) Although no such dedicated Life Cycle Assessment (LCA) study specifically comparing the carbon impact of traditional versus green / sustainable road construction techniques has been undertaken, however, the Government in the Ministry of Environment, Forest and Climate Change (MoEFCC) has got a study conducted in 2022 on NH projects, which shows that there is net saving / reduction of carbon emissions of about 170% over 20 years operation period after construction on account of reduced fuel consumption, avenue plantation & compensatory afforestation vis-à-vis emission due to NH construction and tree felling.

ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (a) AND (b) OF RAJYA SABHA UNSTARRED QUESTION NO. 2834 ANSWERED ON 12.08.2026
ASKED BY SHRI RATANJIT PRATAP NARAIN SINGH REGARDING DEVELOPMENT OF ROADS IN KUSHINAGAR

The State/ Union Territory (UT) wise details of NHs Projects awarded since 01.04.2021, including in Kushinagar in the State of Uttar Pradesh incorporating green technology / material and / or integrated rainwater harvesting systems, and length constructed

S.No.	State/UT	No.	Length (km)	Length Constructed during Financial Year (km)						Total Project Cost (Rs. in Cr)
				2021-22	2022-23	2023-24	2024-25	2025-26	2026-27 (till July 2026)	
1	Andhra Pradesh	37	935	0	64	310	236	179	28	31368
2	Assam	5	142	0	0	17	32	36	4	5400
3	Bihar	44	1698	185	277	211	203	181	28	58403
4	Chhattisgarh	9	417	0	24	82	106	70	105	13212
5	Gujarat	21	551	25	118	219	139	16	6	31870
6	Haryana	6	196	0	0	61	98	0	38	11875
7	Himachal Pradesh	23	502	8	87	88	55	86	47	23096
8	Jharkhand	20	686	2	47	108	114	85	6	21258
9	Karnataka	5	197	0	0	46	53	45	3	7246
10	Madhya Pradesh	68	2270	0	210	245	630	469	333	36686
11	Maharashtra	44	1636	63	107	214	342	334	84	28865
12	Odisha	73	945	41	65	80	294	149	30	20053
13	Punjab	8	178	14	3	15	41	86	0	9001
14	Rajasthan	3	138	0	22	58	51	3	1	1762
15	Tamil Nadu	6	215	51	16	8	25	79	36	8470
16	Telangana	7	232	0	4	17	41	105	6	9870

S.No.	State/UT	No.	Length (km)	Length Constructed during Financial Year (km)						Total Project Cost (Rs. in Cr)
				2021-22	2022-23	2023-24	2024-25	2025-26	2026-27 (till July 2026)	
17	Tripura	1	11	0	0	1	0	0	0	4
18	Uttar Pradesh	48	1277	9	108	268	276	315	48	49264
19	Uttarakhand	3	65	0	0	11	33	20	0	2365
20	West Bengal	4	160	0	28	59	30	24	0	4721
21	Delhi	23	576	89	172	97	75	38	26	30534
22	Jammu and Kashmir	5	155	0	2	3	25	60	28	10123
