GOVERNMENT OF INDIA
MINISTRY OF RURAL DEVELOPMENT
DEPARTMENT OF RURAL DEVELOPMENT

LOK SABHA
UNSTARRED QUESTION NO. 2396
ANSWERED ON 03/08/2021

USE OF COIR GEO TEXTILES IN CONSTRUCTION OF ROADS UNDER PMGSY

2396. ADV. ADOOR PRAKASH:
SHRI KUMBAKUDI SUDHAKARAN:

Will the Minister of RURAL DEVELOPMENT be pleased to state:

(a) whether the Government has decided for using Coir Geo textiles in the construction of rural roads in the country, State-wise, particulary in Kerala;
(b) if so, the details thereof along with the cost and benefits of using coir geo textiles for road construction along with the amount of coir that will be procured from coir companies in Kerala for construction of roads under PMGSY;
(c) whether the same has been implemented in the construction of rural roads under PMGSY-III in various States and if so, the details thereof, State-wise; and
(d) the list of roads in Kerala where coir will be used as an ingredient for construction, district-wise?

ANSWER
MINISTER OF STATE IN THE MINISTRY OF RURAL DEVELOPMENT
(SADHVI NIRANJAN JYOTI)

(a)&(b) In order to encourage locally available materials and use of green technologies, guidelines were issued by the Ministry in May 2013, wherein the State Governments are required to propose minimum 15% of total length of annual proposals under PradhanMantri Gram SadakYojana (PMGSY) under new technologies such as cement stabilization, lime stabilization, cold mix, waste plastics, cell filled concrete, paneled cement concrete pavement, fly ash,coir geo-textiles, etc. The details of roads constructed as on 28th July, 2021 using coir geo-textiles are as under.

Name of State	**Road length constructed (in km)**
Karnataka	28.85
Kerala	14.29
Madhya Pradesh	9.05
Tamil Nadu	44.40
Total	**96.59**

Coir geo-textiles are used for improvement of sub-grade soil strength in road pavements and stabilization of side slopes. Coir geo-textiles have been used in various places for improving the properties and strength of sub-grade soil layer by providing a physical separation of sub-base and sub-grade layers. It is also used for side-slope protection, as it can retard soil erosion. The Indian Road Congress (IRC) has also accredited the use of coir geo-textiles in construction of roads.

The State of Art Report published by the IRC HRB SR No. 21-2012 has reported that coir and jute technologies have proved to be effective in protection of slopes. In the preliminary observations by the National Quality Monitors (NQMs), these roads were found to be performing well. It has also been found that by improving the strength of the sub-grade soil the coir geo-textile results in marginal reduction in the thickness of the granular sub-base (GSB) layer, thus reducing costs. Cost of a road depends on the Schedule of Rates (SoR) of the State and local conditions. For those areas where coir is locally available, use of coir geo-textiles in road pavements is economical compared to the traditional methods of soil stabilization, especially when traditional material may not be available locally.

The State of Kerala has been allocated target length of construction of 71 km road length using Coir geo-textile under PMGSY-III, for which the requirement of Coir Geo-textile is assessed to be around 2.80 Lakh Square metre approximately.

(c) Coir geo textile is being used for construction in PMGSY-III roads. The state-wise details of roads sanctioned using coir geo textiles are as under:-

Name of State	**Road length already sanctioned (in km)**
Andhra Pradesh	-
Gujarat	3.65
Kerala	0.80
Maharashtra	96.45
Odisha	-
Tamil Nadu	-
Telangana	127.88
Karnataka	82.51
Total	**311.29**

(d) The list of roads sanctioned/ proposed using Coir Geo-textile at present, in the State of Kerala, district-wise is given at **Annexure.**

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Annexure

Annexure referred to in part (d) of Lok Sabha Unstarred Question No.2396 for 3rd August, 2021

Roads sanctioned/ proposed using Coir Geo-Technology under PMGSY-III in Kerala State

S.N.	District	Name of the Road	Road length sanctioned/ proposed to be sanctioned (Km)	Layer	Road Length sanctioned/ proposed using Coir Geo-Textile (Km)	Current Status
1	Alappuzha	MRL15-Palathikadu Kshethram to Jyothi jn Kavalakkal	4.11	Sub-grade	0.800	In Progress
2	Ernakulam	MRL11-Kummanode Jayabharath Ottathani Perumani Road	5.18	Sub-grade	1.015	Proposal submitted by the State
3	Kannur	T02-Vazhakkal oorpalli thekkumpoyil road	3.48	Sub-grade	0.830	Proposal submitted by the State
4	Kozhikode	MRL12-Anjampeedika Kayaladu Nedumpoyil Arikulam	8.83	Sub-grade	1.830	Proposal submitted by the State
5	Kozhikode	MRL05-Thaivvachaparambu Valathukaracanal	5.44	Sub-grade	1.000	Proposal submitted by the State
6	Malappuram	T10-Mele Kozhiparamb-Poolakkal-Palakode-Karayil	6.53	Sub-grade	1.007	Proposal submitted by the State
7	Thiruvananthapuram	MRL17-Suvarna jubilee-Kuttiplavila-Kattachal kuzhi-Peringammala-Mangalathu nada	3.90	Sub-grade	0.625	Proposal submitted by the State
			37.47		**7.107**	