GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2405
TO BE ANSWERED ON 10.08.2023.

Mining of beach sand minerals

2405 Shri Ayodhya Rami Reddy Alla:

Will the PRIME MINISTER be pleased to state:

(a) whether Government is aware about the potential of the beach sand minerals in generating renewable energy and the ways it will help in development of the nation, if so, the steps taken by Government to promote the mining of beach sand minerals;

(b) whether Government is addressing the potential environmental consequences of beach sand mineral extraction, including habitat destruction, shoreline erosion, and impacts on marine ecosystems; and

(c) whether innovative mining technologies being followed to improve efficiency, reduce environmental impacts, and ensure sustainable extraction of beach sand minerals?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH):

(a) Yes Sir. Government is aware of the potential of beach sand minerals in generating renewable energy and the ways it will help in development of the nation. In Beach Sand Mineral (BSM) ore, there occurs monazite, a prescribed substance as per Atomic Energy Act, 1962. Monazite contains Thorium, Uranium and Rare Earths (RE). After extraction of RE and its refining, Neodymium and Praseodymium are produced which are magnetic RE and find use as powerful magnets in renewable energy. Here are some ways in which renewable energy can help India:

(i) In enhancing energy security by giving thrust to renewable energy sources like solar, wind, and hydropower and reduce dependence on fossil fuel imports.

(ii) In reducing carbon footprint and combat climate change in line with the commitment of the country in COP 27.

(iii) Transition to renewable energy from fossil fuels can help improve air quality and public health.

(iv) Renewable energy technologies can help extend electricity access to vast and remote rural population in the country.

(v) In improving Energy Efficiency

(b) The environmental issues pertaining to extraction of beach sand mineral are addressed to the extent that there is no wastage, operations are sustainable and reducing carbon footprint to acceptable norms. Mining of beach sand minerals in the coastal areas is carried out only after obtaining

(i) Environmental Clearance,
(ii) CRZ Clearance,
(iii) Approved Mining Plan and
(iv) Consent to Operate.

The conditions contained in the aforesaid clearances are monitored for compliance thus ensuring nil impact on the shoreline configuration, habitat, and marine ecosystems.

(c) Following innovative measures are undertaken to improve efficiency, reduce environmental impacts, and ensure sustainable extraction of beach sand minerals:

(i) For extracting minerals from the inland deposits, innovative technique like dredging of BSM ore is adopted which ensures complete extraction of beach sand minerals in a given area. This is in line with the "Zero waste mining" envisaged in National Mineral Policy 2019 whereby mining and backfilling is done simultaneously thus ensuring environment friendly mining and facilitating sustainable extraction of beach sand minerals.
(ii) Development of green belt in and around the mining operations by tree plantation to minimise the pollution load generated from different operational activities.
(iii) Compensatory afforestation which is undertaken when forest land is diverted for non-forest purposes by compensating for degraded forest land by planting trees over twice the area available as identified by Forest department.

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