Coir Geo Textile

Why in News

Recently, the **National Rural Infrastructure Development Agency (NRIDA)** has announced that **coir geo textiles** will be used for construction of rural roads under the **Pradhan Mantri Gram Sadak Yojana (PMGSY-III).**

- This would give a **boost to the Coir industry** hit due to **Covid-19** pandemic.
- NRIDA is an agency under the **Ministry of Rural Development.**

Geo Textiles

- These are **synthetic** including polyester and polypropylene or **man-made materials** that have varying degrees of **permeability.**
  Permeability means their surfaces have very small openings that allow liquid or gases to pass through.
- **Characteristics of Geo Textile Fabrics:**
  - It has the ability to separate, filter, reinforce, protect and drain when used in association with soils.
  - It drains areas where water pools while keeping soil in place.
  - It serves as effective filters, catching some materials to prevent drains from clogging.
  - It reinforces earthen structures like drains by holding layers in place.
  - It protects against erosion in places like roads and beaches.
- These functions make Geo Textile fabrics useful in many **industries, especially construction and civil engineering.**

Key Points

- **Coir Geo Textile:**
    - Coir is a 100% natural fiber, obtained from a **renewable source – the coconut husk.**
    - Coir Geo Textile is naturally **resistant to rot, molds and moisture,** and free from any microbial attack hence it needs no chemical treatment.
    - It has a **permeable, natural and strong fabric** with high durability.
    - It protects the land surface and promotes quick vegetation.
    - It is **totally biodegradable,** and helps in soil stabilisation.
    - It can dissipate the energy of flowing water and absorb the excess solar radiation.
- **PMGSY New Technology Guidelines:**
    - The new guidelines encourage **locally available materials** and use of **green technologies for construction of roads** under **Pradhan Mantri Gram Sadak Yojana (PMGSY).**
    - The State Governments are required to propose a **minimum 15%** of total length of annual road proposals under **new technologies such as** cement stabilization, Lime stabilization, cold mix, waste plastics, cell filled concrete, paneled cement concrete pavement, fly ash etc.
    - Out of this, **5% roads** are to be constructed using **Indian Road Congress (IRC) accredited technology.** The IRC has now accredited coir Geo textiles for construction of rural roads.
    - Thus, **5% length of the rural roads under PMGSY-III will be constructed using coir geo textiles.**
    - **1674 km road** will be constructed using **Coir Geo textiles in 07 states i.e. Andhra Pradesh, Gujarat, Kerala, Maharashtra, Odisha, Tamilanadu** and in **Telangana.**
    - There will be a requirement of **One Crore Sq. mtrs of coir geo textiles,** estimated cost of which would come to **Rs.70 Crore.**

Indian Road Congress

- The Indian Roads Congress (IRC) is the **apex body of Highway Engineers** in the country.
- It was set up in December, 1934 on the recommendations of the **Indian Road Development Committee** also known as **Jayakar Committee** (under the Chairmanship of Shri M.R. Jayakar) with the objective of road development in India.
- It works in close collaboration with the Ministry of Road Transport and Highways.
- It is committed to utilise global best practices and promote the **use of cutting edge technologies** for construction for the maintenance of roads, bridges and road transportation.
- It promotes **environmental strategy for promotion of cleaner, less energy intensive and less polluting construction techniques** and use of recycled wastes.

- **Indian Road Congress (IRC) accredited technology:**
- The **Committee for Accreditation of New Materials and Techniques** formed under the aegis of **Highway Research Board of Indian Roads Congress** gives accreditations to patented or new materials, techniques developed in India and abroad and evaluated as per recognized National/ International Specifications.

Pradhan Mantri Gram Sadak Yojana - III

- The Phase III of Pradhan Mantri Gram Sadak Yojana (PMGSY) was **launched in 2019.**
- The Pradhan Mantri Gram Sadak Yojana was **launched to provide connectivity to unconnected habitations as part of a poverty reduction strategy.**
- The **National Rural Infrastructure Development Agency** works to implement the Pradhan Mantri Gram Sadak Yojana across states.
    - The Ministry of Rural Development along with state governments is responsible for the implementation of PMGSY.
- Under the PMGSY-III Scheme, it is proposed to **consolidate 1,25,000 Km** road length in the States.
    - It involves consolidation through routes and major rural links connecting habitations to **Gramin Agricultural Markets (GrAMs), Higher Secondary Schools and Hospitals.**
- The **duration** of the third phase is **2019-20 to 2024-25.**
- The **funds** are shared in the ratio of 60:40 between the Centre and State for all States except for 8 North Eastern states and Himachal Pradesh & Uttarakhand for which it is 90:10.

Source: PIB