



Saksham Portal and Seaweed Mission: TIFAC

Why in News

The **Technology Information, Forecasting and Assessment Council (TIFAC)** has launched **two new initiatives** - **SAKSHAM** (Shramik Shakti Manch) Job Portal and a **Seaweed Mission**.

- TIFAC is **an autonomous organization** set up in 1988 under the **Department of Science & Technology** to look ahead in the technology domain, **assess the technology trajectories, and support innovation** by networked actions in select areas of national importance.

Key Points

▪ SAKSHAM Portal:

◦ About:

- It is a dynamic portal for jobs/mapping the skills of Shramiks (workers) vis-a-vis requirements of Micro, Small and Medium Enterprises (**MSMEs**) and other industries all across the country. It is **an all India Portal**.
- It will facilitate **creation of 10 lakh blue collar jobs**.

◦ Features:

- **High Technology Enabled:** The portal with the demand and supply data uses algorithm and **Artificial Intelligence (AI)** tools, for geo spatial information on demand and availability of *Shramiks*, and also provides analysis on skill training programmes of *Shramiks*.
- **Automatic Updation:** The data/information pertaining to the *Shramiks* and the industries (especially MSME) are being updated automatically through various whatsapp and other links.

◦ Advantages:

- **For Workers:** This would **empower Shramiks by projecting their candidature directly to the MSMEs** & other employers and would also **address aspects related to their skill proficiency levels**.

- It will **minimise migration of Shramiks** - provide job opportunity in proximate MSMEs.

- **For Industry:** This would also **eliminate the dependence of industry on the middlemen/labour contractor** for their manpower requirements.

◦ Other Related Initiatives:

- **ShramShakti Portal** (Ministry of Tribal Affairs).
- **ASEEM Portal** (Ministry of Skill Development and Entrepreneurship).
- **NMIS Dashboard** (National Disaster Management Authority).

▪ Seaweeds Mission:

◦ Background:

- Out of the global seaweed production of 32 million tons fresh weight valued around 12 billion US dollars, China produces 57%, Indonesia 28% followed by South Korea, whereas **India is having a mere share of 0.01-0.02%**.
- Despite several advantages, commercial seaweeds cultivation has not taken place in the country at an appropriate scale, as being practiced in South-East Asian countries.
- **About the Mission:**
 - It has been **launched for commercial farming of seaweeds** and its processing for value addition towards boosting the national economy.
 - It **envisages following activities:**
 - **Establishing model demonstration farms** over one hectare for cultivation of economically important seaweeds in nearshore and onshore along the Indian coast.
 - **Establishment of seaweed nurseries** for supplying seed material for large scale farming of economically important seaweeds in the country.
 - Establishment and **demonstration of processing technologies/recipes for edible seaweeds** in line with consumer acceptability or cultural food habits.
 - An activity on **seaweed cluster development** including value chain development, supply chain development, collection of data on environmental, economic and social impacts of seaweed projects in the country.
- **Advantages:** By an estimate, if seaweed cultivation is done in 10 million hectares or 5% of the **Exclusive Economic Zone (EEZ)** area of India, it can
 - Provide **employment** to 50 million people.
 - Set up a **new seaweed industry**.
 - Contribute to **national Gross Domestic Product (GDP)**.
 - Enhance **ocean productivity**.
 - **Abate algal blooms**.
 - **Sequester** millions of tons **CO₂**.
 - Could **produce bioethanol** of 6.6 billion litres.

Seaweeds

▪ About:

- They are the **primitive, marine non-flowering marine algae without root, stem and leaves**, play a major role in marine ecosystems.
- Large seaweeds form dense underwater forests known as **kelp forests**, which act as underwater nurseries for fish, snails and sea urchins.
- Some **species of seaweeds** viz. Gelidiella acerosa, Gracilaria edulis, Gracilaria crassa, Gracilaria verrucosa, Sargassum spp. and Turbinaria spp.

▪ Location:

- Seaweeds, found **mostly in the intertidal region**, in shallow and deep waters of the sea and also in **estuaries and backwaters**.
- The southern **Gulf of Mannar's** rocky intertidal and lower intertidal regions have rich populations of several seaweed species.

▪ Ecological Importance:

- **Bioindicator:** When waste from agriculture, industries, aquaculture and households are let into the ocean, it causes nutrient imbalance leading to algal blooming, the sign of marine chemical damage. Seaweeds **absorb the excess nutrients** and balance out the ecosystem.
- **Iron Sequester:** These aquatic organisms heavily rely on iron for photosynthesis.

When the quantity of this mineral exceeds healthy levels and becomes dangerous to marine life, seaweeds trap it and prevent damage. Similarly, most heavy metals found in marine ecosystems are trapped and removed by seaweeds.

- **Oxygen and Nutrient Supplier:** On their part, the seaweeds derive nutrition through photosynthesis of sunlight and nutrients present in seawater. They release oxygen through every part of their bodies. They also supply organic nutrients to other marine life forms.

▪ **Role in Climate Mitigation:**

- Seaweed has a significant role in mitigating climate change. By afforesting 9% of the ocean with seaweed, it is possible to sequester 53 billion tons of carbon dioxide annually. Hence, there is a proposal termed as 'ocean afforestation' for farming seaweed to remove carbon.

▪ **Other Utilities:**

- They can be used as **fertilizers** and to **increase aquaculture production.**
- When livestock is fed with seaweed, **methane emission from cattle may be reduced** substantially.
- They can be buried in beach dunes to **combat beach erosion.**
- It is **used as an ingredient** in preparing toothpaste, cosmetics and paints.

[Source:PIB](#)

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