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1. Infrastructure for Resilient Island States (IRIS)

Related to Disaster Management, GS III

Prelims: About IRIS, VEDAS

Mains: Role of IRIS in establishing disaster resilience

Context: ISRO has decided to extend its support to the [Small Island Developing States](#) in the Indian Ocean Region in order to promote disaster resilience.

IRIS:

- The Infrastructure for Resilient Island States was launched with an objective to assist infrastructure development in small island countries that face the continuous threat of natural disasters.
- It took its advent at the [COP26](#) summit at Glasgow in November 2021 and it was launched by the Prime Minister.
- IRIS functions as a component of the Coalition for Disaster Resilient Infrastructure ([CDRI](#)). CDRI has been joined by 25 countries so far.
- This initiative will ensure access to financial mechanisms for resilient infrastructure development to 58 small island states across geographic regions.

Intervention by ISRO:

- [ISRO](#) will carry out prediction of track, intensity, landfall time and location of the cyclones that originate in the Indian Ocean.
- ISRO will work in collaboration with the Indian Meteorological Department ([IMD](#)) for cyclone forecast advisories.
- Improved prediction methodology with effective R&D output will be provided by ISRO.

Vulnerability Assessment by ISRO:

- ISRO has conducted a vulnerability assessment of certain regions in the vicinity of the Indian coast and identified the coastal stretch that is susceptible to sea-level rise.

- A real-time prediction of storm surge and surge induced inundation for the Indian coast has been carried out using satellite observations and numerical models.
- The maps of coral reefs of the Indian Ocean, Red Sea and the Gulf of Aden were published and regularly updated.
- A region-specific coral bleaching monitoring system based on sea surface temperature has been developed in ISRO's VEDAS geoportal.
- VEDAS is a geoprocessing platform that uses optical, microwave, thermal and hyperspectral data and can be applied in various fields. It provides mobile applications, solar and wind calculators which can be downloaded and used for computing, rooftop solar insolation and energy potential for individual households.

Application of VEDAS (Visualization of Earth Observation Data Archival System)

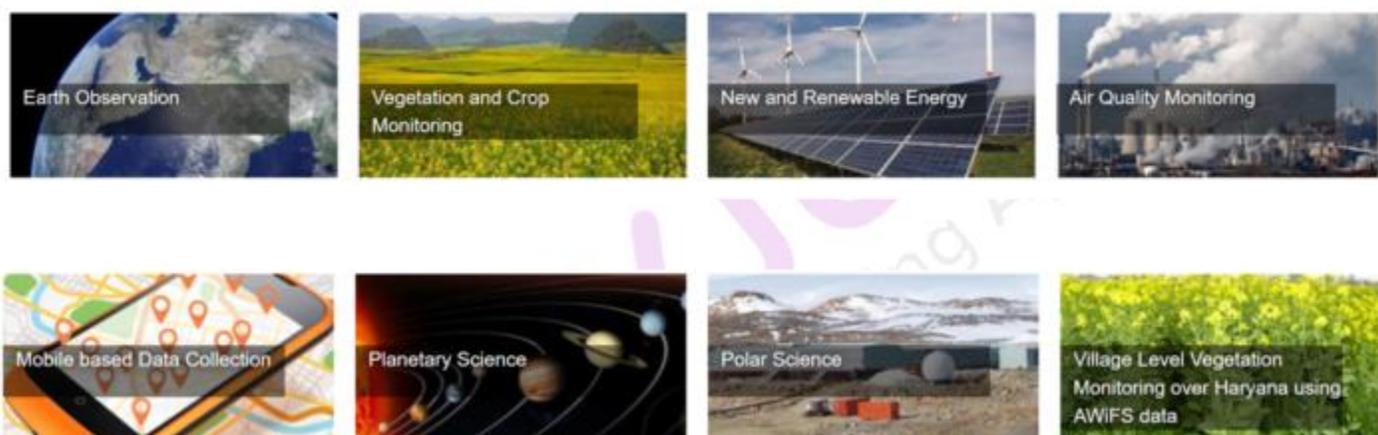


Image source: www.isro.gov.in

2. Integrated Bamboo Project

Related to Technology, GS III; Govt schemes, GS II

Prelims: Important Facts about the Project

Mains: Significance of the Project in promoting Bamboo trade, Importance of bamboo

Context: With the objective to redefine the Bamboo Mission, the integrated bamboo project has been launched at Tamenglong in Manipur and it is funded by the North Eastern Council ([NEC](#)) which operates under the Ministry of Doner.

About the Bamboo Project:

- The project will be implemented by the North East Cane and Bamboo Development Council (NECBDC) which is a designated Bamboo Technical Support Group under the National Bamboo Mission.

- This project intends to promote bamboo technology and up-gradation.
- The NECBDC has trained more than 7000 officials, army men, farmers, artisans, bamboo workers in the bamboo trade.
- This project facilitates the industrialisation of bamboo and cane setting up networks that can be augmented as bamboo clusters resulting in employment generation in rural areas.
- The project comprises the following for better bamboo and cane processing:
 - **Cane and Bamboo Nursery**
 - **Bamboo Treatment Plant**
 - **Common Facility Centre**

Importance of Bamboo:

- Bamboo is considered to be a versatile crop with multiple uses.
- It can be used as a food, a substitute of wood, biofuel, incense sticks, construction material and also for handicrafts and paper.
- India is the second-largest cultivator of bamboo with 136 species and 23 genera spread over millions of hectares.
- Despite having a considerable bamboo resource India's commercial share in terms of bamboo is a mere 4% globally.
- Several initiatives like the bamboo mission and the integrated bamboo project aim at increasing the trade and commerce in bamboo and cane along with the incorporation of better species of bamboo by employing tools of biotechnology.
- Therefore bamboo reserves enormous potential to transform the entire set-up of the rural economy.
- Researchers, after an extensive study, have suggested that bamboo can be a potential plant species that can restore degraded land and mitigate climate change.

Read more about [National Bamboo Mission](#) in the linked article

[Integrated Bamboo Processing](#)

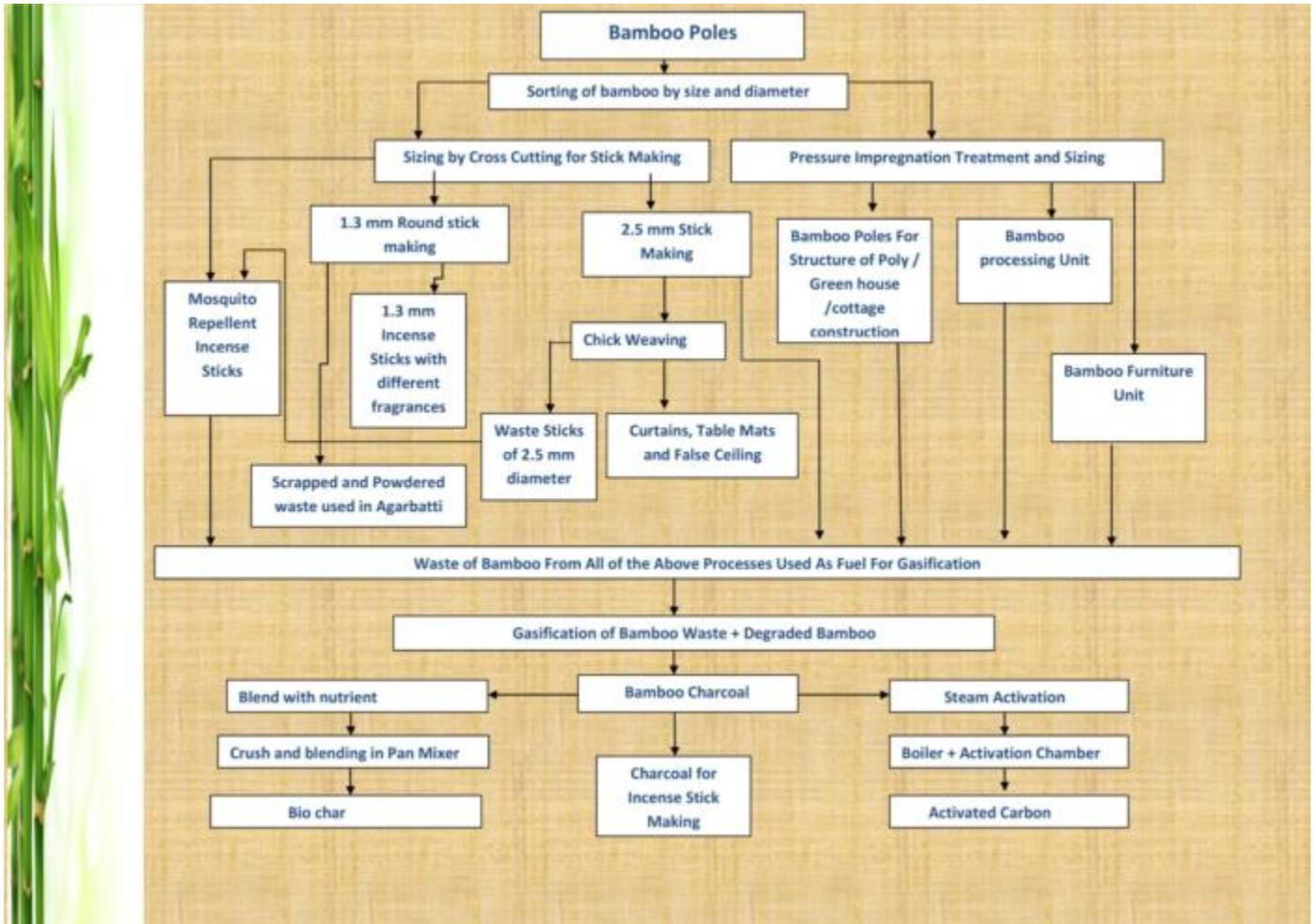


Image Source: www.sustainableoptions.in

3. INS SUDARSHINI

Related to Security, GS III

Prelims: About INS SUDARSHINI

Mains: Self-reliance in Defence

Context: INS SUDARSHINI has been deployed to the Gulf countries to expand foreign training cooperation.

Important Facts:

- INS SUDARSHINI is an indigenous sail training ship built by Goa Shipyard Limited and based at Kochi, Kerala under the Southern Naval Command of the Indian Navy.
- The ship visited Oman, Muscat and Port Sultan Qaboos on a three-day operational turnaround.

- The operation aimed at emboldening the bridges of friendship with foreign countries in the Gulf region and also reaching out to the Indian diaspora.
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4. Sri Guru Tegh Bahadur

Related to the Personalities section of GS I

Prelims: About Guru Tegh Bahadur, Sikhism.

Mains: Contributions and teachings of Guru Tegh Bahadur

Context: The Prime Minister commemorated the compassionate personality of Guru Tegh Bahadur and offered tribute to him on his martyrdom day.

About Guru Tegh Bahadur:

- He was the ninth Sikh Guru who sacrificed his life in order to protect human values, ideals and promoted the message of unity and brotherhood.
- Every 8th of December is celebrated as the Martyrdom Day of Guru Tegh Bahadur.

Read more about Guru Tegh Bahadur on [This Day in History dated Nov 24.](#)

5. Sprint04: Market – Tech under I – Sprint' 21

Related to Economic Development, GS III

Prelims: About Sprint04, Sandbox, IFSCA

Mains: Role of technology in improving financial services

Context: The hackathon Sprint04 was launched by the International Financial Services Authority ([IFSCA](#)) in the closure event of the “Infinity Forum 2021”.

Significance:

- The hackathon intends to emphasize the capital market segment by expanding the purview of fintech and will be an open platform for stakeholders across the globe.
- This will create a level playing field in supporting a world-class FinTech hub to improve financial services and products that would operate under regulations and result in a customer-friendly environment.
- This would pave ways for innovation and better banking, insurances, securities and fund management systems.

- The finalists of the Hackathon will be allowed direct entry into IFSCA Sandbox, will receive INR 5 million incentives per FinTech and prize money of INR 20 lakhs along with guidance from experts.

Read more about IFSCA Regulatory Sandbox in [CNA](#) dated 29h July 2017

