



News Analysis (30 Aug, 2018)

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Cabinet Approves O-SMART Scheme

Recently the cabinet approved Umbrella scheme “Ocean Services, Technology, Observations, Resources Modelling and Science (O-SMART)” .

- The scheme encompasses a total of 16 sub-projects addressing ocean development activities such as Services, Technology, Resources, Observations and Science.
- Implementation period is from 2017-18 to 2019-20.
- The project will be implemented by Ministry of Earth Sciences.
- The ocean advisory services and technologies being rendered and developed under the scheme will play a pivotal role in the development activities over
- many sectors, working in the marine environment including the coastal states of India, contributing significantly to the GDP.

Background

- The ministry is proposing to continue the existing schemes in a focused way as a part of umbrella scheme of O-SMART.
- Ocean Policy Statement enacted in November 1982, implements multi-disciplinary projects in the field of ocean development primarily to
 - provide a suite of Ocean Information services,
 - develop technology for sustainable harnessing the ocean resources,
 - promote front-ranking research and
 - conduct ocean scientific ocean surveys.
- India’s ocean related activities extended from the Arctic to the Antarctic region covering large ocean spaces which have been monitored through a wide spectrum of in situ and satellite-based observations.
- India also signed the Antarctic Treaty System and joined Commission of Conservation of Antarctic Marine Living Resources (CCAMLR) for harnessing the resources.

- The ministry has been monitoring the health of coastal waters of India including shoreline changes and marine ecosystem.
- Some of the technologies for harnessing the ocean resources that have been developed are low temperature thermal desalination for islands, Remotely Operated Submersible and soil tester, shallow bed mining systems, etc.
- Deep-sea mining of Poly-Metallic Nodules [PMN] in the Central Indian Ocean was allotted by International Sea Bed Authority [ISBA] for exploration of PMN, and also in the Indian Ocean for exploration of hydrothermal sulphides.
- India has also established a state-of-the art early warning systems for ocean disasters, viz, tsunami, cyclones, storm surges etc., for providing round the clock services for India and countries of the Indian Ocean, which have been recognized by UNESCO.

Vision

The important deliverables during the next years envisage under the scheme include:

- Strengthening of Ocean Observations and Modelling
- Strengthening of Ocean Services for Fishermen
- Setting up Marine Coastal Observatories for monitoring marine pollution in 2018
- Setting up Ocean Thermal Energy Conversion Plant (OTEC) in Kavaratti
- Acquisition of 2 Coastal Research Vessels for Coastal research
- Continuation of Ocean Survey and Exploration of Minerals and Living Resources
- Technology Development for Deep Ocean Mining- Deep Mining System and Manned Submersibles
- Setting up Six Desalination Plants in Lakshadweep

Impact

- The services rendered under the O-SMART will provide economic benefits to a number of user communities in the coastal and ocean sectors, namely, fisheries, offshore industry, coastal states, defence, shipping, ports etc.
- Fishermen community receiving information like fish potential and local weather conditions in the coastal waters daily through mobile will help them to reduce the search time, resulting savings in the fuel cost.
- Implementation of O-SMART will help in addressing issues relating to Sustainable Development Goal-14, which aims to conserve use of oceans, marine resources for sustainable development.
- This scheme (O-SMART) also provide necessary scientific and technological background required for implementation of various aspects of Blue Economy.
- The State of Art Early Warning Systems established under the O-SMART Scheme will help in effectively dealing with ocean disasters like Tsunami, storm surges.

- The technologies being developed under this Scheme will help in harnessing the vast ocean resources of both living and non-living resources from the seas around India.

Commission of Conservation of Antarctic Marine Living Resources (CCAMLR)

- It was established by international convention in 1982, with the objective of conserving Antarctic marine life.
- Secretariat is based in Hobart, Tasmania.
- Currently, CCAMLR has 25 Members and 11 Acceding States.
- India is one of the members of CCAMLR.

International Seabed Authority [ISBA]

- It was established under the 1982 United Nations Convention on the Law of the Sea ,to organize, regulate and control all mineral-related activities in the international seabed area beyond the limits of national jurisdiction
- It is based in Kingston, Jamaica.
- It has 168 members.
- India is one of the member countries.

Blue Economy

- The “blue economy” concept seeks to promote economic growth, social inclusion, and the preservation or improvement of livelihoods while at the same time ensuring environmental sustainability of the oceans and coastal areas.
- The blue economy aims for integration of development of ocean economy, along with social inclusion, environmental sustainability, combined with innovative business models.

Poly-Metallic Nodules (PMN)

- Polymetallic nodules, also called manganese nodules, are rock concretions formed of concentric layers of iron and manganese hydroxides around a core. The core may be microscopically small and is sometimes completely transformed into manganese minerals by crystallization.
- Polymetallic nodules contain multiple metals like copper, nickel, cobalt, manganese, iron, lead, zinc, aluminium, silver, gold and platinum etc. in variable constitutions and are precipitate of hot fluids from upwelling hot magma from the deep interior of the oceanic crust.

Mining for Polymetallic nodules is of strategic importance for India as there are no terrestrial sources of these metals in India.

Centre and Punjab government are working to ensure that there are enough machines to tackle the problem of stubble burning which is a major source of air pollution in the National Capital Region.

What is Stubble Burning?

- Stubble burning is the act of setting fire crop residue to remove them from the field to sow the next crop. It is practised in areas which use 'combine harvesting method'.
- Combines are machines that harvest, thresh i.e separate the grain, and also clean the separated grain, all at once.
- The problem is that the machine doesn't cut close enough to the ground, leaving stubble behind which is of no use for farmers.
- There is pressure on farmers to sow the next crop in time for it to achieve a full yield. So, the quickest and cheapest solution is to clear the field by burning the stubble.

Why do farmers practice stubble burning?

- Even after being discouraged by the government, farmers prefer stubble burning because it's very cheap.
- Lack of financial and technological means to opt for alternatives to stubble burning, such as ploughing the stubble or investing it for other purposes, also plays a role in the continuation of this practice.
- Uprooting the stubble, cutting, burying and watering it takes two days. It then takes 45 days to turn into manure. The element of time is crucial for farmer as the plantation for the next crop (Rabi crop) is due in November-end.
- Also, this process costs a farmer Rs 500-700 per acre per day while setting fire to the stubble barely costs them anything.

Effects of Stubble Burning

- Stubble burning in Punjab, Rajasthan and Haryana is blamed for causing a thick blanket of smog in Delhi during winter, which is a serious health hazard.
- Open stubble burning emits large amount of toxic pollutants in the atmosphere which contain harmful gases like Methane (CH₄), Carbon Monoxide (CO), Volatile organic compound (VOC) and carcinogenic polycyclic aromatic hydrocarbons.
- After release in the atmosphere, these pollutants disperse in the surroundings, may undergo physical and chemical transformation and eventually adversely affect the human health.
- Burning husk on ground destroys the nutrients in the soil, making it less fertile.
- Heat generated by stubble burning penetrates into the soil, leading to the loss of the moisture and useful microbes.

- It kills natural nutrients and bacteria that helps rejuvenate soil.

Alternatives of Burning Stubble

- The most efficient technology to counter crop burning at the moment is Turbo Happy Seeder (THS) which is a machine mounted on a tractor that not only cuts and uproots the stubble, but can also drill wheat seeds on the soil that has just been cleared up. The straw is simultaneously thrown over the sown seeds to form a mulch cover.
- Punjab and Haryana together produce around 32 million tonnes of stubble and straw. Of this, only 1.5 million is going into energy generation and only from Punjab. If more of this stubble can be utilised in the waste-to-energy and biomass based power generation plants, it will help the farmer as well as the government.
- Decomposing stubble in the farm field and turning it into the useful manure.
- Making fodder for livestock out of collected stubble.
- Setting up Bio-mass fuel plants to generate fuel using paddy husk.
- Government should involve or invite benefiting industries like cement industry to collaborate in stubble collection to use it proficiently.
- Inviting packaging industries to collect stubble to make packaging boxes which are more environment friendly than other non-disposable materials like thermocole and plastic.

Government Initiatives

- In November 2015, the National Green Tribunal directed authorities in Delhi and its neighboring states to stop this practice. But the directive had little effect.
- The Centre had, in March, approved a Rs 1,151-crore scheme to promote in-situ management of crop residue by providing subsidized THS machines. Under the scheme, the users are supposed to deposit the subsidised price amount with the agriculture department once their applications are cleared.
- Punjab has planned 30 paddy stubble-based power plants, mostly in paddy-growing areas of the state. These plants will consume 44 lakh tonnes of paddy stubble; seven such plants are operational with a total generation capacity of 62.5 megawatt.

Challenges

- Punjab government has set the target of delivering 25000 THS machines but only about 500 machines were actually delivered to end-users who have paid the applicable subsidised rates on these. The deliveries are happening at a slow pace because the buyers, especially farmers, are not depositing even subsidised price money.

- With manufacturers not getting their monies — whether the upfront share from buyers or government subsidy, delivering the machines even by September 30 (the earlier deadline was August 31) is looking to be a herculean task.

Way forward

- The timely implementation of Government schemes of providing the subsidized THS machine will help to tackle the situation.
 - Further the governments need a combination of incentives and prosecution. Give incentives to farmers who use green methods and penalise the ones who don't. Haryana is already following this approach.
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Committee Headed by Home Secretary Submitted Report on Lynching

A committee headed by Home Secretary recently submitted its report on enacting a law to curb lynching.

Background

Aftermath of Lynching incident in Alwar on July 20, the Central government formed a panel of Group of Ministers (GoM) under the chairmanship of Union Home Minister and Committee of Secretaries under Home Secretary, to submit a report on enacting a law to curb lynching.

The committee also deliberated upon the steps to curb fake news and misinformation and child pornography.

Recommendation

- The Committee has suggested tightening the existing law by inserting clauses in the Indian Penal Code and the Code of Criminal Procedure through parliamentary approval.
 - Lynching cases currently get covered under Section 302 (murder), 307 (attempt to murder), 323 (causing voluntary hurt) 147 (rioting), 148 (rioting armed with deadly weapons) and 149 (unlawful assembly) of the Indian Penal Code.
- The Committee has suggested that social media platforms — Facebook, WhatsApp, YouTube, and Twitter — will be made accountable for not blocking malicious posts/videos when brought to their notice. And social media platforms should act in a time-bound manner.

- The Committee has suggested that an FIR could be lodged against their country heads of social media platforms if they fail to comply with government orders and they will be prosecuted under the law.

Initiatives by Civil Society:

Civil Society also made efforts to draft a bill against Mob lynching. National Campaign Against Mob Lynching has drafted a bill known as the Manav Suraksha Kanon (MASUKA) against lynch mobs. It proposed to make lynching a non-bailable offense and the punishment for the ones convicted under it with life imprisonment.

Steps taken by the government to curb lynching

After SC directives, the Centre has asked state governments and UT's to appoint an officer in each district at the level of Superintendent of Police, set up a special task force to gather intelligence, and closely monitor social media contents to prevent mob attacks on suspicion of being child-lifters or cattle smugglers.

Way forward

- Legal Experts are of opinion that existing laws are sufficient to tackle mob violence. Enacting a new law is unlikely to make much difference. Better enforcement of existing laws is more important than new law.
- Committee's recommendation makes Social media solely responsible for lynchings and fake news. The real problem is not a messaging service, but how the people who use it.
The same messaging service that was used to organize lynchings, was used to a completely different effect in Kerala where it helped save many lives.

[Read about SC Guidelines.](#)

Important Facts for Prelims (30th August 2018)

Smart India Hackathon

- The **third edition of World's Biggest Open Innovation Model - Smart India Hackathon 2019 (SIH-2019)** was launched by the Union Minister for Human Resource Development (MHRD).
- SIH-2019 is a nationwide initiative to provide students a platform to solve some of pressing problems we face in our daily lives, and thus inculcate a culture of product innovation and a mindset of problem solving.

- Smart India Hackathon is an **initiative by MHRD, All India Council for Technical Education (AICTE), Persistent Systems and Inter Institutional Inclusive Innovation Centre (i4C)**.
- Students from IISc, IITs, NITs and AICTE/UGC approved institutions will also compete to creatively solve problems and offer technical solutions.
- For the first time, **private industry/organisations and NGOs** can also send their problem statements to students under SIH-2019.
- Smart India Hackathon- 2019 will have **2 sub-editions**-
 - Software edition (a 36-hour software product development competition)
 - Hardware edition (a 5 days long hardware product development competition)
- Previous Editions of Smart India Hackathon were held in 2016 and 2017.

Open Innovation Model

Open Innovation Model is way organizations employ to find solutions to their problems by tapping on the knowledge and expertise beyond their usual internal pool of employees and experts. It provide an architecture to connect the external pool with internal pool for development of new technologies.

PRAGATI (Pro-Active Governance and Timely Implementation)

- It is a platform which enables the Prime Minister to discuss the issues with the concerned Central and State officials with full information and latest visuals of the ground level situation.
- It was launched in **2015** and has been designed by the **PMO team** with the help of **National Informatics Center (NIC)**.
- It is a **three-tier** system (PMO, Union Government Secretaries, and Chief Secretaries of the States).
- The **three objectives** of PRAGATI are:
 - Grievance Redressal
 - Programme Implementation
 - Project Monitoring
- The PRAGATI platform uniquely bundles **three latest technologies**: Digital data management, videoconferencing and geo-spatial technology.
- It **promotes cooperative federalism** as it brings on one platform the Secretaries of Government of India and the Chief Secretaries of the States.
- However, the direct interaction of the PM with the state secretaries without involving the political executives of the states is **undermining the State political executive**. It is also said that this is leading to concentration of power in the extra-constitutional office of PMO.

- It is a robust system for bringing **e-transparency and e-accountability** with real-time presence and exchange among the key stakeholders.
- It is an innovative project in e-governance and good governance.
- It is held once every month on **Fourth Wednesday at 3.30 PM** and known as **PRAGATI Day**.

Aranmula Boat Race

- For the first time in the past 50 years, the annual '**Aranmula Vallamkali**' boat race was held without celebration due to recent floods in Kerala.
 - The Aranmula Boat Race is the **oldest river boat festival in Kerala**, which is held during Onam (August–September).
 - It takes place at Aranmula in **Pampa river**, near a Hindu temple, Sree Parthasarathy temple dedicated to **Lord Krishna and Arjuna** in Pathanamthitta district of Kerala State.
 - The '**palliyodams**' (**snake boats**) move in pairs to the rhythm of full-throated singing and shouting watched by an exciting crowd.
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