



PLUTUS ACADEMY

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1.Study estimates 14 million tonnes of microplastics on sea floor

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) which is an Australia science agency have studied that 14 million tonnes of harmful microplastics are present in the bottom of the world's deep oceans. The accumulation of this chunk of plastic is the result of pervasive use of plastic.

Findings

- The agency analysed the 380 km of deep ocean from the coast of South Australia.
- They found that, amount of plastic particles on the seafloor was double the amount of plastic pollution on the surface of the sea globally.

What are microplastics?

Microplastics are small pieces of plastic having a size of 5mm. Some of them are equivalent to the size of a rice grain. They include small pieces of degraded plastic, synthetic fibres and plastic beads that are used in cosmetic items , toothpaste and even in laundry powder soaps. Microplastics are the result of larger plastic debris degrading into smaller pieces.

How do microplastics be transported to the Ocean bed?

They are transported to the ocean bed by Deep sea currents. Further, plastics can sink down after they are attacked by Algae.

Why are microplastics a threat to marine life?

The microplastics are harmful for marine life because marine life is dependent on the ocean currents for their survival. Ocean currents carry the oxygenated water and nutrients to sea floor Hotspots on which marine ecosystems survive. If the microplastics increase in the ocean water the currents will carry these tiny substances along with nutrients and silt. The microorganisms will end up ingesting these microplastics and thus the marine hotspot begins to deteriorate.

Concerns

Every year, millions tonnes of plastic goes into oceans. Irrespective of the fact that efforts are being made to reduce the use of plastics, volume of plastics in the marine environment is increasing day by day.

Plastic ban

The Netherlands became the first nation to ban plastic microbeads in cosmetics and personal care products in 2014. Later, in 2015, the United States banned its use. But other countries continue to use them. India has also targeted to completely ban single use plastic by 2022.

2.Vigraha- An Offshore Patrol Vessel of Indian Coast Guard launched.

The Indian Coast Guard launched a 98-metre offshore patrol vessel 'Vigraha' at a private shipyard in Kattupalli, Chennai on October 7, 2020. The vessel is the one among the series of seven vessels that were designed and built for the Coast Guard. These vessels have been built and designed by Larsen and Toubro Shipbuilding under the 'Make in India' initiative.

About Vigraha or Yard-45007

- The vessel is a 98-m long ship.
- It has a displacement of 2100 tons.
- It is capable of achieving a top speed of 26 knots.
- The vessel has an endurance of 5000 nautical miles.
- The vessel can stay at sea for 20 days without replenishment.
- Vigraha will be inducted into Indian Coast Guard in March 2021 after extensive trials and testing of the on-board equipment and machinery.
- Expected life span of the vessel is more than 25 years.
- The vessel was manned by 102 crew including the 14 officers, 88 subordinate officers and enrolled personnel.
- The vessel would serve the East Region, from Visakhapatnam after induction. It would be operated under the leadership of IG S.Paramesh.

Significance

The ship comprises advanced navigation and communication equipment. It also contains sensors and machinery that are capable of operating in tropical climates. The vessel has been designed to carry an integral Twin Engine Helicopter. Thus, it will enhance its operational, search, surveillance and rescue capability. The vessel has also been armed with a 30mm 2A42 Naval Gun and two 12.7mm guns. The vessel can be utilised for day and night surveillance, anti-terror and anti-smuggling

operations in the Exclusive Economic Zone. In all, the vessel would enhance the coastal security.

Indian Coast Guard

The Indian Coast Guard was established in 1977. Then, the coast guard comprises two vessels and five boats. It has made swift progress since then. It is the fourth largest coast guard in the world and it stands larger than many navies. It has also established bilateral and multilateral agreements with countries including Sri Lanka, Mauritius, Bangladesh, Seychelles and Maldives to secure the coastal countries and exclusive economic zone.

3.API Integration between PM SVANidhi and SBI Portal Launched

Under the Prime Minister Street Vendor's AtmaNirbhar Nidhi (PM SANNidhi) Scheme, Shri Durga Shanker Mishra, Secretary of Ministry of Housing & Urban Affairs, had launched the Application Programming Interface (API) integration between the PM SANNidhi Portal and the State Bank of India (SBI) portal on October 7, 2020.

Highlights

- The API integration will facilitate seamless flow of data between the PM SANNidhi Portal and SBI's eMudra Portal
- The integration will secure the payment environment and expedite the loan sanctioning and disbursement process.
- This is going to benefit the street vendors seeking working capital loan under the Scheme.
- Ministry will further explore similar integration with other banks.

PM SVANidhi Scheme

The Ministry launched the scheme and has been implemented since June 01, 2020. The scheme was launched to provide affordable working capital loan to street vendors. The capital loans were provided to resume their livelihoods that was adversely affected amid Covid-19 lockdown. This scheme have a target to benefit over 50 lakh Street Vendors. The vendors include those who had been vending on or before 24 March, 2020 in urban areas and surrounding peri-urban or rural areas. The vendors can take a working capital loan of up to Rs. 10,000, under the scheme. They required to repay the loan in monthly instalments within one year. If the loan is timely or early repaid, an interest subsidy @ 7% per annum will be credited to the bank accounts of beneficiaries through Direct Benefit Transfer quarterly. The

scheme has no provision of penalty on early repayment of loan. It also promotes digital transactions through cash-back incentives up to an amount of Rs. 1,200 per annum. So far, 20.50 lakh loan applications have been received, 7.85 lakh loans have been sanctioned and over 2.40 lakh loans disbursed under the scheme.

4.How Bio-Decomposer Spray will Counter the Stubble Burning in Delhi?

Delhi Chief Minister Arvind Kejriwal announced on October 6, 2020 that the Delhi Government will be doing the Bio-Decomposer spraying from October 11, 2020 in order to counter the stubble burning issue. Bio-Decomposer spraying have been prepared by the scientists at the Indian Agricultural Research Institute, PUSA. It is a low-cost and an effective way to deal with the stubble burning issue.

What is the issue?

The stubble burning from neighbouring states including Uttar Pradesh, Haryana, Punjab contribute to 44% of Delhi Pollution. The farmers choose to burn the crop residue as they get very short time to prepare their field to sow the next winter crop known as Rabi crop after harvesting the monsoon crops known as kharif crops. Thereafter the retreating monsoon carries the smoke from the states of Punjab and Haryana to Delhi which gets stuck in the region. Thus, the winds deposit the smoke in Delhi leading to the problem of smog during winter.

How Bio-Decomposer Spraying will help?

A bio-decomposer capsule has been discovered by scientists. These capsules will be sprayed on crop residue which will turn the residue into manure. The process increases the soil fertility and reduces the use of fertilizers. Delhi government have estimated that around Rs 20 lakhs will be required to manage 700 hectares of stubble using this method. The estimate is inclusive of cost of preparation, transportation and spraying.

Other option

The National Centre of Organic Farming also developed the waste decomposers earlier. The waste decomposers are used for quick composting of organic waste. It consists of micro organisms that are extracted from cow dung. The waste decomposers were also validated by the Indian Council of Agricultural Research (ICMR). As per the study, 30 grams of waste decomposer can decompose 1000 metric tonnes of waste within 30 days. Further, the decomposer is cost effective. 30 grams of it costs just Rs 20.

5.Gujarat Government Launched the Digital Seva Setu Programme.

The Gujarat State Government launched the “Digital Seva Setu Programme” for rural areas on October 6, 2020. It was launched under the Bharat Net Project of the Central government.

Highlights

The programme complies with India's Digital India Mission. The villages will be connected with the 100 MBps optical fibre network with an aim to make every village a mini Sachivalay. The programme connects the village panchayats. It will provide twenty pro-people services including the delivery of ration cards at door steps.

Significance

- The programme will enable people to receive public welfare services at the Panchayat level.
- Gram panchayats will be connected to the state data centre at Gandhinagar, under the programme. Thus, it will integrate the data.
- The citizens will be charged Rs 20 to avail the benefits of the programme.
- The programme will transform the 18,000 villages of Gujarat into modern and global villages.
- In the first phase, 2000 village panchayats will be covered. Rest of the villages will be covered by 2021.

Seva Setu Programme

The Seva Setu Programme was launched in 2016. It is an initiative of the Gujarat Government in order to ensure timely redressal of their needs at citizen’s door step. The seva setu camp is organised under the supervision of sub divisional officer on cluster basis comprising of the eight to ten villages. So far, around two crore people have benefited from the programme.

6.Ganga River Dolphin Day- My Ganga My Dolphin Campaign launched on the occasion.

My Ganga My Dolphin campaign was launched today on the occasion of Ganga River Dolphin Day. This campaign was launched by the National Mission for Clean Ganga, the Wildlife Institute of India and the Forest Department.

My Ganga My Dolphin

The campaign has been launched for sustainable tourism. It also links with the livelihood through Dolphin Conservation for ecotourism along the Ganga river. The

campaign has been launched in the 250 km stretch of the river. The campaign will also conduct a census under the stretch.

Dolphin Safari

Dolphin-based ecotourism programme – Dolphin Safari was started at six sites in the states of Uttar Pradesh, Bihar and West Bengal. Trained volunteers, being called as Ganga Prahar, will take the tourists on boat for the Dolphin safari.

Ganga River Dolphin Day

The Ganga River Dolphin Day is observed on October 5 every year since 2010. The day is celebrated because on October 5 Dolphins were declared as National Aquatic Animals.

Project Dolphin

Project Dolphin was announced in 2020 by the Prime Minister in his independent speech and was approved by National Ganga Council. The project is being implemented by the Ministry of Environment, Forest and Climate Change. It was launched with an aim to conserve and protect dolphins in the marine and riverine ecosystems. The 10-year project focuses on both sea and river dolphins.

Threats

Construction of dams are the biggest threats and disturbance to these animals as it hinders their migration.

How Dolphins are protected?

- The Gangetic Dolphins are protected under the First Schedule of Indian Wildlife (Protection) Act, 1972.
- They have been declared “Endangered” under the International Union for Conservation of Nature (IUCN) red list.
- They are categorized under Appendix I of the Convention on International Trade in Endangered Species (CITES).
- They are Appendix II animals under the Conservation of Migratory Species.

Dolphin Count

As per the Dolphin Census, there are about 2,500 – 3,000 Gangetic Dolphins in India.

Dolphin Sanctuary

The Vikramshila Ganges Dolphin Sanctuary had been established in Bihar under the Wildlife (Protection) Act, 1972.

7.IFFCO and Prasar Bharati sign MoU to promote new Agriculture Innovations

Prasar Bharati and Indian Farmers Fertilizer Cooperative Limited (IFFCO) signed a MoU on October 6, 2020 in order to broadcast and promote new agriculture technology and innovations.

Key Facts

- **As per the MoU, DD Kisan will broadcast innovative techniques that are being adopted in the agriculture field in an easy language.**
- **It will run a 30 minutes program series to benefit the farmers.**
- **The MoU tries to explain the new innovation and techniques to the farmers in order to make them atma nirbhar.**
- **IFFCO's innovations will be shared with farmers in approximately 25 episodes.**

IFFCO's Innovation

IFFCO has prepared an alternative of Urea that was launched in Kalol, Gujarat by Union Chemicals and Fertilisers Minister Sadananda Gowda in November 2019. The alternative is nanotechnology based and will help farmers achieve the target of doubling their income by 2022. The 'nano-technology' based products include nano nitrogen, nano zinc and nano copper.

Significance

- **These products are environment-friendly.**
- **It will reduce usage of conventional chemical fertilisers including urea by 50%.**
- **It will raise the crop output by 15-30 % by effectively delivering the required nutrients to the plants.**
- **It also improves the soil health and**
- **It cuts the emission of greenhouse gases.**

Benefits

10 gm of nano-zinc would be enough for a hectare of land and can bring down the requirement of NPK fertilizer by 50%. Nano-copper provides nutrition and protection to the plant. It can boost the plant's immunity against the harmful pathogens. It also helps to increase the activity of plant growth hormone thus, improves the overall plant growth and development.