

## 23 Oct 2020: PIB Summary & Analysis

### 1. India Meteorological Department (IMD)

#### Context:

India Meteorological Department commissions Flash Flood Guidance Services for South Asia.

#### Details:

- India has launched Flash Flood Guidance services for South Asian countries — India, Bangladesh, Bhutan, Nepal and Sri Lanka — to issue impact-based forecasting of floods, which are very sudden and of short duration, at watershed and also city level.
- The Flash Flood Guidance services is the first of its kind for South Asian countries namely, India, Sri Lanka, Nepal, Bhutan and Bangladesh.
- The Flash Flood Guidance is a robust system designed to provide the necessary products in real-time to support the development of warnings for flash floods about 6- 12 hours in advance at the watershed level with a resolution of 4kmx4km for the Flash Flood prone South Asian countries.
- IMD has tested the performance of the system during recent monsoon seasons in the preoperational mode and the Flash Flood Bulletins were issued to National Hydrological and Meteorological Services in the Region for its validation.
- The system has in-depth science, dynamics and diagnostics to provide guidance for the possible occurrences of flash floods at the local level.
- The guidance for flash floods in the form of threats (6 hours in advance) and risks (24 hours in advance) will be provided by the Regional Centre to the National Meteorological and Hydrological Services, National and State Disaster Management Authorities and all other stakeholders for taking necessary mitigation measures to reduce the loss of life and property.
- Recognising that flash floods have a particularly disastrous impact on the lives and properties of the affected populations, the 15<sup>th</sup> WMO Congress had approved the implementation of a Flash Flood Guidance System project with global coverage that had been developed by the [WMO](#) Commission for Hydrology jointly with the WMO Commission for Basic Systems.

#### What are Flash Floods?

- A flash flood is a rapid flooding of low-lying areas: washes, rivers, dry lakes and depressions.
- It may be caused by heavy rain associated with a severe thunderstorm, hurricane, tropical storm, or meltwater from ice or snow flowing over ice sheets or snowfields.
- Flash floods may also occur after the collapse of a natural ice or debris dam, or a human structure such as a man-made dam.
- Flash Floods are highly localized events of short duration with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.
- There is a general lack of flash flood warning capabilities and capacities of the nations across the world.
- Flash floods induce severe impacts in both the built and the natural environment. Especially within urban areas, the effects of flash floods can be catastrophic and show extensive diversity, ranging from damages in buildings and infrastructure to impacts on vegetation, human lives and livestock.

### 2. Price rise in onions

**Context:**

The government has stepped up disposal of onion from the buffer stock.

**Background:**

- The Essential Commodities (Amendment) Act, 2020 provides for the circumstances for the imposition of the stock limit under extraordinary price rise.
  - Read more on the Essential Commodities (Amendment) Act, 2020 (EC Act) covered in [CNA dated Sep 23, 2020](#).
- The prices of onions have increased by more than 100% when compared with the average of the last five years.
- Thus, the price triggers under the EC Act have been reached.

**Steps taken by the Govt.:**

- The stock limit on the onions has been imposed with effect from 23 October 2020.
- The stock limit is 25MT for Whole Sellers and 2MT for Retailers for a period up to 31-12-2020.
- Further, onions are also being disposed of through Open Market Sales. This will be stepped up further to bring down the price rise.
- To additionally ensure the availability of onions in the Mandis, the government has taken steps to facilitate the import of onion.

### 3. Project Snow Leopard (PSL)

**Context:**

International Snow Leopard Day is observed on 23 October to raise awareness on protection of snow leopards which are endangered.

To learn more about the International Snow Leopard Day and Snow Leopards, check [PIB dated 23 Oct 2019](#) under the headline, “First National Protocol to Enumerate Snow Leopard Population in India Launched”.

**About Project Snow Leopard:**

- Project Snow Leopard (PSL) is a programme under the Ministry of Environment, Forest and Climate Change with the overarching goal to safeguard and conserve India’s unique natural heritage of high altitude wildlife populations and their habitats by promoting conservation through participatory policies and actions.
- The location of the project is all biologically important landscapes in the Himalayan high altitudes in the states/UTs of Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.
- PSL was launched in 2009.
- It aims to promote a knowledge-based and adaptive conservation framework that fully involves the local communities, who share the snow leopard’s range, in conservation efforts.
- The Government of India has identified the snow leopard as a flagship species for the high-altitude Himalayas.

**Need for the project:**

- Since the harsh climate and topography of the area are relatively less conducive to agriculture and other developmental options such as industry, most of the region is largely dependent on pastoralism.
  - Wild herbivore species are getting out-competed and their populations are declining due to increasing livestock populations in many areas.
  - This is leading to increased dependence of wild predators such as the snow leopard and the wolf on livestock, causing intense human-wildlife conflicts.
- Poaching is a major threat in some areas, along with opening up of areas due to road building, pressures from immigrant labour forces, etc.
- There are increasing reports of conflicts due to crop depredation by wildlife.
- Military and para-military personnel need extensive road networks and are usually settled near important but fragile wetland sites or key mountain passes that are also important for wildlife species such as the Tibetan argali *Ovis ammon* and waterfowl.
- The high altitudes of India (including the Himalaya and Trans-Himalaya biogeographic zones) support a unique wildlife assemblage of global conservation importance.
- This region has attracted less attention from the point of view of wildlife conservation.
- The region represents a vast rangeland system supporting important traditional pastoral economies and lifestyles.
- The region also provides essential ecosystem services and harbours river systems vital for the nation's food security.

#### 4. International Labour Organisation (ILO)

##### Context:

India has assumed the Chairmanship of the Governing Body of the International Labour Organization.

##### Details:

- Shri Apurva Chandra, Secretary (Labour and Employment) has been elected as the Chairperson of the Governing Body of the ILO for the period October 2020 to June 2021.
- The Chairperson of the Governing Body of ILO is a position of international repute.
- The Governing Body (GB) is the apex executive body of the ILO which decides policies, programmes, agenda, budget and elects the Director-General. At present, ILO has 187 members.

For more on the [ILO](#), click on the linked article.

#### 5. Indian astronomers uncover mystery behind decline of star formation rate after its peak 8-10 billion years ago

##### Details:

- A team of astronomers from the National Centre for Radio Astrophysics (NCRA-TIFR), Pune, and the Raman Research Institute (RRI), Bangalore, an autonomous institute of the Department of Science & Technology (DST), Government of India has used the upgraded Giant Metre wave Radio Telescope (GMRT), operated by NCRA-TIFR, to measure the atomic hydrogen content of galaxies seen as they were 8 billion years ago.
- The research, funded by the DST, has been published in the journal 'Nature'.

- The research records the earliest epoch in the universe for which the atomic gas content of galaxies has been measured.

### **Background:**

- For long, scientists have been intrigued by the decrease in the rate at which stars were formed in galaxies after it peaked about 8-10 billion years ago.
- They have now deciphered the mystery behind this decline in star formation activity by measuring the atomic hydrogen of the galaxies.
- Galaxies are made up mostly of gas and stars. Gas converts to stars with time.
- Understanding this conversion requires measurement of the atomic hydrogen gas, the primary fuel for star formation in galaxies in early times.
- Astronomers have long known that galaxies formed stars at a higher rate when the universe was young than they do today.
- But the cause of this decline is unknown, mostly because there was no information about the amount of atomic hydrogen gas at that time.

**Know more about GMRT in [CNA dated 17 Oct 2020](#).**

## **6. Sustainable Processing of Municipal Solid Waste: 'Waste to Wealth'**

### **Context:**

CSIR-CMERI has developed a Municipal Solid Waste Processing Facility.

### **Details:**

- This new facility has not only helped in achieving decentralized decimation of solid wastes, but has also helped create value-added end-products from abundantly available redundant stuff such as dry leaves, dry grass, etc.
- The MSW Processing Facility is developed for the disposal of solid waste in a scientific way following the Solid Waste Management Rules (SWM) 2016 prescribed by Union Ministry of Environment, Forests and Climate Change (MoEF&CC), Govt. of India.
- The primary focus of CSIR-CMERI is to unburden the common households from the segregation responsibilities through advanced segregation techniques.
- The mechanized segregation system segregates solid waste into metallic waste (metal body, metal container, etc.), biodegradable waste (foods, vegetables, fruits, grass, etc.), non-biodegradable (plastics, packaging material, pouches, bottles, etc.) & inert (glass, stones, etc.) wastes.
- The bio-degradable component of the waste is decomposed in an anaerobic environment popularly known as bio-gasification.
  - In this process, biogas is liberated through the conversion of organic matter. The biogas can be used as fuel for cooking purpose.
  - The gas can also be utilized in the gas engine for the generation of electricity.
  - The residual slurry from the biogas plant is converted to compost in a natural process known as vermi-composting by introducing earthworms. The vermi-compost is utilized in organic farming.
- Biomass Waste Disposal
  - Biomass waste such as dry leaves, dead branches, dry grass, etc. are disposed of by first shredding it to suitable size followed by mixing with the slurry of the biogas digester.
  - This mixture is feedstock for briquette, which is utilized as fuel for cooking.

- These briquettes are also being utilized in gasifier for production of syngas which can be utilized in gas engine for the generation of electricity.
- The ash produced from the burning of briquette is mixed with cement and water in an appropriate proportion for production of bricks which is used for construction work.
- Polymer Waste Disposal
  - The polymer waste consisting of plastics, sanitary waste, etc. is being disposed of through two main processes i.e. pyrolysis and plasma gasification.
  - In the pyrolysis process, the polymer waste is heated to a temperature of 400 – 600°C in an anaerobic environment in the presence of a suitable catalyst.
  - The volatile matter from the polymer waste comes out as a result of heating which on condensation gives pyrolysis oil.
  - The non-condensed syngas and crude pyrolysis oil after purification are reused for heating purposes and it helps in obtaining self-sustainability.
  - The solid residue known as char is mixed with the biogas slurry for production of briquette.
- Sanitary Waste Disposal
  - The sanitary items including masks, sanitary napkins, diapers, etc. are disposed of utilizing high-temperature plasma.
  - The MSW facility is equipped with special disinfection capabilities to help break the COVID Chain through UV-C Lights and Hot-Air Convection methods.
  - The Decentralized Solid Waste Management Plant developed by CSIR-CMERI has all the potentials to scientifically manage the Solid Waste including the COVID and other viruses present in the wastes.
  - The integrated MSW pilot plant is also self-sufficient in terms of energy requirement through the installation of roof-mounted solar panels, which can also feed the surplus energy supply onto a mini-grid.