

## 29 July 2020: PIB Summary & Analysis

### 1. International Thermonuclear Experimental Reactor (ITER)

#### Context:

Prime Minister at the International Thermonuclear Experimental Reactor (ITER) at the start of the ITER Assembly.

#### About ITER:

- ITER is an energy project located in Cadarache, Southern France.
- It is the largest plasma-based fusion reactor ever built.
- It will be the first fusion device to maintain fusion for long periods of time.
- ITER will also be the first fusion device to test the integrated technologies, materials, and physical regimes necessary for the commercial production of fusion-based electricity.
- ITER will work on the “Tokamak” concept where the reaction of hydrogen isotopes Deuterium and Tritium produces energy by the mass-energy conversion principle, thereby proving to be a source of unlimited energy.
- The idea of the ITER was first launched in 1985.
- It is a collaborative project involving thousands of engineers and scientists from 35 countries.
- As of 2019, 66% of the project’s construction has been completed.
- ITER members: European Union, China, India, USA, Japan, Russia and South Korea.
- India formally joined the ITER Project in 2005.
- ITER Organization (IO) is the central team responsible for construction at site and operation, while the ITER partners created their own domestic agencies to deliver their commitments to ITER. ITER-India is the Indian domestic agency.
  - ITER-India is a specially empowered project of the Institute for Plasma Research (IPR), an aided organization under the Department of Atomic Energy, Govt. of India.
- India is responsible for the delivery of the following ITER packages:
  - Cryostat
  - In-wall Shielding
  - Cooling Water System
  - Cryogenic System
  - Ion-Cyclotron RF Heating System
  - Electron Cyclotron RF Heating System
  - Diagnostic Neutral Beam System
  - Power Supplies
  - Diagnostics

### 2. MoU between India and Zimbabwe

#### Context:

Cabinet approves MoU between India and Zimbabwe on Cooperation in the field of Traditional System of Medicine and Homeopathy.

#### Details:

- The MoU, signed in 2018, will provide a framework for cooperation between the two countries for the promotion of traditional systems of medicine and homoeopathy.
- Areas of cooperation include:
  - Promotion in the regulation of teaching, practice, drugs, and drugless therapies.
  - Supply of all medicine materials and documents necessary for demonstration and reference.
  - Exchange of experts for the training of practitioners, paramedics, scientists, teaching professionals and students.
  - Mutual recognition of pharmacopoeias and formularies.
  - Mutual recognition of educational qualifications, of traditional preparations, permission to practice, etc.

### 3. World Trade Organisation (WTO)

#### Context:

Brajendra Navnit, Ambassador & Permanent Representative of India to the World Trade Organisation presented his letter of credentials to WTO Director-General.

To know more about the [WTO](#), click on the linked article.

### 4. UDAN Regional Connectivity Scheme

#### Context:

Pawan Hans's first UDAN-RCS service launched in Uttarakhand.

To know more about the [UDAN scheme](#), click on the linked article.

### 5. National Awards for Excellence in Earth System Science

#### Context:

The Ministry of Earth Sciences (MoES) announced the National Awards for Excellence in Earth System Science.

#### About the awards:

- The awards were instituted with the aim to provide due recognition and platform to major scientific contributions made by eminent scientists/engineers in various fields of Earth System Science.
- It also aims at encouraging women and young researchers for coming into the mainstream of Earth System Science.
- The awards are announced every year on 27<sup>th</sup> July, which is the foundation day of the Ministry of Earth Sciences. This ministry was constituted in 2006.

- The following awards are announced:
  - Life Time Excellence Award in the sphere of Earth System Sciences
  - Young Researcher/Achiever Award in the field of Earth System Science
  - National award in the fields of:
    - Ocean Science & Technology
    - Atmospheric Science & Technology
    - Geoscience & Technology
    - Polar Science & Cryosphere
- The awards are open to all residents of India.

## 6. Substance abuse

### Context:

Union Health Minister released an e-book titled “Standard Treatment Guidelines for the Management of Substance Use Disorders and Behavioural Addictions” that aims to tackle substance abuse and behavioural addiction in the country.

**Click on the following links to read more on the issue of drug abuse and its prevention:**

<a href="#">Drug abuse</a>	<a href="#">International Day against Drug Abuse &amp; Illicit Trafficking</a>
<a href="#">United Nations Office on Drugs &amp; Crime (UNODC)</a>	<a href="#">Fighting drug menace – RSTV Big Picture</a>

## 7. Screening of bilirubin level in new-borns

### Context:

A team from S.N. Bose National Centre For Basic Sciences (SNBNCBS) has developed a ‘no-touch’ and painless device for non-invasive screening of bilirubin in newborns. The SNBNCBS, located in Kolkata, is an autonomous research Institute under the Department of Science and Technology (DST).

### Details:

- The new device developed has been named ‘AJO-Neo’.
- The operation of the device is based on non-contact and non-invasive spectrometry-based techniques for measurement of neonatal bilirubin level as an alternative of total serum bilirubin (TSB) test without limitations of other available bilirubin meters.
- According to the team, this is a reliable device for measuring the bilirubin levels in preterm, and term neonates irrespective of gestational or postnatal age, sex, risk factors, feeding behaviour or skin colour.
- The device can give the test result in about 10 seconds compared to the conventional blood test, which can take up to 4 hours for report generation.
- The detection of neonatal blood bilirubin (Hyperbilirubinemia) faster is extremely important for therapeutic management in order to avoid Kernicterus leading to neuro-psychiatry problems in neonatal subjects.

### What is bilirubin?

- Bilirubin is an orange-yellow pigment that occurs normally when part of the red blood cells break down.
- If the bilirubin levels are abnormally high, it is an indication that the red blood cells are breaking down at unusual rates or that the liver is not breaking down waste properly and clearing the bilirubin from the blood.
- The bilirubin test measures the amount of bilirubin in the blood. It is used to find the cause of health conditions such as jaundice, liver disease and anaemia. The test is used to diagnose and monitor liver and bile duct diseases like hepatitis, cirrhosis and gallstones.