07 June 2021: PIB Summary & Analysis

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1. World Food Safety Day

Context:

June 7 is observed as World Food Safety Day.

About World Food Safety Day:

- June 7 was proclaimed as the World Food Safety Day in 2018 by the United Nations General Assembly.
- **The theme of World Food Safety Day 2021 is 'Safe food today for a healthy tomorrow'.**
    - The theme stresses that production and consumption of safe food has immediate and long-term benefits for people, the planet and the economy.
- The day is celebrated worldwide to draw attention to the fact that food is not only an agricultural or trade commodity but is also a public health issue.

Also read: Eat Right India Movement

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2. Unique Disability Identification Card (UDID)

Context:

Unique Disability Identification Card (UDID) now acceptable as a Photo ID for registration on Co-WIN 2.0.

Details:

- According to the Health Ministry, the UDID card, issued to persons with disability by the Department of Empowerment of Persons with Disabilities, Ministry of Social Justice and Empowerment, has all the necessary features such as the name, year of birth, gender and photograph of the person, and meets the criteria for use of identification in COVID-19 vaccination.
- Therefore, with a view to further facilitate access to vaccination for persons with disability, it has been decided to include the UDID in the list of prescribed Photo ID document for COVID-19 vaccination.

Read more about the UDID Project in the link.

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3. Black Carbon

Context:

New study to help in the accurate estimation of black carbon over the Himalaya.

What's in the News?

- Scientists at the Aryabhatta Research Institute of Observational Sciences (ARIES) in collaboration with scientists from the University of Delhi, IIT Kanpur and Space Physics Laboratory, ISRO have made extensive observations of black carbon and elemental carbon.
    - **Black carbon** is one of several particles and gases that are emitted when diesel, coal, and other biomass fuels are burned. Black carbon or soot is part of fine particulate air pollution and contributes to climate change.
- They have estimated monthly and wavelength-dependent values of mass absorption cross-section (MAC) over the central Himalayan region for the first time.

Significance of the study:

- Black carbon (BC) is a key contributor to global warming and its accurate estimation will help in improving weather and climate predictions.
- BC is the second most important global warming pollutant after CO_2.
- The researchers have derived the values of MAC – an essential parameter which is used for obtaining Black Carbon mass concentrations.
- According to the ARIES team, the higher resolution multi-wavelength and long-term observations used in calculating MAC will help improve the performance of numerical weather prediction and climate models in estimating the warming effects caused by BC emissions.
- The precise knowledge on BC at various wavelengths will help in source apportionment studies done to constrain the sources of BC emissions. This can thus serve as important information to form the mitigation policies.

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4. New eco-friendly process enhances fatigue life of aluminium alloy used in aerospace components

What's in the News?

- Indian scientists have developed an environmental-friendly process, which can provide excellent corrosion resistance to the high-strength aluminium (Al) alloys extensively used in aerospace, textile, and automotive applications.
- It involves an electrochemical method for the production of an oxide film on the metallic substrate.

Background:

- High-strength aluminium alloys are extensively used in aerospace, textile, and automotive applications owing to their low density and high specific strength.
- Aluminium alloy components are used in landing gear, wing spar, fuselage, aircraft skins or outer surface and pressure cabins; parts which need resistance against wear, corrosion damages, and enhanced fatigue life.
- Currently, the widely used technique to enhance corrosion resistance is the hard anodizing (HA) process.
    - This process involves an electrolyte-based coating deposition using sulphuric/oxalic based electrolytes, which emits not only toxic fumes but are also hazardous to handle during processing.

The new development:

- In order to cater to the growing demand for cleaner industrial processes, an environmental-friendly process called **micro-arc oxidation (MAO)** has been developed at the International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), an autonomous institute under the DST.

Micro-arc Oxidation (MAO):

- The process which involves an alkaline electrolyte is capable of providing better wear and corrosion resistance compared to the HA process.
- It is a high-voltage driven anodic-oxidation process, which through an electrochemical method, produces an oxide film on metallic substrates.
- The MAO process developed at ARCI has been patented in India and abroad.