# Prelim Bits 19-03-2019

## IWDRI

- An International Workshop on Disaster Resilient Infrastructure (IWDRI) is being organized by the National Disaster Management Authority (NDMA).
- The work is conducted in collaboration with United Nations Office for Disaster Risk Reduction (UNISDR).
- The workshop aims to
    1. Identify good practices of disaster risk management in key infrastructure sectors,
    2. Identify specific areas and pathways for collaborative research on DRI (Transport, Energy, Telecom and Water),
    3. Discuss and co-create the broad contours of the Coalition for Disaster Resilient Infrastructure (CDRI) as well as a notional roll-out plan for the next three years.
    4. Build a forum for members to work on areas of common interest and make specific commitments.
- It will bring together countries from different parts of the world, and multilateral development organizations to achieve disaster resilience of large infrastructure systems (transport, telecom, energy, water).

## NDMA

- In 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of National Disaster Management Authority (NDMA).
- NDMA, as the apex body, is mandated to lay down the policies, plans and guidelines for Disaster Management to ensure timely and effective response to disasters.
- NDMA is headed by the Prime Minister, and State Disaster Management Authorities (SDMAs) headed by respective Chief Ministers.

## TROPEX

- Theatre Level Readiness and Operational Exercise (TROPEX) is an annual activity to review the conduct of exercise and to assess operational readiness of the Indian Defense forces.

- The inter-service military exercise involves the participation of the Indian Army, Air Force, Navy and the Coast Guard.
- It is touted to be the largest maritime exercise of the Indian Navy in terms of geographical extent covering the IOR, and also with regard to number of units participating.

## Dry Eye Disease

- According to a recent study India is on the verge of a dry eye disease epidemic, the prevalence of dry eye disease will be 40% of the urban population by 2030.
- Dry eye is a condition in which a person doesn't have enough quality tears to lubricate and nourish the eye.
- Tears are necessary for maintaining the health of the front surface of the eye and for providing clear vision.
- Age, urban residence, occupation and socio-economic affluence were found to be high risk-factors for developing the chronic disease.
- Since the disease tends to be progressive with age, once corneal damage becomes irreversible it can lead to visual impairment and even blindness.
- The onset of dry eye disease is early in men than in women. In men, the age of disease onset is early 20s and 30s compared with 50s and 60s in women.

## Sunspots

- Sunspots are temporary phenomena on the Sun's photosphere that appear as spots darker than the surrounding areas.
- They are regions of reduced surface temperature caused by concentrations of magnetic field flux that inhibit convection.
- Sunspots usually appear in pairs of opposite magnetic polarity, their number varies according to the approximately 11-year solar cycle.
- Individual sunspots or groups of sunspots may last anywhere from a few days to a few months, but eventually decay.
- The larger variety are visible from Earth without the aid of a telescope.
- Similar phenomena indirectly observed on stars other than the Sun are commonly called star spots.

## Solar Tsunami

- Recently a group of solar physicists suggests that a “solar tsunami” is at work that triggers the new sunspot cycle, after the old one ends.
- Sun has toroidal magnetic field, from which sunspots get generated.
- Holding these fields in their place requires extra mass (plasma mass) from higher latitudes for storing a big mass of plasma a magnetic dam is formed.

- At the end of a solar cycle, this magnetic dam can break, releasing huge amounts of plasma cascading like a tsunami towards the poles.
- These tsunami waves travel at high speeds of about 1,000 km per hour carrying excess plasma to the mid-latitudes.
- There they give rise to magnetic flux eruptions and these are seen as the bright patches that signal the start of the next cycle of sunspots.

**Source: PIB, the Hindu**

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