

2019



drishti

# CURRENT AFFAIRS

**ECOLOGY & ENVIRONMENT**

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BusinessLine



## 1. River Pollution

### Why in News

The **Central Water Commission (CWC)** has reported that India's major rivers are being contaminated by one or more heavy metals.

- The contamination exceeds the safe limits set by the Bureau of Indian Standards.

### CWC Report

- Out of 442 surface water samples from the water quality stations on 67 major rivers, 287 were polluted by heavy metals.
- The most common heavy metals were:
  - Iron
  - Lead
  - Nickel
  - Chromium
  - Cadmium
  - Copper
- Arsenic and zinc concentration was obtained within the limits throughout the study period.
- The concentration of these heavy metals in river water and sediments has increased rapidly over the last few decades.
- Population growth and rise in agricultural and industrial activities are responsible for the contamination.
  - The main sources of heavy metal pollution are mining, milling, plating and surface finishing industries that discharge a variety of toxic metals into the environment.

### Water Contamination

- Heavy metals are naturally occurring elements that have a high atomic weight and a density of at least 5 times greater than that of water.
- The presence of metals in drinking water to some extent is unavoidable and certain metals, in trace amounts, are required for good health. However, when present above safe limits, they are associated with a range of disorders.
- Long-term exposure to the heavy metals may result in physical, muscular, and neurological degenerative processes that mimic Alzheimer's disease, Parkinson's disease, muscular dystrophy and multiple sclerosis.

### Central Water Commission (CWC)

- The Central Water Commission is the apex technical organisation in the country for development of water resources and is attached organisation of the **Ministry of Water Resources**.

- The Commission is responsible for initiating, coordinating and furthering the schemes for control, conservation, development and utilisation of water resources throughout the country for the purpose of irrigation, flood management, power generation, navigation etc.

### **Steps by government to check river pollution**

- National River Conservation Plan
- Namami Gange Programme
- Online Effluent Monitoring System
- Implementation of Zero Liquid Discharge
- Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

### **2. Papikonda National Park (PNP)**

#### **Why in News?**

The Forest Department and experts from Kerala and northeastern States will begin the maiden survey of butterfly species in the Papikonda National Park (PNP).

#### **About Papikonda National Park (PNP)**

- The PNP spreads over 1012.86 square kilometres in **East and West Godavari districts of Andhra Pradesh**
- The Park lies in the **River Godavari basin**. The forests of the Park cut through the Papikonda hill range.
- Papikonda Wildlife Sanctuary was established in the year 1978. Later, it was declared as a **National Park in 2008**.
- The majority of the area of the park is covered with moist deciduous forest and include animal species such as tigers, mouse deer, gaur etc.

#### **National Park**

- The **Wildlife Protection Act, 1972** provided for the declaration of National Parks by the State Government in addition to the declaration of wildlife sanctuaries.
- National Parks are declared in areas that are considered to be of adequate ecological, geomorphological and natural significance.

#### **Difference between National Park & Wildlife Sanctuary**

- National Parks enjoy a greater degree of protection than wildlife sanctuaries.
- Certain activities which are regulated in sanctuaries, such as grazing of livestock, are prohibited in national parks.

- Wildlife Sanctuary can be created for a particular species whereas national parks is not primarily focussed on a particular species.
- While human activities are permitted in wildlife sanctuary, it is not allowed in national parks.

### **3. White Island - Volcanic Eruption**

#### **Why in News?**

A deadly volcanic eruption occurred on White Island, also known as **Whakaari**, in New Zealand.

- New Zealand is located in one of the world's most tectonically-volatile regions.
- New Zealand lies at the edge of both the **Australian and Pacific tectonic plates**.
- The **collision of these two plates** under the North Island, New Zealand, is driving most volcanoes in the country including White Island.

#### **White Island**

- The volcano is located in the **Bay of Plenty**, about 50 km from the east coast of New Zealand's North Island.
- It is the country's most active volcano and it belongs to the **stratovolcano category**.
  - Stratovolcanoes are characterized by **conical shape** and its layers are built up by **years of lava flow and hardening**.
  - The rapid **solidifying of lava in the vent** obstructs the flow of the out-pouring lava, resulting in loud explosions, throwing out many volcanic bombs or pyroclasts.
- About 70% of the volcano lies under the sea and the Island forms the tip of the volcano.

#### **Volcanoes**

- A volcano is a **vent (opening) in the earth's crust** through which molten material (lava, ash, etc.) erupts suddenly.
- Such vents or openings occur in those parts of the earth's crust where the rock strata are relatively weak.
- Volcanic activity is an example of **endogenic process**.
- Different landforms are formed depending on the **explosive nature of the volcano**.
  - A plateau is formed if the volcano is not explosive and a mountain is formed if the volcano is explosive in nature.

- The process by which solid, liquid and gaseous material escape from the earth's interior to the surface of the earth is called as **Volcanism**.

#### **4. Cyclone Belna**

##### **Why in News?**

Recently, tropical cyclone Belna has hit the western town of Soalala in **Northern Madagascar**.

##### **Naming of the Cyclones**

- Each Tropical Cyclone basin in the world has its own rotating list of names.
- The **Regional Specialised Meteorological Centre (RSMC)**, New Delhi gives a tropical cyclone an identification name for North Indian Ocean regions. The identification system covers both the **Arabian Sea** and the **Bay of Bengal**.
- Following countries form part of RSMC and **contribute names for identification of cyclones** in North Indian Ocean:
  - Bangladesh
  - India
  - Maldives
  - Myanmar
  - Oman
  - Pakistan
  - Sri Lanka
  - Thailand
- Since 2004, the cyclones have been named according to the list approved by RSMC.
- India has so far contributed the following names: Agni, Bijli, Akash, Jal, Lehar, Megh, Sagar and Vayu.
- **Advantages of naming cyclones:**
  - To help in the quick identification of storms in warning messages as names are easier to remember.
  - To facilitate disaster risk awareness, preparedness, management and reduction.



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