UPSC Daily Current Affairs| Prelim Bits 30-01-2025

Annual Status of Education Report (ASER), 2024

Why in News?

The ASER 2024 annual education report based on household surveys across 618 rural districts, reveals high enrolment but serious learning gaps in rural India, with basic reading and math skills still a challenge.

- It is a nationwide household survey that captures the status of ***children's enrollment and learning outcomes in rural India*** every year since 2005.
- It is a ground level survey released by ***NGO Pratham Foundation.***
- Schooling status is recorded for children in the ***age group of 3-16,*** and children in the ***age group of 5-16*** are tested on their ability to read simple text and do basic arithmetic.



Key Highlights of the report

- **Enrolment & Dropouts** - Over 90% of children aged 6-14 are enrolled in school.
- Hike in government school enrolment in several states like Bihar, Uttar Pradesh, and Madhya Pradesh, alongside declining private school enrolment.
- But among 15-16-year-olds, nearly 8% are not in school. This dropout rate is even higher in states like Uttar Pradesh (13%), Bihar (8.6%), Assam (5%), and West Bengal (5.4%).
- **Learning gaps –** Despite high enrolment the report shows that only about 50% of Class 5 students can read a Class 2-level text.
- The learning gap starts early by Class 3, only 27% of children can read at the expected level, and just 22% can do simple subtraction.
- In some states, reading levels have even declined. Also, less than 30% of Class 5 students can do a basic division problem. Even in Class 8, many students struggle with fundamental arithmetic.
- States like Punjab, Kerala, and Himachal Pradesh have shown signs of improvement in reading and arithmetic skills.
- Bihar, Uttar Pradesh, West Bengal, and Madhya Pradesh continue to struggle with foundational learning.
- **Digital learning gap -** Over 80% of children ***aged 14-16*** have access to a

smartphone, and many are comfortable using basic digital tools.
- But the problem is only about 57% use it for educational purposes (57.7% of boys vs 50.1% of girls).
- **Infrastructure gap in schools -** School facilities have improved in recent years, with most schools offering essential services.
- Over 90% of schools provide mid-day meals, and nearly 80% of schools have drinking water facilities and functional toilets, though some regions still struggle with maintenance.
- However, while electricity access has expanded, library usage remains low, with many schools having books that students rarely use.
- **Community and Parental Involvement –**Local initiatives and support networks have helped bridge learning gaps.
- Parental involvement in learning activities at home has increased by nearly 10% since 2022.
- In states like Rajasthan, Maharashtra, and Tamil Nadu, local initiatives have also been introduced to help bridge learning gaps.
- **Top-performing states** - Kerala, Himachal Pradesh, and Punjab continue to lead in learning levels, with better school infrastructure and teacher training.
- **Struggling states -** Bihar, Jharkhand, and Uttar Pradesh have some of the lowest learning outcomes, with students struggling in reading and math.
- **Mixed results -** States like Maharashtra and Gujarat have good enrolment numbers but show stagnation in learning progress.
- These state-wise differences highlight the need for region-specific policies rather than a one-size-fits-all approach.

References

1. ASER Centre | ASER Report, 2024
2. India Today | ASER, 2024

Indian squid

Why in News?

The ICAR-Central Marine Fisheries Research Institute (CMFRI) recently said that it decoded the gene expression pattern of Indian squid having major implications from neuroscience to environmental science.

- **Scientific Name -** Uroteuthis duvaucelii.
- It is also known as the Indian calamari.

- **Group** - It is a cephalopod species, any member of the molluscan class Cephalopoda.
    - This group includes highly advanced species such as squids, octopuses, cuttlefish, and nautiluses.
- **Family –** Loliginidae, typically called inshore or neritic squids.
- **Appearance -** Indian squid has a distinctive coloration, with a light pinkish-gray body and 2 large fins on either side. They have 8 arms and 2 longer tentacles that they use to capture prey.



- **Behavior -** Generally, squids are extensively known for their rapid growth rate, limited lifespan, and complex population structures
- They are fast swimmers and are capable of propelling themselves through the water using a jet propulsion system.
- This allows them to reach speeds of ***up to 40 km/h*** when escaping from predators or chasing prey.
- Squids tend to prefer areas with high levels of dissolved oxygen, as this is crucial for their respiration.
- **Distribution -** It is distributed in the Indo-Pacific region, occurring in depths between 30 and 170 meters.
- Along the coast of India, squids are commonly found in the waters off the coasts of Tamil Nadu, Kerala, and Goa.
- **Diet** - This species is an ***active carnivore*** that feeds mainly on crustaceans and small fishes and often exhibits cannibalistic behavior.
- **Conservation Status**
    - **IUCN** - Least Concern.
- **Uses -** Food resource, utilized as fertilizer supplemental food source for highend and expensive cultured animals.
- **Other Species - Bigfin reef squid** – IUCN Status - “Data Deficient”.

References

1. The Hindu | Indian squid
2. National Library of Medicine | Uroteuthis duvaucelii

Namdapha National Park

Why in News?

An elephant has been camera-trapped after 12 years, as the encroachment since 1996 blocked the jumbo migration route between Arunachal Pradesh and Myanmar through Namdapha National Park.

- It is India’s easternmost tiger reserve and National park situated in the Changlang district of ***Arunachal Pradesh.***
- It is originally declared as a Wildlife Sanctuary in 1972 and a National Park and Tiger

Reserve (15th Tiger Project) in 1983.

- The Namdapha protected area is wedged between Dapha Bum ridge of Mishmi Hills, of North Eastern Himalayas and Patkai Ranges.
- The reserve has a common boundary with Kamlang Wildlife Sanctuary (Lohit District).
- **Vegetation** - It consists of Northern Tropical Evergreen Forest, North Indian Tropical Moist Deciduous Forests, East Himalayan Moist Temperate Forests, Moist Alpine Scrub Forests.
- **River** - It lies along the ***Noa-Dihing river*** lies in the tropical rain forest.
- **Flora -** The *Pinus merkusi and Abies delavavi* are not found elsewhere in India.
- One of the rarest and endangered orchids, the ***Blue Vanda*** found here.
- The most famous local medicinal plant ***Mishimi Teeta (Copti teeta)***, is available here but its export has been banned.
- It is ***only park in the World*** to have the 4 Feline species of big cat namely
    - The Tiger (Panthera Tigris),
    - Leopard (Panthera Pardus),
    - Snow Leopard (Panthera Uncia) and
    - Clouded Leopard (Neofelis Nebulosa) and numbers of Lesser cats.
- **Primate species -** Assamese macaque, pig-tailed macaque, stump-tailed macaque and Hoolock Gibbons (Hylobates Hoolock), highly endangered and only 'ape' species found in India dwells here.
- **Birds** - White winged Wood Ducks, a rare and endangered species, the great Indian hornbills, jungle fowls and pheasants.

References

1. The Hindu | Namdapha Tiger Reserve
2. Government of Arunachal Pradesh | Namdapha National Park

Inherited Retinal Diseases (IRDs)

Why in News?

According to a recent study, there is a higher prevalence of Inherited Retinal Diseases (IRDs) situation in India.

- **IRDs** – It is a ***genetic disorder***, a change or a variant, in one or more genes that contribute to proper retinal function.
- **Genetic mutations** – It stems from *mutations in more than 300 genes* responsible for the function of the retina, the light-sensitive tissue at the back of the eye.
- It varies significantly across different communities, and it is difficult to identify common mutations.
- **Impacts** – It ***affects the gene's ability*** to do its job properly.
- The mistake gene doesn't make a protein and cells in the retina degenerate and cause vision loss.
- **Vulnerables –** It affects individuals of *all ages*.

According to the World Health Organization (WHO), more than 2.2 billion people

worldwide experience some form of vision impairment.

- **Causes** – Lose sight shortly after birth
  - Gradual deterioration over time
  - Progressive vision loss
  - Often resulting in blindness.
- **Treatment - Gene therapy** – It is for blindness caused by mutations in the *RPE65* genes and treat various inherited eye disorders.
- **RNA-based therapies** – To restore protein production in retinal cells without altering the underlying DNA.
- Treat retinal degenerative diseases caused by single-point mutations.

Studies have revealed significantly higher prevalence, with 1 in 372 individuals in rural South India, 1 in 930 in urban South India, and 1 in 750 in rural Central India affected by these conditions.

References

1. The Hindu| IRDs Treatment & Precision Therapeutics
2. Prevent Blindness| Inherited Retinal Diseases (IRDs)

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Polity & Governance

Waqf

• **Waqf** –It is a *permanent dedication of movable or immovable properties* for religious, pious or charitable purposes and the transfer will benefit the needy.
• **Recognized by** – Muslim Law.

Waqf Asset Management System of India (WAMSI)

• **WAMSI** – It is an e-Governance initiative and an *on-line system for searching waqf properties* in their area & their status.
• **Nodal Ministry** – Ministry of Minority Affairs.
• **Objective** – To manage and maintain up-to-date status of Waqf Properties in India throughout their life cycles.

National Critical Mineral Mission (NCMM)

Union Cabinet has approved the launch of National Critical Mineral Mission (NCMM).
• **NCMM** – It will *cover all stages of the mineral value chain*, from exploration to mining, beneficiation, processing, and recovery from end-of-life products.
• **Objectives** – Intensify the exploration of critical minerals within the country and in its offshore areas.
• To create a *fast-track regulatory approval process* for critical mineral mining projects.
• To encourage Indian Public Sector Undertakings (PSUs) and private sector companies to acquire critical mineral assets abroad.

Ethanol Blended Petrol (EBP) Programme

• **Launched in** – *2003*.
• **Nodal Ministry** – Ministry of Petroleum and Natural Gas.
• **EBP** – It implemented throughout the country except Union Territories of Andaman Nicobar and Lakshadweep islands.
• Oil Marketing Companies (OMCs) *sell petrol blended with ethanol up to 20%.*
• **Aim** – Target of 20% blending of ethanol with petrol by 2025.
• **Features** – To promote use of indigenously produced Bio-Ethanol as transportation fuel along with Petrol (Motor Spirit or Gasoline).
• To reduce Carbon Dioxide CO_2 emission as well as reduce import of fossil fuel.

Mitigation Project on Lightning Safety

A High-Level Committee (HLC) has approved the Mitigation Project on Lightning Safety.
• **Objectives** – To mitigate lightning Risk in *50 heavy lightning prone districts in 10 states.*
• **10 states** – Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Uttar Pradesh and West Bengal.
• **Funds** – From National Disaster Mitigation Fund (NDMF).

Environment

Marshall Islands Marine Sanctuary

Marshall Islands declared its 1st national marine sanctuary.

• **Located in** – West-central Pacific Ocean between the Philippines, Hawaii and French Polynesia.



• **Coverage** – 2 northernmost uninhabited atolls called Bikar and Bokak.
• It protecting 2 of the most pristine ecosystems in the Pacific Ocean.
• **Species included** – Bristle-thighed curlew birds, Napoleon wrasse fish, and green sea turtle nesting colony and bumphead parrotfish.
• It is the *1st federal Marine Protected Area (MPA)* established by the Pacific Island nation.

National Geographic Pristine Seas

• **Launched in** – *2008*.
• **Concept** – It is an initiative that promotes the *creation of new marine protected areas* in collaboration with indigenous and local communities.
• It has helped establish *29 of the largest marine protected areas* in the world.
• **Area coverage** – 6.8 million square kilometers, more than twice the size of India.

Science

Molasses

• **Molasses** – It is a thick syrup and *by-product of making sugar*.
• It contains more vitamins and minerals than other sweeteners but is still *high in sugar*.
• It is used in *Bioethanol production*.
• **Types** – It vary in color, consistency, flavor and sugar content.
• **Nutrition content** – Manganese, magnesium, copper, selenium, potassium, iron and calcium.

Index

Body Mass Index (BMI)

• **BMI** – It is an *estimate of body fat* by using height and weight measurements.
• It is a *ratio of weight to height.* It is a tool used by healthcare providers.
• **Features** – It measures patients' risk for diseases that can occur with overweight and obesity.
• It is *not always an accurate representation* of body fatness.

Miscellaneous

38th National Games of India, 2025

• **Held in** – Dehradun, Uttarakhand.
• **Theme** – Green Games.
• **Mascot** – *Mauli*, inspired by Uttarakhand's state bird - Monal.
• **Torch bearer** – Lakshya Sen, a world championship medal-winning shuttler.
• **Games included** – Yoga and Mallakhamb for the *1st time*.
• **Medals and certificates** – It will be made from environmentally friendly and *biodegradable materials*.



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