

INTERNATIONAL BIG CAT ALLIANCE (IBCA)



- **Launched by Prime Minister Narendra Modi in April 2023** during the **50th anniversary of Project Tiger**. Formally approved by the Union Cabinet in February 2024.
- **Implementation agency:** The IBCA is implemented through the **National Tiger Conservation Authority (NTCA)** under the **Ministry of Environment, Forest and Climate Change (MoEFCC)**.
- **Objective:** To **conserve seven major big cat species** across the world: Tiger, Lion, Leopard, Snow Leopard, Puma, Jaguar, and Cheetah.
- **Current ratifying members:** **India, Nicaragua, Eswatini, Somalia, Liberia** are the initial countries that ratified the **IBCA Framework Agreement**.
- **Membership:** Membership is open to **all UN Member States**, including:
 - **Range countries**, where big cats naturally occur.
 - **Non-range countries** that are interested in supporting **global conservation** of big cats.

IBCA as a Global Legal Entity

- **India formally joined the IBCA in September 2023**, after ratifying the framework agreement.
- The IBCA became a **treaty-based intergovernmental organisation** after **five countries ratified** the framework agreement. These include **India, Nicaragua, Eswatini, Somalia, and Liberia**.
- **Institutional Support and Funding:** India has committed **₹150 crore** (for the period **2023–2028**) as **budgetary support** for:
 - Creating a **corpus fund**,
 - Building **infrastructure**, and
 - Covering **recurring expenses** of the IBCA.

OPERATION ATALANTA



Recently, the European Union Naval Force (EUNAVFOR) under Operation ATALANTA has proposed a joint naval exercise with the Indian Navy.

- EUNAVFOR Operation ATALANTA, which operates in the **Western Indian Ocean and the Red Sea**, has proposed a **joint maritime exercise** with the **Indian Navy** to be conducted **around the end of May 2025**.
- The primary goal of the proposal is to **enhance coordination and maritime cooperation** between **European naval forces** and the **Indian Navy**, particularly in the face of **resurgent piracy threats** and **geopolitical instability** in the Red Sea region.
- The proposed drill will go beyond the usual **Passage Exercises (PASSEX)** and will include **advanced tactical manoeuvres, counter-piracy operations, and inter-naval communications training**, if approved.
- The **Horn of Africa** region, once again experiencing piracy amidst **Houthi rebel activity in the Red Sea**, has prompted a need for **enhanced maritime coordination**, even though incidents have decreased recently.

About Operation ATALANTA

- **Launched in 2008**, Operation ATALANTA is the EU's **counter-piracy mission** in the **Western Indian Ocean and the Red Sea**, initially targeting piracy off the **Somali coast**.
- Its expanded mandate includes:
 - Protection of World Food Programme (WFP) vessels
 - Surveillance of arms embargo on Somalia
 - Monitoring drug and arms trafficking
 - Combating Illegal, Unreported and Unregulated (IUU) fishing
 - Disruption of illegal charcoal trade.

JAMES WEBB SPACE TELESCOPE (JWST)



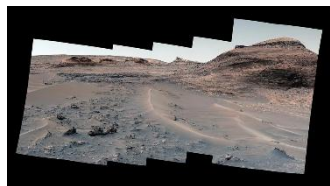
Recently, scientists have found tentative but strong evidence of possible extraterrestrial life on a distant exoplanet named K2-18b, located 124 light years away from Earth in the Leo constellation.

- The **James Webb Space Telescope (JWST)**, launched in **December 2021**, is the **largest and most powerful space observatory** built through a collaboration between **NASA, European Space Agency (ESA), and Canadian Space Agency (CSA)**.
- JWST orbits the **L2 Lagrange Point**, about **5 million km** beyond Earth, enabling a stable position for deep-space observation.
- The telescope operates primarily in the **infrared spectrum** and is equipped with components such as:
 - **Optical Telescope Element (OTE)** – collects light from distant objects.
 - **Integrated Science Instrument Module (ISIM)** – houses all cameras and instruments.
 - **Sunshield** – protects sensitive instruments from solar radiation.
 - **Spacecraft Bus** – provides necessary operational support.

Scientific Findings on K2-18b

- The **Cambridge University research team**, led by **Nikku Madhusudhan**, studied the planet's atmosphere and detected **chemical signatures** of gases like **dimethyl sulphide (DMS)** and **dimethyl disulphide (DMDS)**.
- On **Earth**, these gases are known to be produced **only by marine phytoplankton and certain bacteria**, raising the possibility of **biological activity** on K2-18b.
- The amount of DMS detected is **thousands of times greater** than Earth's levels, suggesting, if biological, that the planet might be **teeming with life**.

NASA'S CURIOSITY ROVER



- **Curiosity** is a **robotic rover** launched on **November 26, 2011**, aboard an **Atlas V rocket** and landed on Mars on **August 5, 2012**.
- It is part of NASA's **Mars Science Laboratory (MSL)** mission and was the first to use a **sky crane landing system** to reach the Martian surface.
- The rover runs on a **thermoelectric power generator**, which utilizes the **radioactive decay of plutonium** instead of solar panels.
- Its **four primary scientific goals** are:
 - Determine whether life ever existed on Mars.
 - Characterize Mars' past and present climate.
 - Understand the geology of Mars.
 - Prepare for future human exploration.
- The rover is approximately **3 meters long**, weighs around **900 kilograms**, and is equipped with an **onboard chemistry lab** for analyzing rock samples.

Key Findings from the Rover

- The discovery was made during rover's exploration of an **89-meter stretch of terrain** in an **ancient lakebed** in the **Gale Crater**, where it drilled into different types of rocks.
- The Curiosity rover identified a **carbonate mineral called siderite**, which contains **carbon and oxygen**, in the **sulfate-rich layers** of Martian rocks. This is the **first time** this mineral has been found on Mars.
- The rocks containing **5–10% siderite by weight** suggest that a **significant portion of Mars' past CO₂** may be **trapped in the planet's crust**, rather than escaped into space.
- The rocks also showed the presence of **iron oxyhydroxides**, indicating that **siderite may have dissolved in acidic water**, releasing some **CO₂ back into the atmosphere**. This points to a **limited and slow carbon cycle**.

VEHICLE-TO-GRID (V2G) TECHNOLOGY



- **Vehicle-to-Grid (V2G)** is a set of technologies that enable **Electric Vehicles (EVs)** to send **stored electricity back to the power grid** when they are not in use.
- When an **EV is idle and connected via a bi-directional charger**, it can act as a **decentralised battery energy storage system**, contributing electricity to the grid.
- V2G supports both **charging (Grid to Vehicle – G2V)** and **discharging (Vehicle to Grid – V2G)** of EV batteries, creating a **two-way energy flow**.
- During charging, EV batteries act as a **load** on the grid, which can be managed using tools like **Time of Use (ToU) tariffs** and **smart charging** to reduce stress during peak hours.
- During discharging, EV batteries serve as **distributed energy sources**, providing electricity during **peak demand periods** or when **renewable energy (RE)** is low.
- V2G is part of a broader framework including **Vehicle to Home (V2H)** and **Vehicle to Vehicle (V2V)** applications, but **V2G is the most widely explored use case**

PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS (PETA)



- It is a **nongovernmental organization (NGO)** committed to **ending abusive treatment of animals** in business and society and promoting consideration of animal interests in everyday decision-making and general policies and practices.
- It is the **largest animal rights organization** in the world.
- It is based in **Norfolk, Virginia, United States**, with entities worldwide.

- PETA was **founded in 1980** by **Ingrid Newkirk and Alex Pacheco**, who were influenced by Australian ethicist Peter Singer's book *Animal Liberation* (1975).
- Initially recognized for exposing cruelty in research laboratories, PETA has grown into a global entity with **over nine million members** and considerable annual expenditures.
- PETA **opposes speciesism, a human-supremacist worldview, and focuses on the four areas** in which the **largest numbers of animals suffer the most** intensely for the longest periods of time: in **laboratories**, in the **food industry**, in the **clothing trade**, and in the **entertainment business**.
- PETA also works on a variety of **other issues**, including the **cruel killing of rodents, birds, and other animals who are often considered "pests"** and **cruelty to domesticated animals**.
- PETA works through **public education, investigations, research, animal rescue, legislation, protests, and negotiations** with companies and regulatory agencies.

DAL LAKE



- It is a **mid-altitude urban lake** located in **Srinagar, Jammu and Kashmir**.
- It is **surrounded by the Pir Panjal mountains**.
- It is integral to tourism and recreation in Kashmir and is named the **"Jewel in the crown of Kashmir"** or **"Srinagar's Jewel"**.
- It is also known as the **Lake of Flowers**.
- The **shoreline** of the lake, which is about 15.5 kilometres (9.6 mi), is **encompassed by a boulevard lined with Mughal-era gardens, parks, houseboats, and hotels**.
- It has an average depth of almost 5 ft and a maximum depth of 20 ft.
- It is **one of the world's largest natural lakes**.
- The lake covers an area of **18 sq.km.** and is **part of a natural wetland** which covers 21.1 sq.km., **including its floating gardens**.

- The **floating gardens**, known as “Raad” in Kashmiri, blossom with lotus flowers during July and August.
- The wetland is **divided by causeways into four basins; Gagribal, Lokut Dal, Bod Dal, and Nagin** (although Nagin is also considered an independent lake).
- **Lokut-dal and Bod-dal each have an island** in the centre, known as **Rup Lank** (or **Char Chinari**) and **Sona Lank**, respectively.
- Dal Lake is also popular for the **floating market** where vendors have their own Shikaras/wooden boats and approach tourists.

INTERNATIONAL MARITIME BUREAU (IMB)



- The International Maritime Bureau (IMB) is a **non-profit-making organisation, established in 1981**, to act as a focal point in the fight against all types of **maritime fraud, malpractice, and piracy**.
- It is a specialised **division of the International Chamber of Commerce (ICC)**.
- It serves as a **platform for cooperation** and information sharing among various stakeholders, including **governments, shipping companies, and law enforcement agencies**.
- By acting as a **central hub for reporting and disseminating information on maritime crimes**, the IMB helps in preventing and combating piracy, armed robbery, and other illicit activities that pose a threat to the safety of ships and crew members.
- The **IMB Piracy Reporting Centre** is located at **Kuala Lumpur, Malaysia**.
- The key services of the PRC are:
 - **Issuing daily status reports on piracy and armed robbery to ships via broadcasts** on the Inmarsat-C SafetyNET service.
 - **Reporting piracy and armed robbery at sea incidents to law enforcement and the International Maritime Organization (IMO)**.

- **Helping local law enforcement apprehend pirates** and assist in bringing them to justice.
- **Assisting shipowners** whose vessels have been attacked or hijacked.
- **Assisting crew members** whose vessels have been attacked.
- Providing updates on pirate activity via the Internet, twitter, and email alerts.
- Publishing comprehensive **quarterly and annual reports** detailing piracy statistics.
- The **services** of the PRC are provided **free of charge to all ships** irrespective of their ownership or flag.
- The **IMB also locates lost ships or ships seized by pirates, recovers stolen cargoes**, and prepares customised reports on a chargeable basis.

INDIA'S PRISON CRISIS: OVERCROWDING AND LACK OF HEALTHCARE SERVICES IN FOCUS

- The **India Justice Report 2025** reveals alarming findings about the condition of Indian prisons, placing the spotlight on worsening overcrowding, the glaring lack of healthcare personnel, and the urgent need for mental health support across prison facilities.
- With a rising inmate population and stagnant infrastructure development, the report flags a systemic failure that requires immediate policy attention.

Worsening Inmate Overcrowding

- The inmate population in India rose sharply from **3.8 lakh in 2012 to 5.7 lakh in 2022**, and is projected to **reach 6.8 lakh by 2030**.
- However, the **available prison capacity stands at only 4.3 lakh**, with a forecast of just **5.15 lakh** by 2030, falling significantly short of demand.
- The **national occupancy rate** stands at **131%**, a substantial jump from **112%** in 2012.
- States like **Maharashtra** saw an occupancy spike from **99% to 161%** over a decade.

Acute Shortage of Medical Professionals

- The report highlights a **43% vacancy rate among prison medical officers**, and the existing doctor-to-prisoner ratio stands at a staggering **1:775**, far worse than the **Model Prison Manual 2016 benchmark of 1:300**.
- This deficit in medical staff hinders not only day-to-day healthcare but also responses to outbreaks, injuries, chronic illness management, and even forensic documentation.

A Mental Health Emergency Behind Bars

- Perhaps the most serious revelation of the report is the near-collapse of India's prison mental healthcare system.
 - Only **25 psychologists** are available for the entire prison population, equating to **one psychologist for every 22,929 prisoners**.
 - In 2022, India had **69 sanctioned posts** for mental health professionals, but **less than half were filled**.
 - Not a single state or union territory meets the standard of **1 psychologist per 500 inmates**.
- Mental illness among prisoners doubled from **4,470 in 2012 to 9,084 in 2022**.

Recommendations and Way Forward

- The India Justice Report calls for:
 - Urgent recruitment of medical and mental health staff in jails.
 - Strategic investment in **prison infrastructure expansion**.
 - Regular publication of prison health and disability data.
 - Policy incentives for States to **decongest prisons**, especially through alternatives to incarceration like bail reforms and community sentencing.
- India's prison system stands at a crossroads. As the country advances technologically and economically, **its correctional system needs equal attention** to ensure dignity, health, and safety for all inmates, aligning with international human rights standards.