

## INDIA'S GREEN PATH: ENVIRONMENTAL CONSERVATION AND CLIMATE ACTION

This report outlines the multifaceted strategies being implemented by India to achieve its 'Net Zero' target by 2070.

### 1. BIODIVERSITY & ECOSYSTEM RESTORATION

- **Statistics:** Despite possessing only **2.4%** of the world's land area, India hosts **8%** of the global biodiversity (ranking as one of the 17 megadiverse countries).
- **NBSAP 2024-2030:** India released its updated '**National Biodiversity Strategy and Action Plan**' at the COP16 venue in Colombia.
  - **Goal:** Halt biodiversity loss by 2030 and live in harmony with nature by 2050.
- **Ramsar Sites (Wetlands):** India currently has **98 Ramsar sites** (the highest in Asia and 3rd globally). Udaipur and Indore are the first 'Ramsar Accredited Wetland Cities' in the country.

### 2. KEY WILDLIFE CONSERVATION PROJECTS

*Crucial updates for competitive examinations:*

- **Project Tiger:** The number of Tiger Reserves increased from 46 (2014) to **58 (2025)**. The latest addition: **Madhav Tiger Reserve (Madhya Pradesh)**.
- **Project Cheetah:** Cheetahs were introduced into the **Gandhisagar Wildlife Sanctuary (Madhya Pradesh)**. As of 2025, the total population is 30 (including 19 cubs born in India).
- **Project Snow Leopard:** According to the first-ever national assessment, there are **718 snow leopards** in India (highest in Ladakh at 477).
- **Project Dolphin:** The 2021-23 survey recorded 6,327 dolphins. The second phase of the survey commenced in January 2026.
- **IBCA (International Big Cat Alliance):** Formed under India's leadership for the conservation of 7 major big cat species. It became operational in **January 2025**.

### 3. LEGAL AND POLICY FRAMEWORK

*Key for UPSC Prelims matching questions:*

- **Wildlife (Protection) Act:** 1972
- **Water (Prevention and Control of Pollution) Act:** 1974
- **Forest (Conservation) Act:** 1980
- **Air (Prevention and Control of Pollution) Act:** 1981
- **Environment (Protection) Act:** 1986 (**Umbrella Act**)
- **Biological Diversity Act:** 2002

### 4. ENERGY TRANSITION AND CLEAN ENERGY

- **NDC Targets:** While the target is to reduce emission intensity by **45%** by 2030, India already achieved **36%** by June 2025.

- **RE Capacity:** India surpassed its 2030 goal of 50% non-fossil fuel energy capacity five years early, in 2025.
- **Global Rankings (IRENA 2025):**
  - **Solar Power Capacity:** 3rd Rank
  - **Wind Power Capacity:** 4th Rank
  - **Total Renewable Energy:** 4th Rank
- **Key Projects: Modhera (Gujarat)** – Country's first 24x7 solar-powered village. **Omkareshwar (Madhya Pradesh)** – Asia's largest floating solar park.

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## 5. POLLUTION CONTROL AND WASTE MANAGEMENT

- **NCAP (National Clean Air Programme):** Aimed at improving air quality in 130 cities. 103 cities have shown significant reduction in PM10 levels.
- **Fly Ash:** Over 98% of fly ash was utilized in 2024-25 (primarily in road construction and the cement industry).
- **EPR (Extended Producer Responsibility):** This policy is being implemented for plastics, e-waste, tires, and batteries.

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## 6. OTHER KEY INITIATIVES

- **Mission LiFE: Lifestyle for Environment.** Approximately 50 million (5 crore) people have taken the pledge.
- **Ek Ped Maa Ke Naam: 2.624 billion (262.4 crore)** saplings were planted by December 2025.
- **MISHTI Scheme:** A scheme dedicated to the restoration of **Mangroves** in coastal areas.
- **Blue Flag Certification:** 18 beaches in India have received this recognition for maintaining international cleanliness standards.

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## INDIA'S NUCLEAR ENERGY JOURNEY: A NEW CHAPTER (THE PFBR MILESTONE)

The 500 MWe **Prototype Fast Breeder Reactor (PFBR)**, indigenously built at Kalpakkam, Tamil Nadu, achieved **First Criticality** on April 6, 2026. This signifies the commencement of a controlled and sustained nuclear chain reaction within the reactor.

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### 1. THREE-STAGE NUCLEAR POWER PROGRAMME

India has officially entered the second stage of the strategy envisioned by the father of India's nuclear programme, **Dr. Homi Jehangir Bhabha**.

- **Stage 1: Pressurized Heavy Water Reactors (PHWRs)**
  - **Fuel:** Natural Uranium.
  - **Output:** Generates electricity and produces '**Plutonium**' as a byproduct.
- **Stage 2: Fast Breeder Reactors (FBRs)**
  - **Fuel:** A mixture of Plutonium (from Stage 1) and Uranium, known as **Mixed Oxide (MOX)** fuel.
  - **Highlight:** It "**breeds more fuel than it burns,**" creating more fissile material than it consumes.
- **Stage 3: Thorium-Based Reactors**
  - **Goal:** To utilize India's vast Thorium reserves. Uranium-233, produced in the second stage, will be used as fuel here.

## 2. FEATURES OF THE PFBR

- **Construction:** Built by **Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI)**.
- **Technology:** Developed by the **Indira Gandhi Centre for Atomic Research (IGCAR)**.
- **Global Standing:** India is set to become the second country after Russia to operate a commercial-scale Fast Breeder Reactor.
- **Closed Fuel Cycle:** Achieves fuel self-sufficiency by reprocessing nuclear waste back into fuel.

## 3. CURRENT NUCLEAR ENERGY SECTOR - STATISTICS

- **Current Capacity:** 8.78 GW.
- **Target (2031-32):** 22.38 GW.
- **Long-term Goal (2047):** 100 GW (via the Nuclear Energy Mission).
- **Electricity Share:** Nuclear energy currently accounts for approximately **3.1%** of India's total power generation.
- **International Cooperation:** India has signed Civil Nuclear Cooperation agreements with **18 countries**.

## 4. KEY ACTS AND POLICIES

- **SHANTI Act, 2025:** (*Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act*). This modernizes India's nuclear laws and permits private participation in a regulated manner.
- **SMRs (Small Modular Reactors):** Aiming to deploy 5 indigenous SMRs by 2033. **BARC** is currently developing the **BSMR-200** (200 MWe).

## CONCLUSION

The achievement of criticality in the PFBR is not just a technological triumph; it is a giant leap toward India's **Net Zero** emissions goal by 2070. It serves as a bridge toward the ultimate utilization of Thorium reserves.

## IMPORTANT GLOSSARY:

- **Criticality:** The state in which a nuclear fission chain reaction becomes self-sustaining.
- **Transmutation:** The process of converting Thorium-232 into Uranium-233.
- **MOX Fuel:** Mixed Oxide Fuel (a blend of Uranium and Plutonium).

## NATIONAL INCOME STATISTICS: NEW BASE YEAR AND STATES' INCOME WORKSHOP

The Ministry of Statistics and Programme Implementation (**MoSPI**) has taken a significant decision to revise the base year for estimating national income statistics.

### 1. NEW BASE YEAR (2022-23)

- **Change:** Replacing the previous base year, **2022-23** will henceforth be used as the benchmark.

- **Objectives:** \* To accurately reflect the current **Structure of the Economy**.
  - To improve estimation methodologies in alignment with **international standards**.
  - To utilize **Updated Data Sources**.
- **Impact:** In line with the change in National **GDP**, States and Union Territories (UTs) must also revise the base year for their Gross State Domestic Product (**GSDP**). This will enhance accuracy and transparency in the economic performance of states.

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## 2. ALL-INDIA WORKSHOP - VISAKHAPATNAM

A workshop is being organized under the aegis of the **National Statistical Office (NSO)** to bring uniformity to state income estimates.

- **Venue:** Visakhapatnam, Andhra Pradesh.
- **Dates:** April 8 - 10, 2026.
- **Key Highlights:**
  - Discussion on **Methodological Changes** in the collection of **GSDP**.
  - Formulating **Uniform Guidelines** for the calculation of District Domestic Product (**DDP**).
  - Training for officials from the State Directorates of Economics & Statistics.

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## 3. KEY CONCEPTS FOR EXAMS

- **What is a Base Year?**

It is a benchmark year used to measure **Real Growth** by eliminating the effect of **Inflation**. This is referred to as calculation at '**Constant Prices**'.

- **GSDP (Gross State Domestic Product):** The monetary value of all goods and services produced within the geographical boundaries of a state in a single financial year.
- **DDP (District Domestic Product):** This is crucial for **Decentralized Planning**. It helps in assessing growth at the district level.

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## 4. QUICK FACTS

- **Organized by:** National Accounts Division (NAD), NSO.
- **Ministry:** MoSPI (Ministry of Statistics and Programme Implementation).

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## SWACHHATA PAKHWADA 2026: INITIATIVE BY THE DEPARTMENT OF JUSTICE

The Department of Justice, under the **Ministry of Law and Justice**, Government of India, is observing 'Swachhata Pakhwada' during the first fortnight of April 2026.

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### 1. WHAT IS SWACHHATA PAKHWADA?

- It is a **15-day (Fortnight)** action plan designed under the **Swachh Bharat Abhiyan**, where various Union Ministries and Departments focus specifically on cleanliness within their respective jurisdictions.

- **Objective:** To raise awareness about cleanliness and hygiene in offices and society, and to promote a sense of collective responsibility.

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## 2. KEY ACTIVITIES OF THE DEPARTMENT OF JUSTICE

- **Duration:** April 1 to April 15, 2026.
- **Commencement:** All officials, led by the Secretary of the Department of Justice, **Shri Niraj Verma**, took the 'Swachhata Pledge' (Cleanliness Oath).
- **Shramdaan (Voluntary Labour):** Officers and staff actively participated in voluntary cleanliness drives within the **Jaisalmer House** premises.
- **Other Proposed Programs:**
  - Yoga sessions.
  - Workshops on cleanliness, along with essay writing and painting competitions.
  - Categorization and **auction of obsolete items** to clear office space.

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## 3. EXAM POINT OF VIEW (KEY HIGHLIGHTS)

- **Organizational Structure:** The Department of Justice is one of the three departments under the Ministry of Law and Justice (the others being the **Legislative Department** and the **Department of Legal Affairs**).
- **Swachh Bharat Mission (SBM):** Launched on October 2, 2014. The **SBM 2.0** version currently focuses on 'Garbage Free Cities' and 'Sustainable Sanitation'.
- **Auction and E-Waste:** Auctioning obsolete items not only saves government office space but also generates revenue. This is considered a part of the '**Mission Recruitment and Office Management**' reforms.

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## 4. VALUE ADDITION FOR UPSC MAINS

- **Civil Services Values:** The act of 'Shramdaan' reflects values of transparency, accountability, and **Team Spirit** among officials working alongside junior staff.
- **Governance:** It signifies that government departments are evolving beyond mere paperwork to become agents of **Behavioral Change** in society.

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## BOB SAMVAD: BANK OF BARODA'S INNOVATIVE AI PLATFORM

Bank of Baroda (BoB) has launched '**bob SAMVAD**', an Artificial Intelligence (AI) powered multilingual conversational platform, in Mumbai. The initiative aims to eliminate language barriers in customer service at its branches.

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### 1. WHAT IS BOB SAMVAD?

- It is an industry-first **AI-Powered Multilingual Conversational Platform** in the banking sector.
- **Objective:** To provide seamless, **real-time communication** between bank staff and customers without language constraints.
- **Languages:** It operates in **22 languages** listed in the 8th Schedule of the Indian Constitution.

## 2. KEY TECHNICAL FEATURES

- **Indigenous Technology:** Developed entirely **in-house** by Bank of Baroda.
- **Two-way Communication:** When a customer speaks in their mother tongue, it is instantly translated into a language understood by the bank staff (in both text and voice formats), and vice versa.
- **Low Latency:** Conversations occur at high speed with almost no delay.
- **Inclusive Banking:** Designed to help those who cannot read or those who speak different regional languages to access banking services easily.

## 3. IMPLEMENTATION

- **Phase 1:** Being implemented on a pilot basis in **250 branches** across Andhra Pradesh, Telangana, Tamil Nadu, Karnataka, and Maharashtra.
- It will subsequently be expanded to all branches nationwide in a phased manner.

## 4. OTHER INITIATIVES MENTIONED

The bank also highlighted its **ESG (Environmental, Social, and Governance)** initiatives:

- **bob Forest:** A 6,000 sq. ft. green oasis built at the BKC office in Mumbai.
- **bob Earth, Green Deposits & Green Bonds:** Financial resource mobilization strategies aimed at sustainable development.

## 5. EXAM INSIGHTS

- **BoB MD & CEO:** Dr. Debadatta Chand.
- **Digital Public Infrastructure (DPI):** Platforms like 'bob SAMVAD' strengthen India's Digital Public Infrastructure.
- **AI in Banking:** This project serves as an excellent **Case Study** for UPSC Mains (Economy or Science & Technology papers) regarding the "**Social Application of AI.**" It illustrates the role of technology in achieving **Financial Inclusion.**

### Quick Fact:

**Bank of Baroda** is the first bank in India to facilitate banking services in 22 languages, honoring the country's linguistic diversity.

## INS SUNAYNA (IOS SAGAR): STRENGTHENING MARITIME TIES WITH MALDIVES

The Indian Navy's **INS Sunayna**, as part of the '**Indian Ocean Ship (IOS) SAGAR**' initiative, arrived at Male, the capital of Maldives, on April 6, 2026.

## 1. WHAT IS IOS SAGAR?

- **Full Name:** Indian Ocean Ship - **Security and Growth for All in the Region.**

- **Distinction:** It features a multinational crew consisting of personnel from India and **16 Friendly Foreign Countries (FFCs)**.
- **Objective:** To enhance mutual trust, security, and capacity building among nations in the Indian Ocean Region.
- **Motto:** "One Ocean, One Mission".

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## 2. KEY HIGHLIGHTS OF THE VISIT

- **Multinational Crew:** Notably, two personnel from the **Maldives National Defence Force (MNDF)** are also part of this ship's crew.
- **Training:** During the transit, the crew underwent intensive training in seamanship, small arms firing, and damage control drills, aimed at improving **inter-operability** between nations.
- **PASSEX:** A **Passage Exercise (PASSEX)** is scheduled to be conducted with the Maldives Coast Guard upon the ship's departure.

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## 3. STRATEGIC SIGNIFICANCE

This initiative reflects two of India's major foreign policy frameworks:

1. **Neighbourhood First Policy:** Prioritizing relations with immediate neighbors.
2. **MAHASAGAR Vision: (Mutual and Holistic Advancement for Security and Growth Across Regions)** - Aimed at collective security and growth in the region.

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## 4. EXAM POINT OF VIEW (KEY FACTS)

- **INS Sunayna:** A **Saryu-class** offshore patrol vessel.
- **Indian High Commissioner:** Shri G. Balasubramanian (Indian Ambassador to Maldives).
- **Strategic Location:** The geographical position of the Maldives in the Indian Ocean is vital for India's **Maritime Security**.
- **Minister of State for Defence:** Shri Sanjay Seth (who flagged off the ship from Mumbai on April 2).

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## VALUE ADDITION FOR UPSC MAINS

- **Maritime Diplomacy:** This visit serves as a prime example of how India is establishing itself as a "Net Security Provider" through the SAGAR initiative.
- **Cooperation vs. Competition:** In the context of increasing Chinese influence in the Indian Ocean, such defense ties with neighboring countries provide a strategic advantage to India.

### Quick Fact:

The visit of INS Sunayna to Male is part of an effort to unite nations in the Indian Ocean Region under the vision of "One Ocean, One Mission."

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## WORLD HEALTH DAY 2026: KEY INFORMATION

World Health Day is observed every year on April 7 to commemorate the founding anniversary of the **World Health Organization (WHO)**.

### 1. 2026 THEME

- **Theme: "Together for health. Stand with science."**
- **Objective:** To protect the health of people, animals, plants, and the environment through scientific collaboration and **evidence-based action**.

### 2. "ONE HEALTH" APPROACH

This year's campaign is primarily based on the **"One Health"** concept.

- **Concept:** This approach recognizes that human health, animal health, and environmental health are inextricably linked.
- **Significance:** It is essential for addressing **Zoonotic diseases** (transmitted from animals to humans), **Antimicrobial Resistance (AMR)**, and the impacts of climate change.

### 3. 2026 CAMPAIGN HIGHLIGHTS

- **Stand with Science:** A call to trust scientific evidence and facts to restore public confidence in healthcare.
- **One Health Summit:** A global summit hosted by the Government of **France** under its G7 Presidency.
- **WHO Collaborating Centres Forum:** Nearly 800 scientific institutions from over 80 countries are gathering to showcase science-driven partnerships.

### 4. HISTORICAL BACKGROUND (STATIC GK FOR EXAMS)

- **Establishment:** Decided during the First Health Assembly in 1948.
- **First Observance:** Held annually on April 7 since 1950.
- **WHO Headquarters:** Geneva, Switzerland.

### 5. RECENT THEMES (MATCHING QUESTIONS)

Year	Theme
2026	Together for health. Stand with science
2025	Healthy beginnings, hopeful futures

Year	Theme
2024	My health, my right
2023	Health For All
2022	Our planet, our health

## 6. ANALYSIS FOR EXAMS (UPSC/GROUP-1 PERSPECTIVE)

- **Trust in Science:** Following the rise of misinformation (**Infodemic**) post-COVID-19, trusting science has become a critical international challenge.
- **SDG 3:** This day plays a vital role in achieving **Sustainable Development Goal 3:** "Good Health and Well-being."
- **India - One Health:** India has already launched the '**National One Health Mission**', which enhances coordination between the departments of Animal Husbandry, Forests, and Health.

## ANNUAL SURVEY OF INCORPORATED SERVICES SECTOR ENTERPRISES (ASISSE) 2026

The National Statistical Office (NSO), under the Ministry of Statistics and Programme Implementation (**MoSPI**), has launched the first-ever survey dedicated to the incorporated services sector in India's history.

### 1. SURVEY BACKGROUND AND OBJECTIVE

- **Launch:** April 2026.
- **Reference Period:** Financial Year 2024–25.
- **Primary Objective:** To create a robust official database for the **Incorporated Services Sector**, which contributes more than half of India's Gross Domestic Product (GDP).
- **User Guide:** To ensure transparency, a detailed document titled "**Know Your Survey: A User Guide to ASISSE**" has been released.

### 2. SCOPE & METHODOLOGY

- **Eligibility:** Entities registered under the Companies Act (1956/2013) or the Limited Liability Partnership (LLP) Act, 2008.
- **Sample:** Approximately **1.21 lakh enterprises** across the country will be surveyed.

- **Data Source:** The **GSTN (Goods and Services Tax Network)** database will be used for primary information.
- **Sectors Covered:** Trade, Transport, Hospitality, IT, Education, and Health.
- **Collection Method:** Information will be collected through a secure web-based portal.

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### 3. STRATEGIC IMPORTANCE IN ECONOMIC STATISTICS

To estimate India's non-agricultural economy, MoSPI now utilizes a three-pronged survey approach:

1. **ASI (Annual Survey of Industries):** For the registered manufacturing sector.
  2. **ASUSE (Annual Survey of Unincorporated Sector Enterprises):** For the unorganized/unincorporated services and other sectors.
  3. **ASISSE:** Newly introduced for the **incorporated services sector**.
- **Legal Support:** The survey is conducted under the 'Collection of Statistics Act, 2008' and the 'Jan Vishwas Act, 2023'.

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### 4. EXAM INSIGHTS

- **Formation of NSO:** Established in 2019 by merging the National Sample Survey Office (NSSO) and the Central Statistics Office (CSO).
- **Key Functions:** Calculation of the Periodic Labour Force Survey (PLFS), Consumer Price Index (CPI), and Index of Industrial Production (IIP).
- **UPSC Mains Point:** The importance of ASISSE can be cited when writing about "Bridging the **Data Gap** in India." It facilitates more accurate **Evidence-based Policy** formulation for the services sector.

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### 5. STATIC GK

- **MoSPI Establishment:** 1999 (as an independent ministry).
- **Headquarters:** New Delhi.

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### CONCLUSION

Given the dominance of the services sector in the Indian economy, introducing an annual survey like ASISSE – moving beyond just the manufacturing sector (ASI) – is a revolutionary step. It aligns Indian economic statistics with international standards.

**Source:** PIB, I.E