

## DAILY CURRENT AFFAIRS (DCA)

Time: 45 Min

Date: 13-10-2025

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## INDIA'S DISEASE BURDEN SHIFTS FROM INFECTIOUS TO NON-COMMUNICABLE DISEASES

### In News

- According to the latest **Global Burden of Disease (GBD) report** published in The Lancet, Non-communicable diseases (NCDs) now account for nearly **two-thirds of global deaths**.
  - And, from 1990 to 2023, non-communicable diseases (NCDs) have **increasingly become the dominant causes of death in India**, overtaking infectious diseases.

### What are Non-Communicable Diseases?

- Noncommunicable diseases (NCDs), or chronic diseases, are long-lasting conditions caused by a mix of genetic, physiological, environmental, and behavioural factors.
- The major types include cardiovascular diseases (e.g., heart attacks, stroke), cancers, chronic respiratory diseases (asthma), and diabetes.

### Causes of the Shift

- Demographic Transition:** Decline in fertility and rise in life expectancy makes ageing population more prone to chronic diseases.
- Urbanisation and Lifestyle Changes:** Sedentary lifestyle, high-calorie processed foods, stress, alcohol and tobacco use.
- Environmental Factors:** Rising air pollution, chemical exposure, and urban heat islands contribute to respiratory and cardiovascular illnesses.
- Socio-economic Development:** Shift from communicable disease control to lifestyle-driven diseases — “diseases of affluence.”
- Health System Evolution:** Success in immunisation and sanitation reduced infectious diseases — but preventive systems for NCDs lagged.

### Implications

- High mortality :** NCDs disproportionately affect people in low- and middle-income countries, where nearly three quarters of global NCD deaths occur.
- Economic burden:** NCDs cost India nearly \$250 billion in productivity loss annually (WHO estimate). Out-of-pocket health expenditure remains >50%.
- Healthcare system pressure:** Chronic disease management requires long-term care, diagnostics, and infrastructure.

- Social Consequences:** Middle-aged population are affected which eventually affects working-age demographic dividend.
- Reduced quality of life:** NCDs often lead to disability, mental health challenges, and social isolation.
- Global Health Commitments:** India's progress toward SDG-3.4 (reduce premature mortality from NCDs by one-third by 2030) remains slow.

### Steps Taken

- The National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD)** supports screening, diagnosis, and treatment at district and community levels.
- Ayushman Bharat Health and Wellness Centres** promote preventive care and lifestyle counselling.
- Pradhan Mantri Bhartiya Janaushadhi Pariyojana** provides affordable medicines for cardiovascular, diabetic, and cancer care.
- Fit India Movement and Eat Right India** encourage healthier lifestyles.

### Suggestions

- Experts like Dr. Soumya Swaminathan emphasizes that India's rapid health transition, driven by delayed industrialisation, urbanisation, and globalisation, has led to an increase in NCDs.
- With longer life expectancy but higher morbidity, there is now a critical need to prioritise healthy ageing and NCD prevention.
- Controlling NCDs requires reducing their modifiable risk factors through low-cost, effective strategies.
- A comprehensive, multi-sectoral approach involving health, education, finance, and other sectors is essential for prevention and control.

### Sources:IE

## BASE YEAR REVISION OF INDEX OF INDUSTRIAL PRODUCTION (IIP)

### Context

- The Ministry of Statistics and Programme Implementation (MoSPI) is set to revise the base year of the Index of Industrial Production (IIP) to 2022–23, aligning it with the new base year proposed for GDP estimation.

### Need for Revising the Base Year

- The IIP is a key **short-term indicator** of industrial activity, used by the government, RBI, and researchers for policymaking, forecasting, and national accounts.

- The last IIP base year revision was 2011–12 and since then, major **technological changes, product diversification, and digitalization** have reshaped industrial production.
  - ♦ India's economic structure has transformed: services contribute **62.5% of GVA**, agriculture **15%**, and industry **22%**, indicating scope for growth.
- **MoSPI's Technical Advisory Committee for Base Year Revision of IIP (TAC-IIP)** has recommended aligning the IIP base year with **2022–23**, to capture these structural and technological shifts.
- **The United Nations** has recommended that the base period of the index number should be revised **quinquennially (every five years)**.

#### Index of Industrial Production (IIP)

- The IIP is an index which shows the **growth rates in different industry groups of the economy** in a stipulated period of time.
- The IIP is compiled as a simple weighted arithmetic mean of production relatives by using **Laspeyre's formula**.
- It is a composite indicator that **measures the growth rate of industry groups** classified under:
  - ♦ **Broad sectors:** Mining, Manufacturing, and Electricity.
  - ♦ **Use-based sectors:** Basic Goods, Capital Goods, and Intermediate Goods.
- **Released by:** The Central Statistical Organisation (CSO), Ministry of Statistics and Programme Implementation.
- **Base year:** 2011-2012
- **Periodicity:** Monthly basis

#### Proposed Improvements in the New IIP Series

- **Expanded Scope and Coverage:** The item basket is being revised to eliminate outdated products (e.g., fluorescent tubes, kerosene) and include modern goods like LED bulbs, laptops, vaccines, and aircraft components.
  - ♦ For the first time, minor minerals and gas supply will be covered, aligning with International Recommendations for the Index of Industrial Production (IRIIP, 2010).
- **Refinement of Data and Classifications:** MoSPI reviewed 276 "**not elsewhere classified**" (**n.e.c.**) items, meaning they didn't fit neatly into any specific category.
  - ♦ MoSPI reassigned **95%** of these items to specific product categories, leaving only **5%** unassigned.

- **Substitution of Non-operational Factories:** Earlier, factories remained in the sample even after closure or production change, leading to data distortion.
  - ♦ The new system introduces a methodology for timely replacement of such factories, ensuring continuity and comparability through overlapping data.
- **Seasonal Adjustment of Data:** A seasonally adjusted IIP series will be introduced for better identification of underlying trends and cyclical movements, improving short-term economic forecasting and policy analysis.
- **Integration with Digital Databases:** The integration of GST data and increased digital adoption in industrial statistics will enhance accuracy, reduce reporting lag, and improve real-time monitoring.

#### What are the Challenges?

- **Data Gaps and Coverage Issues:** Some sub-sectors, especially MSMEs and informal units, may remain underrepresented due to data constraints.
- **Timeliness of Data Collection:** Ensuring real-time data flow from diverse industrial establishments remains a challenge.
- **Transition Management:** Ensuring comparability with the old series and managing statistical breaks during transition will require careful calibration.

#### Way Ahead

- **Strengthen Industrial Surveys:** Broaden coverage of the Annual Survey of Industries (ASI) and use of technology-based reporting mechanisms.
- **Integration with Digital Ecosystems:** Utilize e-way bills, GSTN, and MCA21 data to enhance industrial statistics' timeliness and reliability.
- **Periodic Updates:** Ensure base year revisions every 5–7 years to keep pace with India's rapidly evolving industrial structure.
- **Capacity Building:** Train state and local statistical staff for data collection and validation to improve data quality at source.

Source: IE

## NATURAL FARMING GAINS TRACTION IN HIMACHAL

#### In News

- Farmers in Himachal Pradesh are increasingly adopting **natural farming**, supported by the State's flagship **Prakritik Kheti Khushhal Kisan Yojana (PK3Y)**, which promotes **chemical-free agriculture**.



### What is Natural Farming?

- It is a **chemical free farming**, involving livestock (preferably local breed of cow) integrated natural farming methods and diversified crop systems rooted in the Indian traditional knowledge.
- It is **rooted in Indian tradition** enriched with modern understanding of ecology, resource recycling and on-farm resource optimization.
- It is considered as an **agroecology** based diversified farming system which **integrates crops, trees and livestock** with functional biodiversity.
- It is largely based on on-farm biomass recycling with major stress on biomass mulching, use of on-farm cow dung-urine formulations; maintaining soil aeration and exclusion of all synthetic chemical inputs.

### Present status

- Several states like Andhra Pradesh, Karnataka, Himachal Pradesh, Gujarat, Uttar Pradesh, and Kerala are leading in natural farming, having developed successful models.

### Benefits

- **Improved Soil Health:** Natural farming enhances soil organic matter and microbial activity, leading to better nutrient cycling and water retention.



- **Reduced Input Costs:** Farmers save significantly by eliminating chemical fertilizers and pesticides, lowering their financial burden while enhancing farmer incomes.
- **Climate Resilience:** Diverse cropping systems and organic inputs help farms withstand erratic weather and reduce greenhouse gas emissions.
- **Healthy Food Production:** Chemical-free produce supports public health and aligns with growing consumer demand for organic food.

### Challenges

- **Yield Uncertainty:** Transitioning from chemical to natural inputs may initially reduce yields, especially in high-input zones.

- **Lack of Knowledge Gaps:** Farmers need training in soil biology, composting, and pest management without chemicals.
- **Market Linkages:** Lack of dedicated supply chains and certification mechanisms for natural produce limits profitability.
- Coordination between central and state governments, and alignment with existing agricultural schemes, remains uneven.

### Steps

- **National Mission on Natural Farming (NMNF)** is a standalone centrally sponsored Scheme launched in November 2024 to promote chemical-free, ecosystem-based natural farming rooted in traditional knowledge.

### Suggestions and Way Forward

- Natural farming marks a transformative shift in Indian agriculture, aiming to balance productivity with environmental sustainability.
- It reduces reliance on external inputs, making it a cost-effective approach with potential to boost rural employment and development.
- For its widespread adoption, key strategies include strengthening extension services through trained trainers and model farms, investing in long-term research on soil health and productivity, and developing robust market ecosystems with certification, branding, and fair pricing.

Source :TH

## PRADHAN MANTRI DHAN-DHAANYA KRISHI YOJANA AND SELF-RELIANCE IN PULSES MISSION

### Context

- PM Modi launched two new agriculture schemes, the PM Dhan Dhaanya Krishi Yojana (PMDDKY) and the Mission for Aatmanirbharta in Pulses, at a special Krishi programme in New Delhi.

### PM Dhan-Dhaanya Krishi Yojana

- It is a coordinated initiative involving **36 sub-schemes across 11 ministries**, designed to accelerate agricultural progress in aspirational districts.
- The scheme targets **100 low-performing agri-districts** with an annual outlay of **₹24,000 crore for 6 years** (starting from 2025-26).
  - ♦ It will be identified on the basis of three key indicators- low productivity , low cropping intensity and low credit disbursement.
- **Targeted beneficiaries:** 1.7 crore farmers.

- A digital dashboard, farmer app, and district ranking system will ensure transparency, access, and accountability.
- Objectives of the scheme:
  - ♦ Enhancing agricultural productivity.
  - ♦ Encouraging crop diversification and sustainable agricultural practices.
  - ♦ Augmenting post-harvest storage capacity at panchayat and block levels.
  - ♦ Improving irrigation infrastructure for reliable water access.
  - ♦ Enabling greater access to short-term and long-term agricultural credit for farmers.
- It aims to scale up domestic pulses production to **350 lakh tonnes** and expand the cultivation area to **310 lakh hectares by 2030–31**.
- It aims to ensure **100 percent** procurement of **Tur, Urad, and Masoor** at MSP for four years.
- A total of **88 lakh free seed kits** and **126 lakh quintals of certified seeds** will be distributed among farmers.



#### Mission for Aatmanirbharta in Pulses

- The Mission was launched for **2025–26 to 2030–31** with a budgetary allocation of **₹11,440 crore**.
- It aims to make India self-sufficient in pulses production, **reducing dependence on imports** in light of rising domestic demand.



Source: AIR

## NEWS IN SHORT

### THITU ISLAND

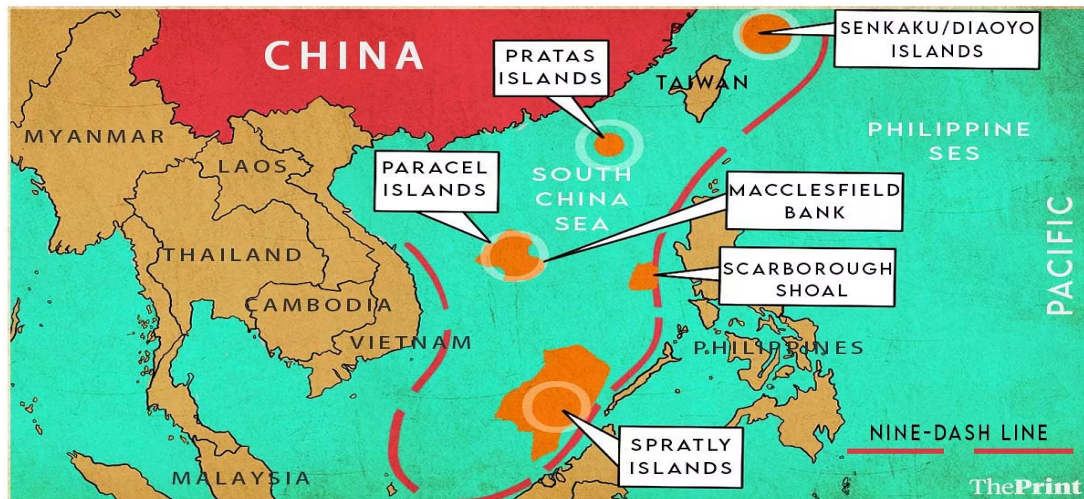
#### Context

- A Chinese coast guard ship and a Philippine government vessel collided near **Thitu Island**, part of the **Spratly Islands**.

#### About the Spratly Islands

- The Spratly Islands are a group of over **100 small islands, reefs, and atolls** located in the **South China Sea**.

- **Thitu Island**, also known as **Pag-asa Island**, is the **second-largest** naturally occurring island in the Spratly Islands archipelago within the South China Sea.
- **The Permanent Court of Arbitration (PCA) in The Hague** ruled that China's "**Nine-Dash Line**" has no legal basis under the **United Nations Convention on the Law of the Sea (UNCLOS)** and it had violated the Philippines' sovereign rights within its EEZ.
- ♦ However, China has refused to recognize the decision.



### South China Sea

- It is a marginal sea of the **Western Pacific Ocean**.
- It is located between **southern China, Taiwan, the Philippines, Indonesia, Vietnam, Thailand, Cambodia and Malaysia**.
- It is a crucial maritime gateway and junction for shipping between the **Pacific and Indian Oceans**.

### Dispute in South China Sea

- Southeast Asian countries like **China, Vietnam, the Philippines, Brunei, Malaysia and Taiwan** have had disputes over the contentious South China Sea region for centuries.
- The two primary points of contention are: The **Spratly Islands** and the **Paracel Islands** in the sea.
- **Nine-dash line:** China stakes claim to most of the region and at the heart of this claim is the U-shaped 'nine-dash line' that includes as much as **90 percent** of these waters.
  - ♦ This dotted line was adopted from Chinese maps in the 1940s, and represents Beijing's claim over the sea and all the land features that are contained within the line.

Source: AIR

## DURAND LINE

### In News

- Border clashes erupted between Afghanistan and Pakistan along the Durand Line.

### About the Durand Line

- The **Durand Line** is a **2,640 km** land border established in **1893** following an agreement between **Sir Mortimer Durand**, then Foreign Secretary of British India, and **Amir Abdur Rahman Khan**, the ruler of Afghanistan.
- The line was intended to define the spheres of influence between **British India and Afghanistan**, effectively splitting ethnic Pashtun and Baloch communities between the two sides.

Source: BT





## THALASSEMIA

### In News

- Thalassemia patients in Kerala are facing serious health risks due to a shortage of leukocyte filter sets and iron chelation drugs.

### Do you know?

- The **leukocyte filter**, essential for preventing adverse reactions during blood transfusions, are unavailable in many government hospitals, causing patients to limit transfusions and resulting in dangerously low haemoglobin levels.
- Iron chelation drugs**, needed to prevent organ damage from iron overload due to transfusions, have reportedly been unavailable for about a year.

### Thalassemia

- Thalassemia is a **group of inherited blood disorders** characterised by the body's inability to produce adequate amounts of haemoglobin, the protein found in red blood cells that is responsible for carrying oxygen.
- It leads to anemia and symptoms like fatigue and weakness.
- It is classified into alpha and beta thalassemia, with severity ranging from mild to life-threatening.
  - It is managed through **regular blood transfusions and iron chelation therapy**.

### Governments Steps

- The Union Health Ministry, in partnership with Coal India Limited, runs the **Thalassemia Bal Sewa Yojana (TBSY)**, providing up to Rs. 10 lakh financial aid to eligible patients for bone marrow transplants (BMT) at 17 empanelled hospitals nationwide, funded through CIL's CSR.
- Under the **National Health Mission**, States and UTs receive support to enhance healthcare services, including Thalassemia prevention and management, blood banks, day care centers, medicines, lab services, awareness programs, and staff training, based on their submitted plans.

Source :TH

## MAITRI II: INDIA'S NEW FRONTIER IN ANTARCTICA

### Context

- The Ministry of Finance has approved the establishment of Maitri II, India's upcoming research station in eastern Antarctica, to be completed by January 2029.

### India's Antarctic Presence

- In **1983**, India established the first permanent base in Antarctica named Dakshin Gangotri. However it is no longer in operation.
- India presently has two research stations at Antarctica namely '**Maitri**' and '**Bharati**'.
  - Maitri**: It has been in operation since 1989 and is located in a rocky mountainous region known as **Schirmacher Oasis in Queen Maud Land**.
  - Bharati**: The new station was **commissioned in 2012**. It is located between **Thala Fjord & Quilty bay**, east of Stornes Peninsula in Antarctica.

### About Maitri II

- Nodal Agency**: National Centre for Polar and Ocean Research (NCPOR), Goa.
- Estimated Cost**: 2,000 crore over seven years.
- Location**: Eastern Antarctica, near the **Schirmacher Oasis**, replacing the aging Maitri station.
- Green Research Base**: Designed to operate on renewable energy sources, solar during summer and wind energy year-round, reducing dependence on fossil fuels.

Source: IE

## INTERNATIONAL BLUE FLAG CERTIFICATION

### In News

- Five beaches in Maharashtra have received the **international Blue Flag certification**.
  - The list includes Shrivardhan and Nagaon beaches, Parnaka, and Guhagar and Ladghar beaches.

### What is Blue Flag Certification?

- Blue Flag is a **globally recognized eco-label for beaches**, marinas, and sustainable boating operators that meet strict environmental, safety, educational, and accessibility standards, often termed the gold standard of beach cleanliness.
- It is **administered by the Foundation for Environmental Education (FEE)**, a Denmark-based non-profit recognized by **UNEP and UNESCO**.
- India implements **Blue Flag under BEAMS** (Beach Environment & Aesthetics Management Services) within the **Integrated Coastal Zone Management Programme**.
- The nodal agency in India is the Society of Integrated Coastal Management (SICOM) under the Ministry of Environment, Forest and Climate Change (MoEFCC).

### Blue Flag beaches in India (2025)

- India has 12 certified beaches: Shivrajpur (Gujarat), Ghoghla (Diu), Kasarkod (Karnataka), Padubidri (Karnataka), Kappad (Kerala), Rushikonda (Andhra Pradesh), Golden Beach/Puri (Odisha), Radhanagar (Andaman & Nicobar Islands), Kovalam (Tamil Nadu), Eden Beach (Puducherry), Minicoy Thundi (Lakshadweep), and Kadmat (Lakshadweep).

Source: AIR

## IUCN WORLD HERITAGE OUTLOOK 2025

### In News

- The IUCN World Heritage Outlook 4 revealed a worrying global environmental trend that climate change has emerged as the greatest threat to natural World Heritage sites.

### Key Points

- The report finds that 43% of sites face severe climate threats, while invasive alien species affect 30%, and wildlife and plant diseases are rising sharply, now impacting 9% of sites, up from just 2% in 2020.
- Overall positive conservation outlook dropped from 62% (2020) to 57% (2025).
- Khangchendzonga National Park is the only site rated "Good" in conservation outlook.
- Sundarbans National Park has deteriorated from "Good with Some Concerns" (2020) to "Significant Concern" (2025) due to sea-level rise, salinity, and cyclones.
- Manas National Park is in significant Concern category persists due to poaching and encroachment.

Source: TH

## EXERCISE AUSTRALIND 2025

### In News

- The 4th edition of Exercise AUSTRALIND 2025 began in Australia.

### About the Exercise

- AUSTRALIND, launched in 2022 in Rajasthan, has evolved into an annual bilateral military exercise, held alternately in India and Australia.
- The 2025 edition focuses on joint company-level operations in open and semi-desert terrain, including joint planning, tactical drills, and special arms skills.

Source: PIB

## KENTON R. MILLER AWARD

### Context

- Dr Sonali Ghosh, Field Director of Kaziranga National Park became the first Indian to receive the prestigious WCPA-Kenton Miller Award at the IUCN World Conservation Congress held in Abu Dhabi, UAE.

### About Kenton R. Miller Award

- Established in 2006, the Kenton R. Miller Award for Innovation in National Parks and Protected Area Sustainability is presented every two years by the World Commission on Protected Areas (WCPA).
- WCPA is one of the six technical commissions of the International Union for Conservation of Nature (IUCN).
- The award honors individuals who demonstrate innovation and leadership in conserving national parks and protected areas, particularly in ensuring their long-term sustainability.
- The award is named after Dr. Kenton R. Miller, a former IUCN Director General and a prominent global leader in protected area management.

Source: TH

## ABEL PRIZE 2025

### Context

- Japanese mathematician Masaki Kashiwara was awarded the Abel Prize 2025 for contributions to algebraic analysis and representation theory.

### Contributions of Masaki Kashiwara

- He pioneered the theory of D-modules, an algebraic framework to study systems of linear partial differential equations (PDEs).
- He developed tools like microsupport and characteristic varieties, which reveal how singularities in equations propagate.
- His work on sheaf theory, deepened understanding of how local analytical data connects to global geometric structure.

### About Abel Prize

- The Abel Prize is an international award recognizing outstanding scientific work in mathematics, often considered the equivalent of a Nobel Prize for mathematicians.
- It is named in honor of the 19th-century Norwegian mathematician Niels Henrik Abel.
- Awarded by: The Norwegian Academy of Science and Letters on behalf of the Government of Norway.



- **Selection process:** An expert committee of **five internationally recognized mathematicians** recommends the laureate(s) to the Norwegian Academy of Science and Letters.
- **The prize was established** by the Norwegian Parliament in **2002** and first awarded in **2003**.
  - ♦ It can be awarded to mathematicians of any age and nationality.

**Some Notable Laureates**

- **Jean-Pierre Serre:** **First laureate (2003)** for contributions in algebraic geometry and topology.
- **Srinivasa S. R. Varadhan:** Indian-origin mathematician, won in **2007**.
- **Michel Talagrand (France)** For contributions to probability theory and functional analysis won in **2024**.

Source: TH

