



DATE: 1 SEPTEMBER 2026

1 Sone River (Source: The Hindu)

- **Origin:** Amarkantak hills of the Maikal Range in Madhya Pradesh.
- **Passing States:** Madhya Pradesh, Uttar Pradesh, Jharkhand, and Bihar.
- **Note:** It is a principal southern tributary of the Ganges (Ganga) River after the Yamuna River.
- **Tributaries:** Major tributaries of the Son River are Banas, Gopad, Rihand, Kanhar, and North Koel.
- **Geographical Setting:** The valley is bordered by the Kaimur Range to the north and the Chota Nagpur Plateau to the south.
- **Dispute:** Disputed between Bihar and Jharkhand, which recently reached an agreement.



2 India Semiconductor Mission (ISM 2.0) (Source: The Hindu)



INDIA SEMICONDUCTOR MISSION 2.0

Building Chips for a Self-Reliant & Technologically Advanced India

Approved by the Union Cabinet in December 2024



 WHAT IS ISM 2.0? A comprehensive programme to accelerate the development of India's semiconductor and display ecosystem by strengthening the entire value chain – from design to manufacturing and technology leadership.	 VISION To make India a global hub for semiconductor design, manufacturing and technology innovation, ensuring self-reliance, economic growth and national security.	 OUTLAY ₹76,000 crore (approx.) for the period FY 2024–25 to FY 2030–31	 IMPLEMENTING AGENCY Digital India Corporation (DIC) under the Ministry of Electronics and Information Technology (MeitY)
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KEY FOCUS AREAS

- Semiconductor Fabs**
Incentivising establishment of leading-edge and mature-node semiconductor fabs in India.
- OSAT & ATMP / Packaging**
Promoting Outsourced Semiconductor Assembly and Test (OSAT) units and Advanced Packaging facilities.
- Design Linked Incentives (DLI)**
Strengthening chip design ecosystem and supporting start-ups, MSMEs and academia.
- Display & Compound Semiconductors**
Supporting display fabs and compound semiconductor (e.g., GaN, SiC) manufacturing.
- R&D, Innovation & Talent**
Investing in R&D, Centres of Excellence and skilling to build a world-class talent pipeline.
- Strong & Resilient Supply Chain**
Developing a secure, trusted and diversified supply chain for critical materials, equipment and IP.

WHAT'S NEW IN ISM 2.0?

- Expanded scope covering the entire semiconductor value chain including materials, equipment and IP development.
- Greater private sector participation with attractive and predictable incentive framework.
- Focus on global partnerships and technology collaborations with trusted countries.
- Strengthening sustainable and energy-efficient semiconductor manufacturing.
- Cluster development approach across states for balanced regional growth.
- Emphasis on national security and strategic autonomy in critical technologies.

EXPECTED OUTCOMES

 Atmanirbhar Bharat in semiconductors

 Large-scale investments & job creation

 Integration into global semiconductor value chains

 Strengthened technological sovereignty

 Boost to GDP and high-tech exports

VALUE CHAIN COVERED

 Design
  Manufacturing (Fab)
  Packaging & Assembly (OSAT/ATMP)
  Testing
  Display & Applications

WHY IT MATTERS

Semiconductors are the foundation of modern economies – powering everything from smartphones and EVs to defence systems and AI. ISM 2.0 is a decisive step towards making India a global semiconductor powerhouse.





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POWERING INDIA'S DIGITAL FUTURE. • SECURING TOMORROW.

#ISM2.0

3 Coral Bleaching (Source: Down To Earth)

CORAL BLEACHING

When Corals Lose Their Color, Oceans Lose Their Life

Coral bleaching occurs when corals are stressed by changes in their environment and expel the symbiotic algae (zooxanthellae) living in their tissues. Without these algae, corals lose their vibrant colors and much of their energy.

THE TRANSFORMATION

HEALTHY CORAL

BLEACHED CORAL

HOW DOES CORAL BLEACHING HAPPEN?

Environmental Stress
Rising sea temperatures, strong sunlight, pollution or other stressors affect corals.

Algae Expulsion
Corals expel the symbiotic algae (zooxanthellae) living in their tissues.

Bleached Coral
Without algae, corals turn white or very pale and lose major source of energy.

Possible Death
If stress continues, corals may starve, become prone to disease and die.

MAJOR CAUSES

- Rising Sea Temperatures**
Ocean warming is the leading cause of mass bleaching events.
- Excessive Sunlight**
High light intensity during heatwaves increases stress on corals.
- Pollution & Runoff**
Sediments, chemicals and nutrients harm corals and reduce water quality.
- Other Stressors**
Ocean acidification, low tides, overfishing and physical damage.

TYPES OF CORAL BLEACHING

PARTIAL BLEACHING
Only a part of the coral colony turns white.

COMPLETE BLEACHING
The entire coral colony turns white.

MORTAL BLEACHING
Prolonged bleaching leads to coral death.

DID YOU KNOW?

- Mass coral bleaching events have become more frequent and intense in recent decades.
- When corals bleach, the entire reef ecosystem—including fish, invertebrates and plants—is threatened.
- Coral reefs support biodiversity, protect coastlines and contribute billions of dollars to local economies through tourism and fisheries.

IMPACTS OF CORAL BLEACHING

LOSS OF BIODIVERSITY
Bleaching threatens the survival of countless marine species that depend on coral reefs.

WEAKER COASTAL PROTECTION
Damaged reefs are less able to protect coastlines from waves, storms and erosion.

ECONOMIC LOSSES
Affects tourism, fisheries and livelihoods of millions of people worldwide.

THREAT TO FOOD SECURITY
Reef degradation impacts fish population that communities rely on.

WHAT-TERM ECOSYSTEM DECLINE
Reefs may take decades to recover—if conditions improve.

WHAT CAN WE DO?

- Reduce greenhouse gas emissions to combat climate change.
- Keep oceans clean: reduce pollution and manage coastal runoff.
- Support sustainable fishing and protect reef habitats.
- Raise awareness and support coral conservation initiatives.

CAN CORALS RECOVER?

Yes! If stress is temporary, corals can reacquire algae and regain their color. Healthy reefs are resilient—but they need our help to survive.

WHAT SCIENTISTS SAY

“Coral reefs are in crisis, but not hopeless. With urgent global action, we can protect and restore these vital ecosystems for future generations.”

HEALTHY CORALS, HEALTHY OCEANS, HEALTHY PLANET.
Act today for vibrant reefs tomorrow.