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# CURRENT AFFAIRS

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## PLANETARY BOUNDARIES

*This article covers "Daily Current Affairs" and the topic details "Planetary Boundaries". This topic has relevance in the "Environment and Ecology" section of the UPSC CSE exam.*

### **For Prelims:**

*What are Planetary Boundaries?*

*Current Status?*

### **For Mains:**

*GS3: Environment and Ecology*

### **Why in the news?**

A recent study has revealed that humanity has exceeded six of the nine critical planetary boundaries essential for maintaining the stability and resilience of Earth's ecosystems.

### **Planetary Boundaries**

- Planetary boundaries serve as a critical framework that sets limits on how much human activity can impact Earth's natural systems. In simpler terms, it provides guidelines on how we can use Earth's resources without drastically altering the environmental conditions that support our way of life.
- This framework was developed in 2009 and defines nine specific planetary boundaries. Scientists believe these boundaries encompass all the crucial processes necessary to maintain Earth's stability.
- For each boundary, specific control variables are chosen to represent the most significant ways human activities impact that particular aspect of the planet.

### **About the Study**

- This study represents an update to the planetary boundaries framework, initially introduced in 2009 to establish safe boundaries within which humanity can operate environmentally. To achieve this, the researchers embarked on a comprehensive process:
  - They began by identifying the essential processes within Earth's ecosystem that have been pivotal in maintaining favourable conditions for human existence over the past 12,000 years.
  - Subsequently, they conducted an assessment of the extent to which human activities are altering these crucial processes.
  - They aimed to pinpoint the threshold at which human actions pose a significant risk of initiating potentially profound and irreversible changes in Earth's overall conditions.
- It's important to note that breaching individual boundaries does not immediately spell disaster.

However, such breaches elevate the risk of initiating processes that could dramatically and irreversibly alter the overall environmental conditions on Earth to a point where our current civilisation can no longer be sustained.

## Nine Planetary Boundaries

### Planetary Boundaries

Biosphere Integrity	Health of ecosystems and species extinction rate; assesses overall biological diversity health.
Climate Change	Focuses on atmospheric CO <sub>2</sub> levels (a major driver of global warming) and changes in radiative forcing (energy balance with the sun) critical for climate dynamics.
Novel Entities	Examines levels of human-made substances (e.g., plastics, synthetic chemicals) not naturally found on Earth without human intervention.
Stratospheric Ozone Depletion	Concerns human-induced chemical releases harming the ozone layer, crucial for shielding Earth from harmful solar radiation.
Freshwater Change	Assesses human impact on blue water (in lakes and rivers) and green water (in soil for plants and microorganisms) availability and quality.
Atmospheric Aerosol Loading	Tracks human-emitted particles influencing cloud formation and global/regional atmospheric circulation, affecting climate and air quality.
Ocean Acidification	Examines long-term ocean pH reduction due to increased atmospheric CO <sub>2</sub> , potentially harming marine ecosystems and biodiversity.
Land System Change	Focuses on land use changes, particularly converting tropical forests to agricultural land, affecting Earth's land cover and ecosystems.
Biogeochemical Flow	Assesses changes in natural cycles of vital elements (e.g., nitrogen, phosphorus) essential for plant growth and ecosystem health, which human activities can disrupt.

### Findings of the Study

- **Planetary Boundary Breaches**
  - Human activities have breached six of the nine planetary boundaries: climate change, biosphere integrity, freshwater change, land system change, biogeochemical flows, and novel entities.
  - Atmospheric aerosol loading and ozone depletion remain within acceptable limits, but ocean acidification is nearing a breach.
- **Biogeochemical Flow Overflow**
  - The overflow of nitrogen and phosphorus, related to the biogeochemical flow boundary, is particularly concerning.
  - While these elements are essential for life, their widespread use as crop fertilisers has led to issues like algal blooms and oxygen-depleted ocean dead zones, harming ecosystems.
- **Rising Levels of Novel Entities**
  - Human activities have led to a notable increase in novel entities in the environment.
  - Unprecedented amounts of synthetic chemicals, such as pesticides and plastics, have been released without sufficient safety testing, destabilising Earth's systems.
- **Land System Change**

- Deforestation in the Amazon tropical forest has increased to the extent that it has breached the planetary boundary.
- **Climate Change**
- Both atmospheric CO<sub>2</sub> concentration and radiative forcing are steadily rising concerning climate change.
- CO<sub>2</sub> concentration stands at 417 ppm, well above the safe boundary limit of 350 ppm, which was breached in the 1980s during the Industrial Revolution.

### Way Forward: A Ray of Hope

- Notably, there's a positive example in the form of the stratospheric ozone depletion boundary, which is on the path to recovery. This progress resulted from international cooperation initiated by the Montreal Protocol in 1987.
- Researchers believe such coordinated efforts can serve as a model for addressing other breached boundaries and safeguarding our planet's health.

**Sources:**

**Humans breach most of the planetary boundaries that keep Earth habitable**

### Q1. With reference to Planetary boundaries, consider the following statements:

1. Planetary boundaries limit human activity's impact on Earth's natural systems, preserving environmental conditions for our well-being.
2. The planetary boundaries framework was developed in 2009, defining twelve specific boundaries encompassing critical processes for Earth's stability.
3. As per recent studies, six planetary boundaries have been breached by human activities

**Which of the statements given above is/are correct?**

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) None

**Answer: (c)**

### Q2. Consider the following:

1. Renewable Energy Transition
2. Biogeochemical Flow
3. Stratospheric Ozone Depletion
4. Biosphere Integrity
5. Biodiversity Connectivity

**How many of the above are planetary boundaries as delineated in the 2009 framework?**

- (a) Only one
- (b) Only two
- (c) Only three
- (d) Only Four

**Answer: (c)**

**Q3. What are planetary boundaries, and why are they essential for global sustainability? Discuss the significance of international cooperation in managing planetary boundaries and propose measures for effective implementation.**

Gaurav Nikumbh

## **NON-PERFORMING ASSETS (NPAS)**

*This article covers "Daily Current Affairs" and the Topic details "Non-Performing Assets (NPAs)". This Topic has relevance in the Economy section of the UPSC CSE exam.*

### **For Prelims:**

*About Non-Performing Assets (NPAs)?*

### **For Mains:**

*GS 3: Economy*

*Impact of Non-Performing Assets (NPAs)?*

*Current NPA Situation in India?*

### **Why in the news:**

The Reserve Bank of India (RBI) has recently proposed that lenders should classify a borrower as a "wilful defaulter" within six months of their account being declared a non-performing asset (NPA).

### **About Non-Performing Assets (NPAs)**

Non-Performing Assets (NPAs) are financial assets, typically loans or advances, that have not met their scheduled principal or interest payment obligations for a specified period, usually 90 days or more. Here's a rephrased explanation:

- **Definition of NPAs:** NPAs are loans or advances for which the borrower has failed to make principal or interest payments for a period exceeding 90 days.
- **Asset Status for Banks:** For banks, loans are considered assets because the interest income generated from these loans is a significant source of revenue. When borrowers, whether retail or corporate, are unable to make interest payments, these assets become "non-performing" for the bank as they cease to generate income.
- **RBI's Definition:** The Reserve Bank of India (RBI) defines NPAs as assets that no longer contribute to a bank's income.
- **Disclosure Requirements:** Banks are obligated to publicly disclose their NPA figures and report them to the RBI regularly.
- **Classification of NPAs:** According to RBI guidelines, NPAs are categorized into three classes:
  - Substandard Assets: Those that have been NPAs for up to 12 months.
  - Doubtful Assets: Assets that have remained substandard for 12 months.
  - Loss Assets: Assets with minimal recovery value, deemed uncollectible, and not considered bankable assets.

- **NPA Provisioning:** Provision for a loan involves setting aside a certain percentage of the loan amount by banks. The standard provisioning rate for loans in Indian banks ranges from 5% to 20%, depending on factors like the business sector and the borrower's repayment capacity. However, under Basel-III norms, 100% provisioning is required for NPAs.
- **GNPA and NNPA:** Two key metrics assess the NPA situation of a bank:
  - **Gross Non-Performing Assets (GNPA):** It represents the total value of NPAs for a bank within a specific quarter or financial year.
  - **Net Non-Performing Assets (NNPA):** NNPA is derived by subtracting the provisions made by the bank from the gross NPA. It provides the actual value of NPAs after accounting for specific provisions.
- **NPA Ratios:** NPAs can also be expressed as a percentage of total advances, providing insights into the unrecoverable portion of the loan portfolio. For instance:
  - **GNPA Ratio:** This is the ratio of total GNPA to total advances.
  - **NNPA Ratio:** It calculates the ratio of net NPA to total advances, offering a more accurate picture of the NPA situation after accounting for provisions.

#### **Impact of Non-Performing Assets (NPAs):**

- **Reduced Lending Capacity:** Banks face constraints in allocating funds for productive economic activities due to the presence of NPAs.
- **Interest Rate Hikes:** To maintain profitability, banks may be compelled to raise interest rates on loans.
- **Unemployment Concerns:** A decrease in investments stemming from NPA issues can potentially lead to an increase in unemployment rates.
- **Handling NPAs:** Banks have two primary options for dealing with NPAs: they can either retain them in their records with hopes of eventual recovery, make provisions for them, or completely write off the loans as bad debt.

#### **Current NPA Situation in India:**

- As per the latest RBI Financial Stability Report, the gross NPA ratio for scheduled commercial banks (SCBs) in India reached a 10-year low of 3.9% in March 2023.
- Both gross and net NPA ratios have declined significantly from their peak levels in March 2018, standing at 3.9% and 1.0% in March 2023, respectively.
- A notable reason for the reduction in gross NPA levels in 2022-23 was the substantial write-offs undertaken by banks.

#### **Prediction for India:**

- Stress test results suggest that the gross NPA ratio for all SCBs may improve to 3.6% by March 2024.
- However, in scenarios where the macroeconomic environment deteriorates to a medium or severe stress level, the gross NPA ratio could increase to 4.1% and 5.1%, respectively.

**Source:**

<https://indianexpress.com/article/business/declare-wilful-defaulters-within-6-months-npa-tag-rbi-proposal-8950548/>

**Q.1 Which of the following statements regarding Non-Performing Assets (NPAs) in India are correct?**

1. NPAs are loans or advances for which interest payment is overdue for a period exceeding 60 days.
2. Net Non-Performing Assets (NNPA) represent the total value of NPAs without accounting for provisions made by the bank.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**ANSWER: B**

**Q.2 Which of the following statements regarding Non-Performing Assets (NPAs) and their impact in India are true?**

1. Lower NPAs generally result in banks decreasing interest rates on loans.
2. The NNPA Ratio offers a more accurate picture of the NPA situation.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**ANSWER: C**

**Q.3 The management of Non-Performing Assets (NPAs) has far-reaching implications for India's banking sector and the broader economy. Analyze**

**Rishabh**

