



Daily current affairs

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Ocean Acidification

Why in News

Shelled marine creatures living in increasingly acidified oceans face a fight for survival as the impacts of climate change spread, a study suggests. Increasing carbon dioxide levels cause seawater to become corrosive to shellfish

What is Ocean acidification?

When carbon dioxide (CO₂) is absorbed by seawater, chemical reactions occur that reduce seawater pH, carbonate ion concentration, and saturation states of biologically important calcium carbonate minerals. These chemical reactions are termed "ocean acidification".



By what margin ocean acidification has increased and future predictions?

- Since the beginning of the Industrial Revolution, the pH of surface ocean waters has

fallen by 0.1 pH units. This change represents approximately a 30 percent increase in acidity

- Estimates of future carbon dioxide levels, based on business as usual emission scenarios, indicate that by the end of this century the surface waters of the ocean could have acidity levels nearly 150 percent higher, resulting in a pH that the oceans haven't experienced for more than 20 million years.

What is the Impact on Biodiversity?

- Ocean acidification is expected to impact ocean species to varying degrees.
- Photosynthetic algae and seagrasses may benefit from higher CO₂ conditions in the ocean, as they require CO₂ to live just like plants on land.
- On the other hand, studies have shown that lower environmental calcium carbonate saturation states can have a dramatic effect on some calcifying species, including oysters, clams, sea urchins, shallow water corals, deep sea corals, and calcareous plankton.

The Gharials of the Gandak

Why in News?

Two recent surveys indicate that the Gandak, a trans-boundary river between Nepal and India, houses 210 gharials in the Indian section, the second-largest such population in the country after the Chambal

About



- The gharial is "**Critically Endangered**" as per the IUCN Species Survival Commission assessment in 2007.
- Its distribution range has shrunk and currently, it occupies only about 2 per cent of its former range.
- The gharial population has registered a decline of up to 98 per cent between 1946-2006 and the adult population has nosedived, with a 58 per cent reduction across its range in just nine years from 1997.
- The monitoring of the gharials released in the Gandak River produced remarkable finds—a released gharial crossed the barrage upstream and another covered over 1,000 km to reach the **Mahananda**, another northern tributary of the Ganga along the Bihar-West Bengal border.
- Of more conservational importance was the discovery of a nesting site in 2016. With this, the **Gandak became the fourth breeding site** for the gharial in India, the other three being the **Chambal, Girwa and Ramganga** river systems.
- This constitutes India's second-largest gharial population after the Chambal river.

What does this Indicate?

- The presence of such a good number of gharials indicates the healthy condition of the river, especially disturbance-free zones, with sufficient food and availability of sand banks which are under great threat due to mining in other gharial-inhabited rivers in the country.
- But, it does not mean that conditions would be optimal for the gharial in the Gandak in the future.

What are the threats to the Gharials of Gandhak?

- The release of water in large volumes from the barrage during the breeding season erodes and inundates nesting sites.
- Notification of the entire river stretch as National Waterway 37 as per the National Waterways Act

Gandhak river



RBI Nominee Directors in the boards of Public Sector Banks

Why in News?

The Finance Ministry is learnt to have turned down the Reserve Bank of India's demand for withdrawing its nominee directors from the boards of public sector banks, arguing that in these times of stress in the banking sector, the banking regulator's presence is important, sources familiar with the matter said.

Why the RBI wants to withdraw Nominee Directors in the boards of Public Sector Banks?

RBI has argued that its nominee directors should be distanced from the management committee of the board of the PSU banks, which takes credit decisions, to avoid any **conflict of interest**. Two issues demand interest in this aspect

Letters of Undertaking (LOU) issue

- After the Nirav Modi-led LoU scam came to light at the Punjab National Bank, the government pointed to supervisory lapses on the part of the RBI.
- The RBI, on its part, argued that "its supervisory process does not constitute an audit of banks and does not seek to replace it"

PCA issue

- The RBI's argument is that as the banking regulator, it should not be sitting on the boards of the "regulated entity" or the banks, as it leads to conflict of interest and hampers effective regulation.
- A total of eleven public sector banks have been put under the RBI's **Prompt Corrective Action (PCA) framework**, which puts certain managerial and lending restrictions on

banks with a view to turn them around by conserving capital and cutting down losses.

Does RBI have more regulatory control over Private Banks than PSU banks?

Yes and the powers that the RBI has over private banks, but not over PSU banks are,

- The mandate to remove the Chairman and Managing Director and to appoint them.
 - Call a meeting of directors of the bank concerned.
 - Appoint observers.
 - Remove managerial and other persons from office.
 - Supersede the Board of Directors.
 - Make application for winding up and amalgamation.
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Gorkhas

Why in News?

the Home Ministry issued a communication citing a 1950 treaty between India and Nepal, and stating that Gorkhas living in India cannot be referred to Foreigners Tribunals in Assam.

Who are Gorkhas?



- Gorkhas (or Gurkhas) are Nepali-origin people who take their name from the 8th-century Hindu warrior-saint Guru Gorakhnath and from the Nepal hill town of Gorkha.
- In India, the word is sometimes used to make a distinction between Indian Gorkhas, who are citizens of India, and Nepali citizens who are living in India.

When did Gorkhas settle in Assam?

- The first large flush of Nepali-speaking persons came in the form of soldiers in the Gorkha Corps when the British annexed Assam in 1826.
- The British raised the Assam Light Infantry which had two Gorkha companies.
- The Assam Rifles, born as Cachar Levy in 1835, recruited several Gorkhas.
- Others were brought as workers in sectors and occupations including tea cultivation, laying of railway tracks, oil and coal industries, and as porters, herdsmen or marginal farmers.
- The apex body Assam Gorkha Sammelan estimates around 20-22 lakh Gorkhas are living in the state.

What has prompted the Home Ministry to issue a clarification about Gorkhas in Assam now?

- At a time when the National Register of Citizens (NRC) is being updated, the All Assam Gorkha Students' Union made a representation to the ministry about members of the community being referred to Foreigners Tribunals.
- The ministry cited the Foreigners Act (1946) and the 1950 treaty to state that Gorkhas


cannot be referred to these tribunals. effectively covering both Indian and Nepali citizens.

Stephen Hawking New Book

Why in News?

Stephen Hawking's final work, which tackles issues from the existence of God to the potential for time travel, was launched on October 15, by his children, who helped complete the book after the British astrophysics giant's death.

About

-  Brief Answers to the Big Questions is a popular-science book written by physicist Stephen Hawking.
- The book examines some of the universe's greatest mysteries, and promotes the view that science is very important in helping to solve problems on planet Earth.
- The book is divided into four sections: "Why Are We Here? Will We Survive? Will Technology Save Us or Destroy Us? How Can We Thrive?"

Challenges discussed by the book

The book discusses many of today's challenges, including the biggest threat to the planet ,an **asteroid collision, climate change, the threat of nuclear war, nuclear power** ("that would give us clean energy with no pollution or global warming"), **the development of artificial intelligence (AI), genetically-modified race of superhumans, disease resistance** and so on

Stephen Hawking

