

UPSC 2017: Comprehensive News Analysis – July 02

TABLE OF CONTENT

A. [GS1 Related](#)

Geography

1. [Antarctica's ice-free islands set to grow](#)
2. [Sunderbans mangrove cover at risk](#)

B. [GS2 Related](#)

Polity

1. [Minister calls for quota in cricket team](#)

International Relations

1. [Why Bhutan is special to India](#)
2. [Xi draws "red line" in Hong Kong](#)

C. [GS3 Related](#)

Economics

1. [Indians' money in Swiss banks hit record low at Rs. 4,500 crore](#)
2. [BIZ-GDP-ANANT](#)
3. [One lakh suspect firms deregistered](#)

Science and Technology

1. [New material uses sunlight to detoxify water](#)
2. [The pursuit of app-iness](#)
3. [Cheaper, indigenous TB test enters final validation phase](#)

D. [GS4 Related](#)

E. [Concepts-in-News: Related Concepts to Revise/Learn](#)

F. [Bills/Acts/Schemes/Orgs in News](#)

G. [Practice Questions for UPSC Prelims Exam](#)

UPSC Current Affairs 2017: News Analysis

A. GS1 Related

Category: GEOGRAPHY

1. [Antarctica's ice-free islands set to grow](#)

Context: Climate change and impact on biodiversity

In news:

Antarctica's ice-free islands:

- Within the Antarctica's continent one can find isolated ice-free nooks – nunataks (exposed mountain tops), scree slopes, cliffs, valleys and coastal oases – which cover less than 1% of the area.
- These ice-free areas support almost all of the continent's biodiversity.
- A paper published in Nature indicates the possibility of expansion of these ice-free islands over 17,000 sq.km (a 25% increase) due to climate change
- Much of the life thrives in Antarctica's ice-free pockets: small invertebrates (nematodes, springtails, and tardigrades) vascular plants, lichen, fungi, mosses and algae. They also serve as breeding ground for sea birds (including the Adelie penguins) and elephant seals.

Possible impacts:

- **Positive:** good news for Antarctica's biodiversity that is likely to find larger habitats.
- **Negative :**
- Biggest threats from an increase in ice-free area appears to be the spread of invasive species
- As ice-free islands expand and coalesce, biodiversity could homogenise, less competitive species could go extinct and ecosystems destabilise from the spread of **invasive species**
- The species that will lose will most likely be those that are not very competitive and can't cope with the invasive species.

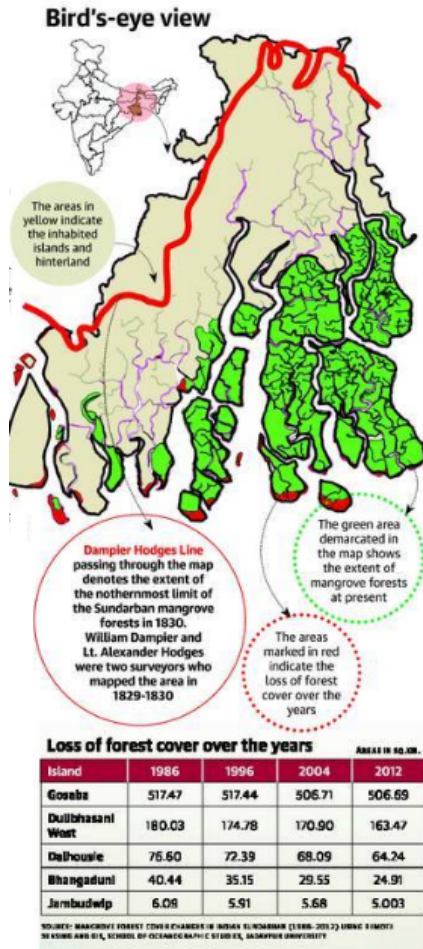
Climate change:

- The greatest change in climate is projected for the Antarctic Peninsula by the end of the century, and more than 85% of the new ice-free area is believed to occur in the **north Antarctic Peninsula**.

Basic information:

Invasive species: An invasive species is a plant, fungus, or animal species that is not native to a specific location (an introduced species), and which has a tendency to spread to a degree believed to cause damage to the environment, human economy or human health

2. [Sunderbans mangrove cover at risk](#)



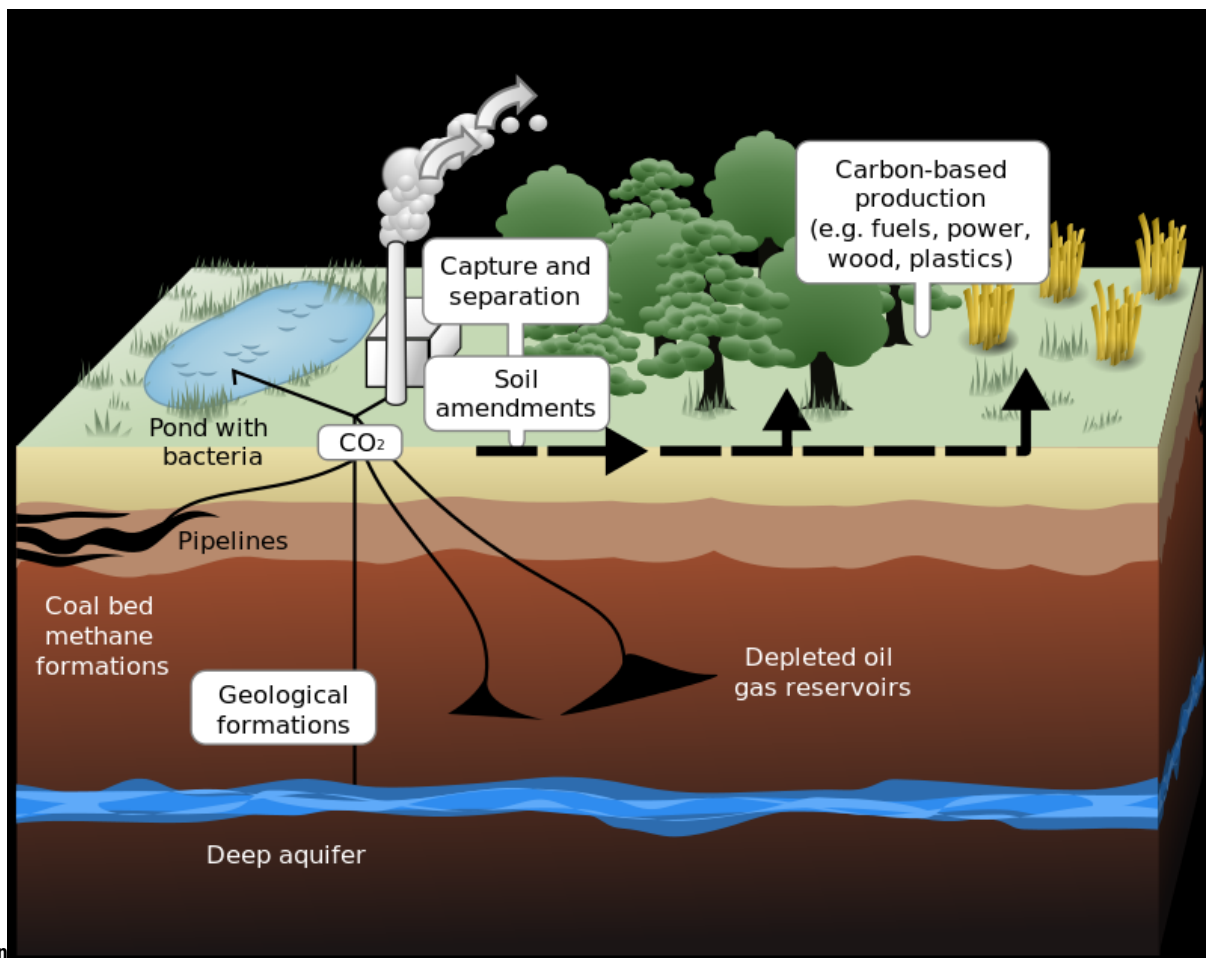
Highlights of study by Jadavpur University

- **Study:** Mangrove Forest Cover Changes in Indian Sunderbans (1986-2012) Using Remote Sensing and GIS, a publication by the School of Oceanographic Studies, Jadavpur University
- Depleting Mangrove forest cover in the Sunderbans at an alarming rate over the past few decades.
- From 1986 to 2012, 124,418 sq. km., or about 5.5% of the mangrove cover, was lost.
- Climate change and sea level rise has contributed to the phenomenon of losing land, including mangrove forests in the Sunderbans, in the last part of the 21st century. Mean sea level rise can be considered a driving factor for coastal erosion, coastal flooding, and an increase in the number of **tidal creeks**.
- Sunderbans has lost 3.71% of its mangrove and other forest cover, while losing 9,990 hectares of its landmass to erosion in one decade.

Threats associated with mangrove damage:

- The continuation of this process (damage to mangroves) in response to climate change and sea level rise poses a serious threat to the **carbon sequestration** potential and other ecosystem services of this mangrove forest in future.
- A critical minimal inflow of freshwater is necessary for the luxuriant growth of mangroves. When freshwater inflow is missing, there is a change in mangrove succession, and freshwater loving species of mangroves are replaced by salt-water loving ones. Immediate impact of salinity will be on the fishing community, where commercially sought after fish species will be replaced by fish that does not have as much market value.

Basic information:



Carbon sequestration

Carbon sequestration is the process involved in carbon capture and the long-term storage of atmospheric carbon dioxide. Carbon sequestration involves long-term storage of carbon dioxide or other forms of carbon to mitigate or defer global warming. It has been proposed as a way to slow the atmospheric and marine accumulation of greenhouse gases, which are released by burning fossil fuels.

Carbon dioxide (CO₂) is naturally captured from the atmosphere through biological, chemical, and physical processes. Artificial processes have been devised to produce similar effects, including large-scale, artificial capture and sequestration of industrially produced CO₂ using subsurface saline aquifers, reservoirs, ocean water, aging oil fields, or other carbon sinks.

B. GS2 Related

Category: **POLITY**

1. [Minister calls for quota in cricket team](#)

In news:

- Union Minister of State for Social Justice and Empowerment Ramdas Athawale demanded **25% reservation for Dalits and Adivasis in the cricket team and other sports.**
- Reason:** Dalits and Adivasis don't get proper representation in sport.

Category: **INTERNATIONAL RELATIONS**

1. [Why Bhutan is special to India](#)

Context: standoff between Indian and Chinese troops in Doka La (Doklam)

India's role in Bhutan's security:

- **2007 India-Bhutan Friendship Treaty :**
 - The two sides have agreed to “cooperate closely with each other on issues relating to their national interests. Neither Government shall allow the use of its territory for activities harmful to the national security and interest of the other.”
 - India to “guide” Bhutan on foreign and defence policies.
 - The 2007 treaty, is meant to respect the sensitivities of Bhutan regarding its sovereignty.
 - Indian military is virtually responsible for protecting Bhutan from the kind of external threat that the Chinese military poses.
 - The Indian Military Training Team (IMTRAT), headed by a Major General, plays a critical role in training Bhutanese security personnel.
 - The Eastern Army Command and the Eastern Air Command both have integrated protection of Bhutan into their role.

2. Xi draws “red line” in Hong Kong

In news:

- China’s President Xi Jinping warned that any challenge to Beijing’s control over Hong Kong crossed a “red line”.

Background:

- tens of thousands calling for more democracy marched through the city 20 years after it was handed back by Britain.

Situation in Hong Kong:

- Many are angry at Beijing’s tightening grip on the freedoms.
- Young activists have emerged calling for self-determination or even full independence for Hong Kong

Beijing’s warning:

- Any threat to China’s sovereignty and security or to the power of the central government “crosses the red line and is absolutely impermissible.”
- Warned against anyone endangering Hong Kong’s Constitution or using the city “to carry out infiltration and sabotage activities against the mainland.”

Basic Information:



Hong Kong:

Hong Kong, officially the Hong Kong Special Administrative Region of the People's Republic of China, is an autonomous territory on the Pearl River Delta of China.

Hong Kong ranks as the world's fourth most densely populated sovereign state or territory.

Hong Kong and China:

After the First Opium War (1839–42), Hong Kong became a British colony.

Hong Kong was later occupied by Japan during World War II until British control resumed in 1945.

In the early 1980s, negotiations between the United Kingdom and China resulted in the 1984 Sino-British Joint Declaration, which paved way for the transfer of sovereignty of Hong Kong in 1997, when it became a special administrative region (SAR) of the Peoples Republic of China with a high degree of autonomy.

Under the principle of "one country, two systems", Hong Kong maintains a separate political and economic system from China. Except in military defence and foreign affairs, Hong Kong maintains its independent executive, legislative and judiciary powers.

In addition, Hong Kong develops relations directly with foreign states and international organisations in a broad range of "appropriate fields".

C. GS3 Related

Category: ECONOMICS

1. [Indians' money in Swiss banks hit record low at Rs. 4,500 crore](#)

In news:

- Money parked by Indians in Switzerland's banks nearly halved to 676 Swiss francs (about Rs. 4,500 crore) in 2016 to hit a record low.
- In comparison, the total funds held by all foreign clients of Swiss banks somewhat rose to CHF 1.42 trillion or about Rs 96 lakh crore (from CHF 1.41 trillion a year ago).
- The total money of Indians fell by 45 % during 2016 to CHF 675.75 million, marking the biggest ever yearly decline in such funds.
- Swiss banks have also said Indians have 'few deposits' in Swiss banks compared to other global financial hubs like Singapore and Hong Kong amid stepped-up efforts to check the black money menace.

Automatic exchange of information:

- A new framework for automatic exchange of information between Switzerland and India, to help check the black money menace.
- Adopting the dispatch on introduction of the AEOI, a global convention for automatic information exchange on tax matters, the Swiss Federal Council said on June 16 that the implementation is planned for 2018 and the first set of data should be exchanged in 2019.
- There have been several rounds of discussions between Indian and Swiss government officials on the new framework and also for expediting the pending information requests about suspected illicit accounts of Indians in Swiss banks.

Possible transfer:

- SNB's official figures also do not include the money that Indians, NRIs or others might have in Swiss banks in the names of entities from different countries.
- There is a view that the Indians alleged to have parked their illicit money in Swiss banks in the past may have shifted the funds to other locations after a global clampdown began on the mighty banking secrecy practices in Switzerland.

2. [BIZ-GDP-ANANT](#)

In News:

- The base year of the new GDP series has been fixed at 2017-18
- The current base year is 2011-12

Why revision?

- It is necessary to review the base year every five years or so
- Change of base year to calculate GDP is done in line with the global exercise to capture economic information accurately
- This ensures capturing latest information and hence accurately reflects the current economic situation in the country
- The new series is compliant with the latest United Nations guidelines in System of National Accounts-2008

3. [One lakh suspect firms deregistered](#)

Context: Demonetisation.

In news:

- The government has **cancelled** the registration of one lakh companies.
- These companies had suspicious and questionable operations, identified on the basis of data mined from the deposit of bank notes following last November's demonetization policy of the govt.

Who has the power to cancel the registration?

- **The Registrar of Companies** has removed these one lakh companies

Quote: Quoting Chanakya, the Prime Minister held out a sombre warning to accountants: **"After the time to do the right thing has passed, time itself consumes those who didn't act."**

Basic information:

The Registrar of Companies

The Registrar of Companies (ROC) is an office under the Indian Ministry of Corporate Affairs that deals with administration of the Companies Act 1956 and Companies Act, 2013.

There are currently 22 Registrars of Companies (ROC) operating from offices in all major states of India.

Some states, such as Maharashtra and Tamil Nadu, have two ROCs each. Section 609 of the Companies Act, 1956 tasks the ROCs with the primary duty of registering companies and LLPs- limited liability partnership, floated in the respective states and the union territories under their administration.

Administrative control:

The Union Government maintains administrative control over ROCs through Regional Directors. There are 7 Regional Directors, and they supervise the functioning of ROCs within their respective regions.

Function: The Registrar of Company takes care of company registration (also known as incorporation) in India, completes reporting and regulation of companies and their directors and shareholders, and also oversees government reporting of various matters including the annual filling of various documents.

Category: SCIENCE AND TECHNOLOGY

1. [New material uses sunlight to detoxify water](#)

In news:

- **Novel approach:** Scientists have developed a **new non-toxic material** that uses solar energy to degrade harmful **synthetic dye pollutants** which are released at a rate of nearly 300,000 tonnes a year into the world's water.
- The novel, **non-hazardous photocatalytic** material removes dye pollutants from water, **adsorbing more than 90% of the dye and enhancing the rate of dye breakdown by almost ten times using visible light.**

Technical details: (not required)

- **Catalyst synthesis:** By heating the reaction mixture at high pressures inside a sealed container, the composite is synthesised by growing ultrathin "nanowires" of tungsten oxide on the surface of tiny particles of tantalum nitride.
- The composite provides a huge surface area for dye capture (incredibly small size of the two material components- typically less than 40 billionths of a metre in diameter)
- The material then proceeds to break the dye down into smaller, harmless molecules using the energy provided by sunlight, in a process known as "photocatalytic degradation".
- Having removed the harmful dyes, the catalyst may simply be filtered from the cleaned water and reused.

2. [The pursuit of app-iness](#)

iBobbly app :

- Developed by researchers at Black Dog Institute, a mental health organisation in Australia, and launched in the country in 2014.
- The world's first suicide prevention app

Target group:

- The app is specially targeted at young people from the indigenous communities, who are at four times the risk of suicide compared to the rest.
- iBobbly doesn't need the Internet to be accessed once downloaded.

How does it operate?

- It allows a person to keep a "mood diary" after self-assessment, and teaches the user to manage thoughts "especially suicidal thoughts" and feelings and create a personalised action plan with tools to monitor progress.
- The programme maintains patient confidentiality and is password-protected.

Results:

- Participants from the Kimberley region in Western Australia who used the app over a six-week period reported a 42%

reduction in symptoms of depression, 30% reduction in suicidal ideation and 28% reduction in distress.

iBobbly app and Lessons for India:

Key fact:

- As per World Health Organization's (WHO) latest suicide data, nearly 1,00,000 people commit suicide.
- The country's suicide mortality rate is 20.9 per 1,00,000 people, among the highest in the world, with majority of the vulnerable groups not able to get the help they need.
- The use of technology has increased among youth and the app allows mental experts to reach them anonymously

Atmiyata™:

- Similar project like iBobbly in India
- Meaning: Compassion in Sanskrit.
- This project involves using short films loaded on a basic Android app as a training tool to enable a bunch of villagers to identify mental health disorders.
- The project was rolled out in the Peth block of Nashik district, Maharashtra, in December 2013, making mental health care accessible to many in this part for the first time.

3. Cheaper, indigenous TB test enters final validation phase

Context:

- Truenat MTB is being tested in 100 microscopy centres in 10 States
- It's validation and operational feasibility testing is being done by the Indian Council of Medical Research (ICMR)

What is Truenat MTB?

- Truenat MTB, a chip-based nucleic acid amplification test which uses sputum samples for diagnosing Mycobacterium tuberculosis (MTB)

What is its speciality?

- It's a cheaper and indigenously developed molecular diagnostic test for TB.
- The samples were also tested for resistance to the drug rifampicin which is an antibiotic used chiefly to treat tuberculosis and leprosy
- It is a battery-operated, hand-held machine allows detection of TB in approximately one hour
- In Truenat MTB only about 0.5 ml sample is required compared to it's counterpart GeneXpert in the US which requires 1ml sample.

Truenat MTB V/S GeneXpert.

- Truenat MTB is 50% cheaper than GeneXpert
- Truenat MTB is chip-based and will be more environment-friendly compared to GeneXpert which is cartridge-based
- Truenat MTB can be expanded to primary health centre level, which cannot be done using GeneXpert which needs uninterrupted power supply and air conditioning

D. GS4 Related

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