



## News Analysis (20 Jun, 2019)

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### Basel III Requirements

According to a report by the Basel Committee on Bank Supervision (BCBS), **the Reserve Bank of India has fallen short** of meeting tougher **requirements set by the Basel III norms**.

- The report looked at adoption status of Basel III standards by 30 global systemically important banks (G-Sibs) as of end-May 2019.
- The RBI is **yet to publish the securitisation framework and rules on Total Loss-Absorbing Capacity (TLAC)** requirements.
  - Securitisation framework includes credit enhancement facility, liquidity facility, underwriting facility, interest rate or currency swaps and cash collateral accounts.
  - TLAC requirements ensures that G-Sibs have adequate loss absorbing and recapitalisation capacity so that critical functions can be continued without taxpayers' funds or financial stability being put at risk.
- The RBI is also yet to come out with draft regulations on **revised Pillar 3 disclosure requirements**, which took effect from end-2016.
- Indian banks are in the process of implementing **rules on Interest Rate Risk in the Banking Book (IRRBB)**. The central bank is also yet to come out with final guidelines on the same. Globally the rules were effective from end-2018.

### Basel III Norms

- Basel III is an **internationally agreed set of measures** developed by the BCBS in response to the financial crisis of 2007-09. The measures aim to strengthen the regulation, supervision and risk management of banks.
- BCBS members are committed to implementing and applying standards in their jurisdictions within the time frame established by the Committee.
- **Basel 3 measures are based on three pillars:**

- **Pillar 1:** Improve the banking sector's ability to absorb ups and downs arising from financial and economic instability
- **Pillar 2:** Improve risk management ability and governance of banking sector
- **Pillar 3:** Strengthen banks' transparency and disclosures

## Basel Committee on Bank Supervision (BCBS)

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- It is a **committee under the Bank For International Settlements**.
    - Established in **1930**, the **BIS** is owned by 60 central banks, representing countries from around the world that together account for about 95% of world GDP.
    - Its head office is in **Basel, Switzerland**.
    - Its mission is to **serve central banks in their pursuit of monetary and financial stability**, to foster international cooperation in those areas and to act as a bank for central banks.
  - It is the **primary global standard** setter for the prudential regulation of banks and provides a forum for regular cooperation on banking supervisory matters.
  - The Committee identifies global systemically important banks (G-SIBs) using a methodology that includes both quantitative indicators and qualitative elements.
  - **A global systemically important bank** is a bank whose systemic risk profile is deemed to be of such importance that the bank's failure would trigger a wider financial crisis and threaten the global economy.
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## AWaRe

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**The World Health Organization** (WHO) in its global campaign against antibiotics has launched a new online tool called AWaRe.

The campaign aims to achieve a 60% increase in the use of antibiotics under the Access group — cheap, 'narrow-spectrum' drugs (that target a specific microorganism rather than several) and also **lower the risk of resistance**.

## AWaRe

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- The AWaRe tool was developed by the **WHO Essential Medicines List** to contain **rising resistance** and make antibiotic use **safer** and more effective by providing guidelines (over the effective use of antibiotics) to the **policy-makers** and **health workers**.
- It classifies antibiotics into three groups:
  - **Access**— antibiotics used to treat the most common and serious infections.
  - **Watch**— antibiotics available at all times in the healthcare system.

- **Reserve**— antibiotics to be used sparingly or preserved and used only as a last resort.

## Significance

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By classifying antibiotics into three distinct groups, and advising on when to use them, AWaRe makes it easier for **policy-makers, prescribers and health workers** to select the right antibiotic at the right time, and to protect endangered antibiotics.

## Antimicrobial Resistance

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- With the emergence of infections that are untreatable by all classes of antibiotics, antimicrobial resistance is turning into an **invisible pandemic** and is estimated to kill **50 million** worldwide and 10 million in India (by 2050).
- According to a report by the International Coordination Group on Antimicrobial Resistance, Antimicrobial resistance is a **global health and development threat** that continues to escalate globally and threatens to undo a century of medical progress.
- It is estimated that more than 50% of antibiotics in many countries are used inappropriately, such as for **treatment of viruses** (when they only treat bacterial infections) or **use of the wrong** (broader spectrum) antibiotic, thus contributing to the spread of antimicrobial resistance.

## Concern

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- One of the most pressing concerns is the spread of resistant **gram-negative bacteria**, including **Acinetobacter, Escherichia coli and Klebsiella pneumoniae**.  
As these bacteria, which are commonly seen in hospitalized patients, cause infections like **pneumonia, bloodstream infections, wound** or surgical site infections and **meningitis**.
- Although over 100 countries have put in place national plans to tackle antimicrobial resistance, only about **one-fifth** of those plans are funded and implemented.
- Antibiotic resistance (when antibiotics stop working effectively) increases health expenditure and makes **accessibility and affordability** of medicines an expensive affair.

## Gram-Negative Bacteria

- Bacteria are classified into two groups—Gram-positive or Gram-negative—depending on whether they retain a specific stain color.
- Gram-positive bacteria retain a purple-colored stain, while Gram-negative bacteria appear pinkish or red.
- Several species of gram negative bacteria including Escherichia coli, are common causes of foodborne disease and Vibrio cholerae—the bacteria responsible for cholera

—is a waterborne pathogen.

- Gram-negative bacteria can also cause respiratory infections, such as certain types of pneumonia, and sexually transmitted diseases, including gonorrhoea.

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## UNCCD Drought Tool Box

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- The United **Nations Convention to Combat Desertification (UNCCD)** is currently testing a drought toolbox which uses a total of 15 to 30 different parameters to assess drought risk and vulnerability of a geographical region.
- UN convention was given the task of developing such a tool by countries during the previous Conference of Parties (CoP) meeting at the Ordos in China in 2017.
- The UNCCD has been working with other UN organisations including World Meteorological Organisation (WMO) and Food and Agriculture Organisation (FAO) and experts to design the toolbox.
- Drought toolbox is an online web platform, a one-stop shop for all drought-preparedness measures with a link to the various relevant tools in other organisations.
- The tools are categorised in line with **three pillars of drought preparedness**:
  - Monitoring, early warning and forecasting tools used by decision makers.
  - Vulnerability assessment tools for identifying hotspots.
  - Risk mitigation tools with key “policy” and “technical” measures.
- The current procedure for declaring drought is very complex in most countries. This tool can be used by countries to assess and evaluate drought vulnerability in their regions. This can help countries improve their preparedness for dealing with drought.

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## Drought Declaration in India

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- Drought is generally considered as a deficiency in rainfall /precipitation over an extended period, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people.
- There is no single, legally accepted definition of drought in India. Some states resort to their own definitions of drought. **State Government is the final authority** when it comes to declaring a region as drought affected. Government of India has published two important documents in respect of managing a drought.
- The **first step** is to look at two mandatory indicators:
  - Rainfall deviation and dry spell.** Depending on the extent of the deviation, and whether or not there is a dry spell, the manual specifies various situations that may or may not be considered a drought trigger.
- The **second step** is to look at four impact indicators — **agriculture, vegetation indices based on remote sensing, soil moisture, and hydrology**. Each impact can be assessed on the basis of various indices.

- **The intensity of drought:** The States may consider **any three of the four types** of the Impact Indicators (one from each) for assessment of drought, the intensity of the calamity and make a judgement.
- If all three chosen indicators are in the 'severe' category, it amounts to severe drought; and if two of the three chosen impact indicators are in the 'moderate' or 'severe' class, it amounts to moderate drought.
- The **third step** comes in after both previous triggers have been set off. In that event, "States will conduct sample survey for ground in order to make a final determination of drought. The finding of field verification exercise will be the final basis for judging the intensity of drought as 'severe' or 'moderate'.
- Once a drought is determined, the state government needs to issue a notification specifying the geographical extent. The notification is valid for six months unless de-notified earlier.

## ReCAAP ISC Capacity Building Workshop

The **Indian Coast Guard (ICG)** is **co-hosting** the **12<sup>th</sup> Capacity Building Workshop with Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) Information Sharing Centre (ISC)** in New Delhi from 19th -20th June, 2019.

## ReCAAP

- The ReCAAP is the **first regional Government-to-Government agreement** to deal with **piracy and armed robbery at sea in Asia**.
- The ReCAAP Agreement was launched in **November, 2006** with 14 Asian contracting parties including North, Southeast, and South Asian countries.
- It has 20 contracting parties as of now, including Europe (Norway, the Netherlands, Denmark, and the United Kingdom), Australia, and the United States.
- **Information sharing, capacity building and mutual legal assistance** are the three pillars of co-operation under the ReCAAP agreement.
- The ReCAAP **Information Sharing Centre (ReCAAP ISC)** was established in **Singapore** on November 29, 2006.
- The Union Government has designated **ICG as the focal point** within India for ReCAAP.

## Capacity Building Workshop

- Capacity building workshop is **organised annually by the ISC** and is co-hosted by one of the contracting parties.
- The main **objective** of this workshop is to share **updated situation of piracy** and armed robbery against ships in Asia and best practices of Asian countries.

- The workshop also aims to deepen the knowledge of participants on various issues related to piracy and armed robbery such as international laws, prosecution process, forensics and emerging threats.
- India has hosted the workshop earlier also in November,2011 at Goa and December,2017 at New Delhi.

## The Indian Coast Guard (ICG)

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- The Indian Coast Guard was **formally inaugurated on 19<sup>th</sup> August, 1978**. It operates under the **Ministry of Defence**.
  - It has a wide range of task capabilities for both surface and air operations.
  - The organization is headed by the Director General Indian Coast Guard (DGICG) exercising his overall command and superintendence from the Coast Guard **Headquarters (CGHQ) located at New Delhi**.
  - Some of the important duties of the Coast Guard include
    - Ensuring the **safety and protection** of artificial Islands, offshore terminals, installations and other structures and devices in any maritime zone.
    - Providing protection and **assistance to fishermen** in distress while at sea.
    - **Preservation and protection** of maritime environment including prevention and control of marine pollution.
    - Assisting the Customs and other authorities in anti-smuggling operations.
    - Enforcement of the **Maritime Zones of India Act**.
    - Precautionary measures for the safety of life and property at sea and collection of scientific data.
  - For effective command and control, **the Maritime Zones of India are divided into five Coast Guard Regions**, namely, North-West, West, East, North-East and Andaman & Nicobar, with the respective Regional Headquarters located at Gandhinagar, Mumbai, Chennai, Kolkata and Port Blair.
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## Richer Nations have Lower Trust in Vaccinations

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- Richer and more developed nations appear to have a lower trust in immunisation than those in the developing world, a major new study has found.
- As per survey, the people in Europe have the lowest levels of trust in vaccines.
- The people living in high-income countries have the lowest confidence in vaccines, a result that ties in to the rise of the anti-vaccination movement, in which people refuse to believe in the benefits of vaccination or claim that the treatment is dangerous.
  - France has the lowest levels of confidence, as one third (33%) of people do not agree that immunisation is safe.
- Globally, 79% of people agreed that vaccines are safe and 84% said they were effective.

- Bangladesh and Rwanda had the highest levels of confidence in vaccines, with almost 100% in both countries agreeing they were safe, effective and important for children to have.
- The spread of measles, including in the US, Philippines and Ukraine, is one of the health risks associated to low confidence in vaccines.

An estimated 169 million children missed out on the vital first dose of the measles vaccine between 2010 and 2017, according to a UN report issued in April, 2019.

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## QS World University Rankings

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- **IIT-Bombay** has been ranked **India's best university** for the second year in a row, **gaining a global ranking of 152** in the **QS World University Rankings for 2020**.
- **Massachusetts Institute of Technology topped the QS World University Rankings for the eighth consecutive year.**
- Two other Indian universities — IIT Delhi (182) and the Indian Institute of Science, Bengaluru (184) — are now under 200.
- Other Indian universities included in the top 500 list are IIT-Madras (271), IIT-Kharagpur (281), IIT-Kanpur (291), IIT-Roorkee (383), University of Delhi (474) and IIT-Guwahati (491).
- There are a total of 23 Indian institutions in the top 1,000. While most are government-funded universities, **five are privately funded.**
- The **Manipal Academy of Higher Education**, which falls within the 701-750 ranking band, is the **top private university** in the country.
- **For private institutions**, it was the indicators such as **teacher-student ratio**, and **international faculty and student populations** that propelled them to the top.

### QS World University Rankings

- **QS is a leading global career and education network** for ambitious professionals looking to further their personal and professional development.
  - QS develops and successfully implements **methods of comparative data collection** and **analysis** used to highlight institutions' strengths.
  - **The QS World University Rankings is an annual publication of university rankings** which comprises the global overall and subject rankings.
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## Anthrax Vaccine

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Indian scientists have developed a **new vaccine against anthrax**. It is claimed to be **superior** over existing vaccines as it can generate an **immune response to anthrax toxin as well as its spores** rather than the toxin alone.

## Anthrax

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- It is a disease **caused by a bacterium** called **Bacillus anthracis**.
- It occurs naturally in both animals and humans in many parts of the world, including **Asia, southern Europe, sub-Saharan Africa and parts of Australia**.
- Anthrax bacteria **survive** in the environment **by forming spores**.
- **People get infected** with anthrax **when spores get into the body**. When spores get inside the body, they can get activated. When they become active, the bacteria can multiply, spread out in the body, produce toxins (poisons), and cause severe illness.
- **Symptoms** include black sore, headaches, fever, breathing difficulties, vomiting of blood, diarrhea.
- Anthrax **responds well to antibiotic** treatment but **vaccines are necessary** as the infection can cause death within two-three days leaving no scope for diagnosis and treatment.
- The anti-anthrax vaccines available in market generate **immune response against a Bacillus protein-protective antigen** — a protein that helps in transport of bacillus toxins inside the cells.

This means that immune response is triggered only when spores germinate in body and start producing bacterial proteins. Anyone vaccinated with such a vaccine would show **no immune response to bacillus spores** and only perform once spores germinate and release toxins.

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## Capital Gain Tax

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- Any profit or gain that arises from the sale of a **'capital asset'** is a capital gain. This gain or profit comes under the category of 'income'.
- Hence, the capital gain tax will be required to be paid for that amount in the year in which the transfer of the capital asset takes place. This is called the capital gains tax, which can be both short-term or long-term.
- **Long-term Capital Gains Tax:** It is a levy on the profits from the sale of assets held for **more than a year**. The rates are 0%, 15%, or 20%, depending on tax bracket.
- **Short-term Capital Gains Tax:** It applies to assets **held for a year or less** and is taxed as ordinary income.
- Capital gains can be reduced by deducting the capital losses that occur when a taxable asset is sold for less than the original purchase price. The total of capital gains minus any capital losses is known as the **"net capital gains"**.
- Tax on capital gains is triggered only when an asset is **sold**, or **"realized"**. Stock shares



that appreciate every year will not be taxed for capital gains until they are sold.

## Capital Assets

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Land, building, house property, vehicles, patents, trademarks, leasehold rights, machinery, and jewellery are a few examples of capital assets. This includes having rights in or in relation to an Indian company. It also includes the rights of management or control or any other legal right.

### Realized Gain

- It results from selling an asset at a price higher than the original purchase price. It occurs when an asset is sold at a level that exceeds its book value cost.
- While an asset may be carried on a balance sheet at a level far above cost, any gains while the asset is still being held are considered unrealized as the asset is only being valued at fair market value.

### Inherited property

- Capital gains are **not applicable to an inherited property** as there is no sale but only a transfer of ownership.
- The Income Tax Act has specifically exempted assets received as gifts by way of an inheritance or will. However, if the person who inherited the asset decides to sell it, capital gains tax will be applicable.

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## Carbon Quantum Dots

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A team of scientists in **Council of Scientific & Industrial Research-North East Institute of Science and Technology (CSIR-NEIST), Assam** has developed a chemical process that turns 'dirty' coal into a biomedical 'dot' to help detect cancer cells.

They have applied for a patent for their chemical method of producing Carbon Quantum Dots (CQDs) from **cheap, abundant, low-quality and high-sulphur coals**.

### Carbon Quantum Dots (CQD)

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- CQDs are **carbon-based nanomaterials** whose size is less than 10 nm, or nanometre.
- Carbon-based nanomaterials are used as diagnostic tools for **bio-imaging**, especially in **detecting cancer cells**, for **chemical sensing** and in **optoelectronics**. The CQDs that the CSIR-NEIST team developed emit a bluish colour with high-stability.
- **Cost advantage:** The CSIR-NEIST technology can produce approximately 1 litre of CQDs per day at a low cost to become an import substitute.
  - The developed CQDs are cheaper than imported CQD.

- CQDs are futuristic materials whose demand in India has been increasing leading to a considerable volume of import.
  - **Environment-friendly:** The process is environment-friendly and consumes lesser water than methods elsewhere. The process can also be recycled with a manageable supply chain.
  - **Source material:** Abundant, low-quality Indian coal not directly suitable for thermal electricity production.
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## Water Clinic for Elephants

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India has opened its **first specialized hydrotherapy treatment** for elephants suffering from arthritis, joint pain and foot ailments at a wildlife SOS Elephant Hospital, Mathura, UP.

- It is a collaboration between **Uttar Pradesh Forest Department** and the **NGO Wildlife SOS**.
  - The jumbo hydrotherapy pool installed at the Wildlife SOS Elephant Hospital is equipped with **high-pressure water jets** that massage the elephants' feet and body which is a critically important component of the treatment as it also helps **oxygen and vital minerals** to reach the muscle tissues.
  - Hydrotherapy helps in relieving chronic muscle aches as well as **rebuild muscle memory** with its natural resistance.
  - NGO Wildlife SOS works towards **protecting** Indian wildlife, **conserving** habitat, **studying biodiversity**, conducting **research** and taking action against **animal cruelty, rescuing wildlife in distress**, working to resolve **man-animal conflicts** while promoting and educating the public about the need for habitat protection.
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## Solanum Plastisexum

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A team of scientists from the US and Australia has named a new plant species from the northern Australia as **Solanum Plastisexum**.

- First discovered in 1977, it is also known as the Dungowan bush tomato.
- For decades, the plant remained unnamed and no scientists could understand the functionality of the plant. The sex of its flowers kept changing every time it was studied.
- The species name 'Solanum Plastisexum' comes from the Greek root meaning 'moldable' or 'changeable' combined with the Latin word for sex.

## Relevance

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- While it's not unusual for flowers to be hermaphrodite, i.e. to bear both male and

female reproductive parts, this unusual plant did not seem to fall in with the binary sexual norms of the plant kingdom.

- *S. plastisexum* is not just a model for the diversity of sexual/reproductive form seen among plants -- it is also evidence that attempts to recognize a "normative" sexual condition among the planet's living creatures is problematic
- When considering the scope of life on Earth, the notion of a constant sexual binary consisting of two distinct and disconnected forms is, fundamentally, a fallacy.  
Living organisms, including plants and animals, often exhibit diverse sexual forms, such as an all-female lizard species whose eggs have all the genetic material needed to reproduce, and clown fish, which are born male and can transform into females later in life.

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## New Species of 'Cat fox'

A new species of '**cat-fox**' has been found in remote areas of the **French island of Corsica**.



- The cats are bigger than a typical house cat, and have large, ringed tails and "highly developed" canine teeth. **Because of their appearance**, they are known locally as **chat-renard**, or "**cat-fox**".
- It is different from the **European wildcat, *Felis silvestris silvestris***.  
The DNA report confirms it is close to the **African forest cat, *Felis silvestris lybica***, but its exact identity is still to be determined.