



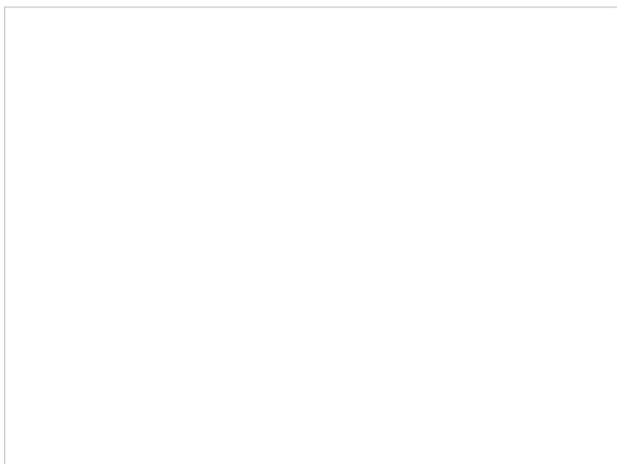
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News Analysis (15 Apr, 2019)

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Ambedkar Jayanti

On **14 April 2019**, the **birth anniversary** of Dr. B.R. Ambedkar was celebrated.



- He was the **principal architect of the Indian Constitution** and independent **India's first law minister**.
- Dr. Ambedkar was a **social reformer, jurist, economist, author, polyglot orator, a scholar of comparative religions and thinker**.

About Dr. Ambedkar

- Dr. B.R. Ambedkar was born on 14 April 1891 in **Mhow, Central Province (now Madhya Pradesh)**.
- He founded **Bahishkrit Hitkarni Sabha (1923)**.
- He led the **Mahad Satyagraha in March 1927** to challenge the regressive customs of the Hindus.
- In **1932** he signed **Poona pact** with Mahatma Gandhi.
- He **participated in all three round-table conferences**.
- In **1936**, he was **elected to the Bombay Legislative Assembly** as a legislator (MLA).

- In **1947**, Dr. Ambedkar accepted PM Nehru's invitation to **become Minister of Law in the first Cabinet of independent India**.
- On **August 29, 1947**, he was appointed **Chairman of the Drafting Committee for the new Constitution**.
- **He resigned from the cabinet in 1951**, over differences on the **Hindu Code Bill**.
- In **1956**, he **converted to Buddhism**.
- He passed away on 6th December 1956.

Poona Pact

- The **Communal Award** was announced by the British prime minister, **Ramsay MacDonald**, on August 16, 1932.
- Award established **separate electorates and reserved seats for minorities and the depressed classes**.
- Dr. B.R. Ambedkar had a viewpoint that the **depressed classes should be treated as a distinct, independent minority separate from the Hindus**.
- While strongly disagreeing with the Communal Award, the **Congress decided neither to accept it nor to reject it**.
- **Mahatma Gandhi** saw the **Communal Award as an attack on Indian unity and nationalism**. He thought it was **harmful to both Hinduism and to the depressed classes**.
- **Mahatma Gandhi** demanded that the **depressed classes be elected through joint and if possible a wider electorate** through the universal franchise, he went on an indefinite fast on September 20, 1932.
- Later **Poona Pact was signed** between **Mahatma Gandhi and B.R. Ambedkar** on behalf of the depressed classes on September 24, 1932.
- The Poona Pact **abandoned the idea of separate electorates for the depressed classes**.
- But the **seats reserved for the depressed classes were increased from 71 to 147** in provincial legislatures and to **18% of the total in the Central Legislature**.
- The Poona Pact was **accepted by the government** as an amendment to the Communal Award.

Antibiogramoscope Device

A team of professors at **Anna University, Chennai** has developed a **device called Antibiogramoscope to deal with antibiotic resistance**.

- The research was supported by **University Grants Commission (UGC)** and **Department of Science and Technology (DST)**.
- The team developed a liquid **Antibiotic Sensitivity Testing (AST) medium**. To this, a

commercially available **fluorescent molecule** is added along with the **sample (body fluid)**.

- This is transferred to the antibiogramoscope's microwells which are coated with one type of antibiotic.
- When bacteria grow in the medium, it **produces a compound called erucamide**, which binds to the **fluorescent molecule, turning OFF** its fluorescence.
- This means **if we see fluorescence in some microwells**, those **antibiotics are effective in killing the bacteria**.
- **No fluorescence** means the **bacteria is growing despite the antibiotic** which **highlights antibiotic resistance**.
- The **advantages** of Antibiogramoscope over traditional methods are:
 - It identifies **resistant strains of bacteria much quicker**, helping physicians choose the right drug, all at a **lower cost**.
 - The existing method uses a solid medium to grow bacteria, while this new method **uses liquid medium giving superior results**.
 - The system is **automated**, needing no human intervention once the samples and medium are loaded.
- Antibiogramoscope has **cleared validation tests** at **National Accreditation Board for Testing and Calibration Laboratories (NABL)** accredited microbiological lab.

National Accreditation Board for Testing and Calibration Laboratories (NABL)

- NABL is a **Constituent Board** of **Quality Council of India**.
- NABL has been established with the objective of providing Government, Industry Associations and Industry in general with a scheme of Conformity Assessment Body's accreditation which involves third-party assessment of the technical competence of testing including medical and calibration laboratories, proficiency testing providers and reference material producers.
- **Quality Council of India (QCI)** as a **non-profit autonomous society** registered under **Societies Registration Act, 1860**.
- The aim of QCI is to establish an accreditation structure in the country and to spread quality movement in India by undertaking a National Quality Campaign.

It can be noted that in a **separate development** which is also significant, the **scientists at the Centre for Cellular & Molecular Biology (CCMB) have come up with a way to inhibit the multiplication of bacteria even before the cell wall begins to grow.**

Indo-Pacific Wing in MEA

India has set up an **Indo-Pacific division** in the Ministry of External Affairs.

The new division is intended to give a coherent architecture to the policy, which was articulated by the prime minister at the Shangri-La Dialogue in 2018.

Highlights of PM Narendra Modi's address at Shangri-La

- By projecting an equivalence in ties with the US, Russia, and China – **India reaffirmed its principle of strategic autonomy** and cautioned against the return of the ‘great power rivalries’.
- India’s Indo-Pacific strategy is **not aimed at China’s containment**.
- India sees the **Indo-Pacific as primarily a geographic domain** — a “natural region”.
- The **Indo-pacific region is ultimately multi-polar, hence rejecting or contesting the idea that either China or the United States could be the one regional hegemonic power**.
- **India is indispensable to the security of the Indian Ocean**.
- Signified the **interconnectedness of the Indian and Pacific Oceans** and the importance of the oceans to security and commerce.

Importance of Separate Division

- **MEA’s territorial divisions are crucial for policy making**, so the creation of an Indo-Pacific division is a big step by the government.
- The division **will integrate the Indian Ocean Rim Association (IORA), ASEAN region and the Quad**.
- India is planning to put greater energy to the IORA because the core of its **Indo-Pacific policy is rooted in the Indian Ocean**.
- The US also recently renamed its Pacific Command to the Indo-Pacific Command as it seeks to give significance to its Indo-Pacific policy.

Shangri-La Dialogue

- The Shangri-La Dialogue (SLD) is an intergovernmental security forum held annually by an independent think tank, **the International Institute for Strategic Studies in Singapore**.
- The Shangri-La Dialogue has evolved into a key **strategic gathering of the Asia-Pacific region**.
- It is attended by defense ministers, permanent heads of ministries and military chiefs of Asia-Pacific states.

Indian Ocean Rim Association

- The Indian Ocean Rim Association is an inter-governmental organization which was established on 7 March 1997.

- IORA has 21 Member States, mainly littoral Indian Ocean states, and 7 other states as Dialogue Partners.



Hydroponics

As per a data from Chennai-based non-profit organisation Green Acres Foundation, around 50,000 acres are estimated to be under hydroponic production around the world.

Hydroponics Method

- It is a method of **growing plants without soil** in which **plants get their nutrients from a mineral solution**.
- The method is **suitable** for growing **greens and herbs** as they don't have deep roots. Tomatoes and strawberries are other popular items.

Costs Involved

- The **initial costs** of setting up a hydroponic farm is very high.
 - A **physical outer structure** is required to grow the plants. This can be trays or tubes, which are typically made of food-grade plastic. The cost of this is typically **Rs. 50,000-75,000 for 1,000 sq ft**.
 - High costs involved in plumbing system and automation such as sensors,

- controller, water pump etc.
- Money paid to consultants for help and guidance.
- **Cost involved in maintaining ambient temperature and moisture**
 - Depending on the type of enclosure, costs can vary from ₹25,000 to ₹1.5 lakh.
 - In some cases, LED lights are used to mimic sunlight, this further increases the cost.
- **Cost from Water**

If **water** of an area has dissolved minerals or is **hard, purification devices will be needed to make it usable**, thus adding to the costs.
- **In-Process Costs**
 - Power costs due to regular water supply , LED lights and climate control.
 - Plants also require nutrient feed from time to time which is either prepared at home or purchased from manufacturers.

Benefits

- The method requires **less labour**, and **yields are much higher** as plants grow faster (due to direct access to required nutrients) compared with regular farms.
 - The method uses comparatively **less water** i.e. only about 20% of the water that is used in the conventional methods.
 - The most efficient aspect of hydroponics is that it can be even applied in a **limited space**. There are cases where 6,000 plants have been grown in 80 sq ft space. This has been done by stacking plants vertically, as the method is **not limited by the ground area**.
 - **Products like herbs and lettuce make this method viable as well as profitable.**
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Important Facts For Prelims (15th April 2019)

Blockchain Technology

- The National Payments Corporation of India (**NPCI**) is considering using highly **scalable blockchain solution to further strengthen digital payments**, which have seen an exponential growth in recent times.
 - A **blockchain is a list of records**, linked using cryptography. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data.
 - At the basic level, a blockchain is **an open, distributed ledger that can record transactions between two parties efficiently** and in a verifiable manner.
 - **Data security** is there as data stored in a block cannot be changed without altering subsequent blocks.
 - As per a recent report of global consultancy firm PwC, India would be one of the

world's blockchain leaders by 2023.

- **NPCI**, an umbrella organisation for operating retail payments and settlement systems in India, **is an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA)** under the provisions of the Payment and Settlement Systems Act, 2007, for creating a robust Payment & Settlement Infrastructure in India.

The Indian Banks' Association (IBA) was formed on 26th September, 1946 with 22 members. As on April, 2018 the total Membership of the Association is 249. It's vision is to work proactively for the growth of a healthy, professional and forward-looking banking and financial services industry, in a manner consistent with public good.

Yangtze Giant Softshell Turtle

- The **last female** of rare **Yangtze Giant Softshell** turtles **died in China.**
- This was one of **four Yangtze giant softshell turtles** known to be remaining in the world. The same zoo also houses a male Yangtze giant softshell turtle. The other two live in Vietnam, but their genders are unknown.
- The species is one of the most endangered turtle in the world.
Loss of habitat and poaching are among the reasons for the decline of the species' population

Higher School Enrolment Rate of Girls: UNFPA

- According to the **State of World Population 2019** report of the **United Nations Population Fund (UNFPA)**, the **enrolment rate of girls is higher** than that of boys in Indian schools at **both primary and secondary levels.**
- Worldwide, the **rate of enrolment of girls is lower than that of boys at primary school, and equal at secondary level.**
- In India, 98% of primary school-age girls were actually enrolled, as opposed to 97% boys, according to figures adjusted for 2009-18.
Worldwide, this compares with 90% female enrolment and 92% male enrolment, so that India's gender parity index is 1.01 to the world's 0.98.
- At secondary school level, India's female and male enrolment rates are **lower than the worldwide 66% for both genders.**
However, **India's female enrolment (62%)** is once again higher than **male enrolment (61%)**, giving it a gender parity index **(1.01) that is higher than the worldwide index of 1.0.**

World's Largest Plane

- World's largest airplane **built by the US-based Stratolaunch Systems** has made its **first test flight** in the Mojave Desert in California.

- The plane, made of **carbon composites**, is **named as Roc**.
- It was financed by **Paul Allen**, who co-founded Microsoft with Bill Gates in 1975.
- The plane can be **used to launch satellites**.

