

**GOVERNANCE****National Agricultural Education Policy**

- The first National Agricultural Education Policy is set to bring academic credit banks and degree programmes with multiple entry and exit options to the 74 universities focussed on crop sciences, fisheries, veterinary and dairy training and research.
- The process for formulating the National Agricultural Education Policy was started about two months ago, after the release of the National Education Policy (NEP) 2020.
- Earlier, the Prime Minister had pitched for taking farm education to middle school level, saying necessary reforms have been made in this regard in the NEP 2020.

**Key Points****Agricultural Education Policy to be Aligned with NEP 2020:****Academic Credit Banks:**

- These may be a service provider available to a desirable student community. It may facilitate the integration of the campuses and distributed learning systems, by creating student mobility within the inter and intra university system.
- It may help in seamlessly integrating skills and experiences into a credit based formal system by providing a credit recognition mechanism.
- It will digitally store academic credits earned from recognised Higher Education Institutions (HEIs) and allow for credit redemption in order to be awarded a certificate, diploma or degree.

**Experiential Education:**

- In India, agricultural education is already ahead of its time, and already aligned with the NEP. The NEP wants a shift to four-year undergraduate degrees, and agricultural degrees are already four-year programmes.
- The NEP mentions experiential education, which has been already mandated in agricultural education since 2016.
- Experiential education is a teaching philosophy that informs many methodologies in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, clarify values, and develop people's capacity to contribute to their communities.
- The Student READY (Rural Entrepreneurship Awareness Development Yojana) programme requires all students to undertake a six-month internship, usually in their fourth year, to gain hands-on training, rural awareness, industry experience, research expertise and entrepreneurship skills.
- One major challenge is to ensure that experiential learning is made available to all students if the multiple entry-exit system gets implemented.
- The option of multiple entry and exit provides students with the opportunity to earn a diploma or an advanced diploma, while they are given the choice to re-enter as and when they are able to resume their studies and earn a full college degree.

**Issues:****Challenge of Multidisciplinarity:**

- Agricultural universities have been modelled on the land grant pattern, with a focus on research and extension, and deep community connections, driven by the philosophy that farmers need holistic solutions to their problems.
- However, in recent years, several domain specific universities in horticulture, veterinary science and fisheries sciences have come up. Incorporating humanities and social sciences into these settings could be a big challenge.

**Related to the ICAR:**

- Though agricultural education is a State subject, the Indian Council of Agricultural Research (ICAR - Ministry of Agriculture and Farmers Welfare) is responsible for the quality of education across the country, and expects to continue in a standards-setting role under the new system of higher education regulation proposed by the NEP.
- However, it is not clear whether it will continue in its accreditation and grant making roles under the new regime.

**INDIAN ECONOMY****CCI to Probe Google**

The Competition Commission of India (CCI) has initiated a probe into alleged abuse of dominant position by the company to promote its payments app, Google Pay.

**Key Points**

**CCI highlighted two main anti market practices by google to unfairly push Google Pay its payment app:**

- **Mandatory Use:** Google's policy of mandatory use of Google Play's payment system for purchasing the apps and IAPs (in-app purchases) in the Play Store.
- **Exclusionary Practices:** It excluded other mobile wallets/UPI (Unified Payments Interface) apps as one of the effective payment options in Google Play's payment system.
- The CCI also criticised Google's policy to charge 30% commission for all app and in-app purchases. Since Google's Play store cornered about 90% of all downloads, a significant volume of payments being processed in the market would thus be controlled by it.
- If the application developers raise their subscription fees to offset the costs of google's commission or remove/reduce premium/paid subscription offers for users, it may affect user experience, cost and choice. Such conditions imposed by the app stores limit the ability of the app developers to offer payment processing solutions of their choice to the users.
- CCI also highlighted reports of Google abusing its dominant position in the Android-television market by creating barriers for companies which wanted to use or modify its Android operating systems for their smart televisions.
- The probe against Google Pay comes days after the National Payments Corporation of India (NPCI) allowed rival Facebook-owned WhatsApp to go live on the UPI in the multi-bank model.

**This is Google's third major antitrust challenge in India:**

**In 2018, the CCI fined Google \$21 million for 'search bias':**

- It was alleged that Google was indulging in abuse of a dominant position in the market for online search through practices leading to search bias and search manipulation, among others.
- In 2019, the CCI started probing Google for allegedly misusing its dominant position to reduce the ability of smartphone manufacturers to opt for alternate versions of its Android mobile operating system.

**Other countries where Google facing antitrust probe:**

- Regulatory scrutiny in the European Union for anti-competitive behaviour.
- The United States Department of Justice (DoJ) also sued Google alleging the company had abused its dominant position in a way that had harmed its competitors as well as customers.

**The Competition Act, 2002**

- It was passed in 2002 and was amended by the Competition (Amendment) Act, 2007. It follows the philosophy of modern competition laws.
- The Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act) was repealed and replaced by the Competition Act, 2002, on the recommendations of Raghavan committee.
- The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations, which causes or likely to cause an appreciable adverse effect on competition within India.
- In accordance with the provisions of the Amendment Act, the Competition Commission of India and the Competition Appellate Tribunal (COMPAT) were established.
- The government replaced COMPAT with the National Company Law Appellate Tribunal (NCLAT) in 2017.

**Competition Commission of India**

- It is a statutory body responsible for enforcing the objectives of the Competition Act, 2002.
- **Composition:** A Chairperson and 6 Members appointed by the Central Government.

**Objectives:**

- To eliminate practices having adverse effects on competition.
- Promote and sustain competition.
- Protect the interests of consumers.
- Ensure freedom of trade in the markets of India.

The Commission is also required to give an opinion on competition issues on a reference received from a statutory authority established under any law and to undertake competition advocacy, create public awareness and impart training on competition issues.

## **ENVIRONMENT AND DIVERSITY**

### **High Biodiversity in Ganga River**

Recently, the Wildlife Institute of India (WII) in its survey of the Ganga river (the main river without its tributaries), has found that 49% of the river has high biodiversity.

Increased biodiversity sightings, including of the Gangetic Dolphin and Otters, indicates reduced pollution levels and a healthier state of the river.

#### **Key Points**

##### **The Study:**

- The study was initiated by WII on behalf of the National Mission for Clean Ganga, one of the flagship projects undertaken by the Ministry of Jalshakti.
- This is the first study ever done in the country on the entire river, and the first also of all its biodiversity.

##### **High Biodiversity Areas of Ganga:**

- 10% of the high biodiversity areas fall alongside national parks and sanctuaries such as Rajaji national park in Uttarakhand, Hastinapur wildlife sanctuary in UP and Vikramshila gangetic Dolphin sanctuary in Bihar.
- Method Used: The institute has been tracking biodiversity through some key aquatic and semi-aquatic species such as the Gangetic Dolphins, gharials, otters, turtles and various species of water birds.

##### **Findings:**

- Many species that used to be found in the main stem and had disappeared, are now coming back.
- Nesting colonies of the Indian Skimmer found.
- Seibold's, a species of water snake, disappeared 80 years ago and has now resurfaced.
- New distributions of the puffer fish found.
- Many other species have started travelling back from tributaries to the main stem of the river indicating improving water quality and increasing Biodiversity.

##### **Background:**

- The distribution and density of key aquatic species such as the Gangetic Dolphin, the gharial and the mugger had in earlier years, significantly reduced due to loss of suitable habitat conditions, and change in the river's morphology due to the construction of dams and barrages, bank alteration, agriculture and sand mining.
- In the early 19th century, 10,000 Gangetic Dolphins were estimated which reduced to 3,526 by early 2000, disappearing entirely in Haridwar and most of the Yamuna and becoming extinct in smaller tributaries.

##### **Biodiversity Threat Higher in Freshwater Ecosystem:**

- Freshwater ecosystems account for 0.01% of the earth's surface water but support 10% of species.
- According to the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), decline in diversity of freshwater species is the highest, and surpasses losses in marine and terrestrial species.
- World Conservation Monitoring Centre (UNEP-WCMC), is an executive agency of the United Nations Environment Programme which provides information for policy and action to conserve the living world.
- Globally 20% of all known freshwater fish, 44% waterbirds and 42% amphibian species are under threat of extinction.
- The highest loss of freshwater biodiversity has been reported from the Indian subcontinent, specifically the Gangetic plains.

##### **Government Initiatives on River Ganga:**

- Ganga Action Plan: It was the first river action plan which was taken up by the Ministry of Environment, Forest and Climate Change in 1985, to improve the water quality by the interception, diversion and treatment of domestic sewage.
- The National River Conservation Plan is an extension to this plan, which aims at cleaning the Ganga river under Ganga Action Plan phase-2.

- National River Ganga Basin Authority: It was formed by the Government of India in the year 2009 under the Environment Protection Act 1986.
- Clean Ganga Fund: In 2014, it was formed for cleaning up of the Ganga, setting up of waste treatment plants and conservation of biotic diversity of the river.
- Bhuvan-Ganga Web App: It ensures the involvement of the public in the monitoring of pollution entering into the river Ganga.
- Ban on Waste Disposal: In 2017, the National Green Tribunal (NGT) banned the disposal of any waste in the Ganga.

**Way Forward**

- Efforts made by the Indian government to save the biodiversity of Ganga are aligned with the sustainable development goal no 15 that is to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- Government efforts to save ganga are being fructified in the form of improved water quality and increased biodiversity. There is a need to change the approach to development which must lay emphasis on understanding that how protecting nature is also about protecting ourselves.

**INTERNATIONAL AFFAIRS**

**China’s Railway Near Arunachal Border**

China has begun work on a strategically significant railway line that will link Sichuan province with Nyingchi in Tibet, which lies close to Arunachal Pradesh border.

**Key Points**

- This will be the second such route linking Tibet Autonomous Region (TAR) with mainland China.
- Earlier Qinghai-Tibet railway line connected Lhasa to the hinterland.

**Implications on India:**

**Security Concerns:**

- The railway line will largely improve the efficiency and convenience of military personnel and material transportation and logistical supplies in the border area.
- In situations of direct standoff near Arunachal Pradesh border, as was seen during Doklam or recent Ladakh standoff, China might be at an advantageous position.
- Doklam Issue: Indian troops intervened to block the path of Chinese soldiers engaged in building road-works on the Doklam plateau of Bhutan’s territory that Beijing laid claim.

**Rail to border town**

China's planned railway line will run from Lhasa in Tibet to Chengdu, the capital of Sichuan province, connecting both the places to Nyingchi, a city near the Arunachal Pradesh border

• The first segment of the line within Sichuan province, from Chengdu to Ya'an, was completed in December 2018

• Work on the 1,011 km section from Ya'an to Nyingchi, which was formally launched this week, will be finished in 2030



**Ecological Concerns:**

- The fragile ecological environment along the project line, may have ecological concerns for India.

**Recent Steps Taken by India:**

- India will spend 10% funds of the Border Area Development Programme (BADP) only to improve the infrastructure along the China border.
- The Border Roads Organisation (BRO) constructed the Daporijo bridge over Subansiri river in Arunachal Pradesh in a record span of just 27 days.
- It links roads leading upto the Line of Actual Control (LAC) between India and China.
- Recently the defence minister virtually laid the foundation of a tunnel at Nechiphu in West Kameng district of Arunachal Pradesh.
- It will shorten travel time for troops till the LAC through Tawang, which China claims to be its territory.
- The BRO is already constructing an all-weather tunnel under the Se La pass in Arunachal Pradesh which connects Tawang to the rest of Arunachal and Guwahati.
- The state government of Arunachal Pradesh has advocated selection of 10 census towns along the India-China border as pilot projects for infrastructure development in order to stop people living along its international borders, specifically with China, from migrating to faraway urban centres in the State.
- Recently, the Defence Minister inaugurated the Sisseri River Bridge located at lower Dibang Valley in Arunachal Pradesh connecting Dibang Valley and Siang.
- In 2019, the Indian Air Force inaugurated resurfaced runway at India's easternmost Village-Vijaynagar (Changlang district) in Arunachal Pradesh.
- In 2019, the Indian Army conducted exercise 'HimVijay' in Arunachal Pradesh and Assam with its newly created Integrated Battle Groups (IBG).
- Bogibeel bridge, which is India's longest road-rail bridge connecting Dibrugarh in Assam to Pasighat in Arunachal Pradesh was inaugurated in 2018.
- It will facilitate quicker movement of troops and equipment to areas near the India-China border.

**Border Area Development Programme (BADP)**

- The BADP was launched by the Ministry of Home Affairs in 1986-87 as part of a comprehensive approach to Border Management.
- BADP was initiated in the border areas of the western region during the Seventh Five Year Plan (1985-90), for ensuring balanced development of border areas through development of infrastructure and promotion of a sense of security among the border population.
- It is a centrally sponsored scheme. Funds are provided to the states as a non-lapsable special central assistance for the execution of projects relating to infrastructure, livelihood, education, health, agriculture and allied sectors.
- The States covered are Arunachal Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tripura, Uttar Pradesh, Uttarakhand and West Bengal.

**Sectors of India-China Border**

- India and China share a boundary that stretches 3,488 km from Ladakh to Arunachal Pradesh.
- The border dispute still stands unresolved.
- It is divided into three sectors:
- Western Sector: It falls in the Union Territory (UT) of Ladakh and is 1597 km long.
- It witnesses the highest transgressions between the two sides.
- Middle Sector: It falls in Uttarakhand and Himachal Pradesh and is 545 km long.
- It is the least disputed sector between the two countries.
- Eastern Sector: It falls in the states of Sikkim and Arunachal Pradesh and is 1346 km long.
- China claims Arunachal Pradesh as part of south Tibet which is firmly rejected by India.

**Way Forward**

- India needs to be vigilant enough for any new development in China near its border to protect its interests efficiently. Further, it needs to build robust Infrastructure in difficult border areas in its territory to ensure movement of personnel and other logistical supplies in an efficient manner..

**AGRICULTURE****Saffron Cultivation in Northeast**

A pilot project of saffron cultivation has yielded successful results in Yangyang village of Sikkim, which produced its first crop of saffron recently.

**Key Points****About:**

- Saffron is a plant whose dried stigmas (thread-like parts of the flower) are used to make saffron spice.
- Saffron cultivation is believed to have been introduced in Kashmir by Central Asian immigrants around the 1st Century BCE.
- It has been associated with traditional Kashmiri cuisine and represents the rich cultural heritage of the region.
- It is a very precious and costly product.
- In ancient Sanskrit literature, saffron is referred to as 'bahukam'.
- It is cultivated and harvested in the Karewa (highlands) of Jammu and Kashmir.

**Importance:**

- It rejuvenates health and is used in cosmetics and for medicinal purposes.
- It has been associated with traditional Kashmiri cuisine and represents the rich cultural heritage of the region.

**Season:**

- In India, saffron Corms (seeds) are cultivated during the months of June and July and at some places in August and September.
- It starts flowering in October.

**Conditions:**

- Saffron grows well at an altitude of 2000 meters above sea level. It needs a photoperiod (sunlight) of 12 hours.
- Soil: It grows in many different soil types but thrives best in calcareous (soil that has calcium carbonate in abundance), humus-rich and well-drained soil with a pH between 6 and 8.
- Climate: For saffron cultivation, we need an explicit climatological summer and winter with temperatures ranging from no more than 35 or 40 degree Celsius in summer to about -15 or -20 degree Celsius in winter.
- Rainfall: It also requires adequate rainfall that is 1000-1500 mm per annum.

**Saffron Producing Regions in India:**

- Saffron production has long been restricted to a limited geographical area in the Union territory of Jammu & Kashmir.
- Pampore region, commonly known as Saffron bowl of Kashmir, is the main contributor to saffron production.
- Pampore Saffron Heritage of Kashmir is one of the Globally Important Agricultural Heritage systems (GIAHS) recognised sites in India.
- Other districts producing saffron are Budgam, Srinagar, and Kishtwar districts.
- Recently, the Kashmir saffron got Geographical Indication (GI) tag status.

**Production & Demand in India:**

- India cultivates about 6 to 7 tonne of saffron while the demand is 100 tonne.
- To meet the growing demand of saffron the Ministry of Science and Technology, through the Department of Science and Technology (DST), is now looking at extending its cultivation to some states in the Northeast (Sikkim now, and later to Meghalaya and Arunachal Pradesh). There is a huge similarity of climate and geographical conditions between Kashmir and few regions of Northeast.
- North East Centre For Technology Application and Reach (NECTAR), an autonomous body under the DST in collaboration with the Botany and Horticulture departments of Sikkim Central University implemented a pilot project in Yangyang village of South Sikkim.

**Benefits**

- It will help in reducing imports.
- It will also diversify agriculture and provide new opportunities to the farmers in the North-East.

- The extension of saffron production will help in meeting the annual demand in India.

**Other Initiatives:**

- The National Saffron Mission was sanctioned by the central government in the year 2010 in order to extend support for creation of irrigation facilities through tube wells and sprinkler sets which would help in production of better crops in the area of saffron production.
- Recently, the Institute of Himalayan Bioresource Technology (CSIR-IHBT) and the Government of Himachal Pradesh, have jointly decided to increase the production of the two spices namely, Saffron and Heeng (asafoetida).
- Under this plan, IHBT will be introducing new varieties of saffron and heeng from the exporting countries and will be standardized under Indian conditions.

**Way Forward**

- Initiatives such as the National Saffron Mission and extension of saffron production to the North-East will help to diversify the agricultural sector. It will also enforce Atmanirbhar Bharat Abhiyan in the agricultural sector.

**IMPORTANT FACTS FOR PRELIM****Thirty Meter Telescope Project**

The design of back-end instruments and other aspects of the Thirty Meter Telescope (TMT) project being installed at Maunakea in Hawaii has been developed by close collaboration between the 2020 Physics Nobel Laureate Prof. Andrea Ghez and Indian astronomers.

**Key Point**

- The Thirty-meter telescope (TMT) project is an international partnership between the USA, Canada, Japan, China, and India.
- It will allow deeper exploration into space and observe cosmic objects with unprecedented sensitivity.

**Other Global Projects with Indian Collaboration:**

- The Laser Interferometer Gravitational-Wave Observatory (LIGO) Project
- The Indian scientists contributed in several aspects such as designing algorithms for analysis of signals from gravitational waves, estimating energy and power radiated from black holes etc.
- Now LIGO-India is a planned advanced gravitational-wave observatory to be located in India as part of the worldwide network.

**CERN Project**

- India became a full Associate Member of world's largest particle Physics laboratory CERN in 2017, thereby getting full access to data generated there.
- The contribution of Indian scientists there is mainly in building the Large Hadron Collider (LHC) and construction of two significant CERN experiments, CMS and ALICE.

**Facility for Antiproton and Ion Research (FAIR)**

- FAIR is coming up at Darmstadt, Germany for studying the building blocks of matter and the evolution of the Universe.
- FAIR is a sophisticated accelerator complex that will use the high energy and ion beams to mimic the condition inside the core of the stars and early phase of the universe.
- The role of Indian scientists would be to build NUSTAR (Nuclear Structure, Astrophysics and Reactions), CBM (Compressed Baryonic Matter) and PANDA (Antiproton Annihilation at Darmstadt).

**Square Kilometre Array (SKA)**

- India has joined nine other countries to build the world's largest and most sophisticated radio telescope called Square Kilometre Array (SKA).
- The core of the telescope will be based in Karoo desert in South Africa. Since the total detection area of the receiver dishes would exceed 1 square kilometer, it is called Square Kilometre Array.
- International-Thermonuclear-Experimental-Reactor (ITER)
- The International-Thermonuclear-Experimental-Reactor (ITER) is focused around creating an environment mimicking the Sun in laboratory conditions using nuclear fusion.
- India's scientists and institutions such as Institute for Plasma Research, Ahmedabad are playing an important role in this.

**DAILY ANSWER WRITING PRACTICE**

**Qns. Discuss the importance of the Non-Alignment Movement in India's foreign policy, in contemporary times. (250 words).**

Ans:

The Non-Aligned Movement (NAM) was formed during the Cold War as an organization of states that did not seek to formally align themselves with either the United States or the Soviet Union but sought to remain independent or neutral. India played an instrumental role in the establishment of NAM in 1961.

- For India, NAM is an important platform that is in tandem with the needs and principles of its foreign policy. It provides an opportunity for India to attain its objective and interests in the international sphere. Some of them as follows:
- Balancing the Cold War between the US and China: In the current geopolitics, the competition between the USA and China is gradually acquiring the characteristics of the Cold war (Trade War, Indo-pacific narrative, etc).
- India can leverage NAM in preventing the polarization of the world again.
- **Strengthening of Multipolar World Order:** A multipolar world order is in concurrence with Indian foreign policy. Thus, NAM can help in the formation of a multipolar world with India becoming a major pole.
- **Countering Neo-colonialism by China:** China's investment in Africa and Asia through its Belt and Road initiative is criticized for being neo-colonialism in nature.
- During the cold war, the NAM played an instrumental role in the decolonization project. Similarly, in present times, NAM can help India in establishing the ethos of collective action.
- **Global South Cooperation:** India is widely perceived as a leader of the developing world. Thus, India's engagement with NAM will further help in the rise of India's stature as the voice of the developing world or global south.

**In times of increasing protectionism, NAM can provide a platform for South-South cooperation.**

- **Support for India's Candidature in UNSC:** Among 120 members of the NAM and most of them are also the members of the UN General Assembly. This could help India in garnering support for not only democratisation of the UN but also for a permanent seat in the United Nation Security Council.
- **Combating Global Issues:** NAM becomes relevant to India in mobilising international public opinion against terrorism, weapons of mass destruction (WMDs), nuclear proliferation, ecological imbalance, safeguarding interests of developing countries in WTO (World Trade Organization) etc.

**Conclusion**

- Given the relevance of NAM in present times, it remains a critical diplomatic forum for the pursuit of India's foreign policy interests. Therefore India must refrain from treating NAM as a ritual to be performed every three years and start engaging with NAM constructively.
- In this context, Covid-19 pandemic has provided an opportunity for India to lay the foundation of NAM 2.0.

**DAILY QUIZ**

1. With reference to Competition Commission of India (CCI), consider the following statements:

1. It is an executive body responsible for prohibiting anti-competitive practices.
2. Competition Appellate Tribunal is the appellate tribunal to hear and dispose of appeals against CCI.

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**

2. Consider the following statements about Saffron Cultivation:

1. Saffron in India is cultivated in the states of Jammu & Kashmir, Sikkim and Meghalaya.
2. Recently, Kashmir Saffron has got the GI tag.

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

3. With reference to the Dharchula region, consider the following statements:

1. The region is prone to the earthquakes of micro and moderate magnitude.
2. The region is located in the peninsular Indian.

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

4. With reference to recommendations of National Education Policy 2020, consider the following statements:

1. Vocational Education shall start from Class 10 with Internships.
2. By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.

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

5. Consider the following statements:

1. The mRNA vaccine can be used for protecting against viral infection.
2. Sputnik V is an undertrial vaccine for Covid-19.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) **Both 1 and 2**
- d) Neither 1 and 2



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