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General Studies II, Governance

HATTIS

CONTEXT

The state government's request for inclusion of the Hatti community in the list of Scheduled Tribes in the state is politically significant, as the Hattis have a considerable presence in about nine seats in the Shimla and Sirmaur regions.

ABOUT HATTIS

- The Hattis is a close-knit community that got its name from their tradition of selling homegrown vegetables, crops, meat, wool, etc. at small markets called 'haat' in towns.
- The Hatti community, whose men generally wore a distinctive white headgear, during ceremonies, is cut off from Sirmaur by two rivers called Giri and Tons. Tons divide it from the Jaunsar Bawar area of Uttarakhand.
- The Hattis who live in the trans-Giri area and Jaunsar Bawar in Uttarakhand were once part of the royal estate of Sirmaur until Jaunsar Bawar's separation in 1815.
- There is a fairly rigid caste system among the Hattis — the Bhat and Khash are the upper castes, while the Badhois are below them.
- Inter-caste marriages have traditionally remained a strict no. Due to topographical disadvantages, the Hattis living in the Kamrau,

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Sangrah, and Shilliai areas lag in education and employment.



DEMAND FOR TRIBAL STATUS

The community has been making the demand since 1967 when tribal status was accorded to people living in the Jaunsar Bawar area of Uttarakhand, which shares a border with the Sirmaur district.

Their demand for tribal status gained strength because of resolutions passed at various maha Khumblis over the years.

They share similar culture and socio-economic conditions with the Hattis residing in Sirmaur, those in Jaunsar were declared tribals but those who remained in Himachal were not given the same status or benefits.

CONSTITUTION DEFINITION OF SCHEDULE TRIBES

Article 366 (25) defined scheduled tribes as "such tribes or tribal communities or parts of or groups within such tribes or

tribal communities as are deemed under Article 342 to be Scheduled Tribes for this constitution".

PROCEDURE FOR INDUCTION IN ST CATEGORY

- The President may, concerning any State or Union territory, and where it is a state, after consultation with the Governor thereof by public notification, specify the tribes or tribal communities or parts of or groups within tribes or tribal communities which shall, for this constitution, be deemed to be scheduled tribes concerning that state or Union Territory, as the case may be.
- Parliament may by law include in or exclude from the list of Scheduled tribes specified in a notification issued under clause (1) any tribe or tribal community or part of or group within any tribe or tribal community
- Thus, the first specification of Scheduled Tribes with a particular State/ Union Territory is by a notified order of the President, after consultation with the State governments concerned. These orders can be modified subsequently only through an Act of Parliament.

CRITERIA REQUIRED FOR STs

- The criterion followed for specification of a community, as scheduled tribes are indications of primitive traits, distinctive culture, geographical isolation, shyness of

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- contact with the community at large, and backwardness.
- This criterion is not spelt out in the Constitution but has become well established. It subsumes the definitions contained in the 1931 Census, the reports of the first Backward Classes Commission 1955, the Advisory Committee (Kalelkar), on Revision of SC/ST lists (Lokur Committee), 1965, and the Joint Committee of Parliament on the Scheduled Castes and Scheduled Tribes Orders (Amendment) Bill 1967 (Chanda Committee), 1969.
- In exercise of the powers conferred by Clause (1) of Article 342 of the Constitution of India, the President, after Consultation with the State Governments concerned has promulgated so far 9 orders specifying the Scheduled Tribes concerning the state and union territories.
- Out of these, eight are in operation at present in their original or amended form. One order namely the Constitution (Goa, Daman & Diu) Scheduled Tribes order 1968 has become defunct on account of the reorganization of Goa, Daman & Diu in 1987.

PEOPLE BENEFIT IF THE GOVERNMENT CONCEDES DEMANDS

The Chief Minister has said that the move will benefit a population of about 3 lakh people in 154 panchayats in the trans-Giri area in the state.

POLITICAL SIGNIFICANCE

In 2009, the BJP promised to give ST status to the Hattis in its election manifesto. That was the first time that any political party had incorporated this demand in its manifesto

The BJP has gained from Hatti support in the parliamentary elections in Shimla, once a Congress stronghold. In 2014, Defence minister Rajnath Singh, then BJP's national president, had even announced the grant of Scheduled Tribe status to Hattis at a rally in Nahan in Sirmaur.

The Hatti community is concentrated in the four Assembly constituencies in the Sirmaur district — Shillai, Paonta, Renuka, and Pachhad, but they can play a significant role in at least nine seats spread across Shimla and Sirmaur. The BJP won 44 of the 68 Assembly seats in the 2017 elections.

General Studies II, International Relations

EASTERN ECONOMIC FORUM

CONTEXT

Russia hosted the seventh Eastern Economic Forum at Vladivostok. The

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forum provided the platform for entrepreneurs to expand their businesses into Russia's Far East.

EASTERN ECONOMIC FORUM

- It was established in 2015 to encourage foreign investments in the RFE.
- The EEF displays the economic potential, suitable business, suitable business conditions, and investment opportunities in the region.
- Agreements signed at the EEF increased from 217 in 2017 to 380 agreements in 2021, worth 3.6 trillion roubles.
- As of 2022, almost 2,729 investment projects are being planned in the region. The agreement focus on infrastructure, transportation projects, mineral excavations, construction, industry, and agriculture.

MAJOR PARTICIPANTS

CHINA

- The Forum aimed at connecting the Far East with the Asia Pacific region
- China is the biggest investor in the region as it sees potential in promoting the Chinese Belt and Road Initiative and the Polar Sea Route in the RFE.
- China's investment in the region accounts for 90% of the total investment. Russia has been welcoming Chinese investment

since 2015, more now than ever due to economic pressure caused by the war in Ukraine.

- The Trans –Siberian Railway has further helped Russia and China in advancing trade ties.
- The countries share a 4000-kilometer-long border, which
- .
- China and Russia have invested in a fund to develop northeastern China and the RFE, through collaborations on connecting the cities of Blagoveshchensk and Heihe via a 1,080metre bridge, supplying natural gas, and a rail bridge connecting the cities of Nizhneleninskoye and Tongjiang.

SOUTH KOREA

- South Korea has invested in shipbuilding projects, the manufacturing of electrical equipment, gas –liquefying plants, agricultural production, and fisheries.
- In 2017, the Export-Import Bank of Korea and the Far East Development Fund announced their intention to inject \$2 billion into the RFE in three years.

JAPAN

- In 2017, Japanese investment s through 21 projects amounted to \$ 16 billion.

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enables them to tap into each other’s resources with some infrastructural assistance.

- China is also looking to develop its Heilongjiang province which connects with the RFE
- Under Shizo Abe “s leadership, Japan identified eight areas of economic cooperation and pushed private businesses to invest in the development of the RFE.
- Japan seeks to depend on Russia's oil and gas resources after the 2011 meltdown in Fukushima which led the government to pull out of nuclear energy.
- Japan also sees a market for its agro technologies which have the potential to flourish in the RFE, given similar climatic conditions.
- The trade ties between Japan and Russia are hindered by the Kuril Islands dispute as they are claimed by both countries.

INDIA

- India is keen to deepen its cooperation in energy, pharmaceuticals, maritime connectivity, healthcare, tourism, the diamond industry, and the Arctic.
- In 2019, India also offered a \$1 billion line of credit to develop infrastructure in the region.
- Through the EEF, India aims to establish strong inter-state interactions with Russia.

- Business representatives of Gujarat and the Republic of Sakha have launched agreements in the diamond and pharmaceuticals industry.

EEF AIM

- The primary objectives of the EEF are to increase Foreign Direct Investments in the RFE.
- The sparse population living in the region is another factor in encouraging people to move and work in the Far East.
- The region's riches and resources contribute to five percent of Russia's GDP.
- The RFE is geographically placed at a strategic location, acting as a gateway into Asia.
- The Russian government has strategically developed the region intending to connect Russia to the Asian trading routes.
- With the fast modernization of cities like Vladivostok, Khabarovsk, Ulan-Ude, Chita, and more, the government aims to attract more investment in the region.
- Russia is trying to attract Asian economies in investing and developing the Far East.

ISSUES

- But despite the abundance and availability of materials procuring and supplying them is an issue due to the unavailability of personnel.

INDIA NEEDS TO STRIKE A BALANCE BETWEEN EEF AND

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INDO –PACIFIC ECONOMIC FRAMEWORK FOR PROSPERITY (IPEF)

- The U.S-led Indo –Pacific Economic Framework for prosperity (IPEF) and the EEF are incomparable based on their geographic coverage and partnership with the host countries.
- India has vested interests in both the forums and has worked towards balancing its involvement
- India has not shied away from investing in Russia –initiated EEF despite the current international conditions. At the same time, India has given its confirmation and acceptance to three of the four pillars in the IPEF.
- The IPEF also presents an ideal opportunity for India to act in the region, without being part of the China-led Regional Comprehensive Economic Partnership or another regional grouping like the Comprehensive and Progressive Agreement for Trans-Pacific Partnership.
- The IPEF will also play a key role in building resilient supply chains. India's participation in the forum will help in disengaging from a supply chain that is dependent on China and will also make it a part of the global supply chain network
- Additionally, the IPEF partners will act as new sources of raw materials and other essential products, further reducing India's reliance on China for raw materials.

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and composition based on the change in its orbit and based on the ejected material.”

General Studies III: Science & Technology

DART

Background

- NASA’s Double Asteroid Redirection Test (DART) is the world’s first full-scale mission to test technology for defending Earth against potential asteroid or comet hazards.
- The mission will test a method that could be used to redirect asteroids that pose a threat to our planet.
- Using the impact of a massive object like a spacecraft to divert asteroids is called the “**kinetic impact method**” of asteroid impact avoidance.

According to Robert Braun, head of the Johns Hopkins Applied Physics Laboratory’s (APL) Space Exploration Sector, “**This is humanity’s** first planetary defence test mission. This is the first time defence technology will be tested in a civilian mission. Also, we do not know the exact shape of the target or what it is made of. But we intend to understand its shape

The crash of DART with Dimorphous

- The 160-meter-wide asteroid Dimorphos orbits the much larger asteroid Didymos, which is about 780 meters wide.
- After DART crashes into Dimorphos, it will ever so slightly change the way that it orbits Didymos.
- Telescopes on our planet and in space including the **Webb Telescope and Hubble** will be trained on this asteroid system to take measurements of the changes in the system.
- While Dimorphos poses no actual threat to Earth, scientists will compare the data from DART’s actual impact with the many computer-generated simulations they have already made.
- This will help ascertain whether the kinetic impact method will be effective as a mitigation strategy in the event of an actual asteroid threat.
- DART weighs around 600 kilograms. According to NASA, this would be similar to crashing a golf cart into the great pyramid.

“This is intended to be a small nudge that will slightly change the position of the asteroid. In the event of an actual predicted threat, this is something that we would do

five, ten or twenty years in advance,”

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Dimorphos while simultaneously supporting DART's autonomous guidance system.

Apart from the James Webb Telescope, the Hubble Telescope and various other space telescopes here on Earth, a satellite much closer to the vicinity of the asteroid system will also have its eyes trained on the impact. This is the CubeSat called LICIA Cube.



About

- The only instrument on board the DART spacecraft is DRACO, or Didymos Reconnaissance and Asteroid Camera for Optical navigation.
- The high-resolution camera will capture images of Didymos and

- According to the Italian space agency Agenzia Spaziale Italiana, which built the CubeSat, LICIA Cube detached itself from DART and has begun operating autonomously.
- The two cameras on board the CubeSat will transmit back images even after the DRACO can no longer do so.

General Studies II: Governance

COASTAL REGULATION ZONE

Context

The Supreme Court last week ordered the demolition, within a month, of five apartment complexes in Maradu municipality in Ernakulam, Kerala, for violating Coastal Regulation Zone (CRZ) norms.

The order came on a special leave petition (SLP) filed by Kerala Coastal Zone Management Authority (KCZMA).

Key Points

- While the CRZ Rules are made by the Union Environment Ministry, implementation is supposed to be done by state governments through their Coastal Zone Management Authorities.
- The states are also supposed to frame their own coastal zone management plans by the central Rules.

The CRZ Rules

- CRZ Rules govern human and industrial activity close to the coastline, to protect the fragile ecosystems near the sea.

- The Rules, mandated under the Environment Protection Act, 1986, were first framed in 1991.

They sought to restrict certain kinds of activities, like large constructions, setting up of new industries, storage or disposal of hazardous material, mining or reclamation and bunding, within a certain distance from the coastline.

- The basic idea is: because areas immediately next to the sea are extremely delicate, home to many marines and aquatic life forms, both animals and plants and are also threatened by climate change, they need to be protected against unregulated development.

In all CRZ Rules, the regulation zone has been defined as the area up to 500 m from the high-tide line.

Several kinds of restrictions apply, depending on criteria such as the population of the area, the ecological sensitivity, the distance from the shore and whether the area had been designated as a

natural park or wildlife zone.

1991 Rules

- Despite several amendments, states found the 1991 Rules to be extremely restrictive.
- They complained that if applied strictly, the Rules would not allow simple things like building decent homes for people living close to the coast and carrying out basic developmental works.
- The 1991 Rules also created hurdles for showpiece industrial and infrastructure projects such as the POSCO steel plant in Odisha and the proposed Navi Mumbai airport in the first decade of the new century.

Evolution of Rules

- The Centre notified fresh CRZ Rules in 2011, which addressed some concerns.
- An exemption was made for the construction of the Navi Mumbai airport. (The POSCO Project had failed to take off due to other reasons).
- Projects of the Department of Atomic Energy plans to set up nuclear power plants near the coast were exempted.

Shailesh Nayak Committee

- After even these Rules were found inadequate, however, the Environment Ministry 2014 set up a six-member committee under then

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Earth Sciences Secretary Shailesh Nayak to give suggestions for a new set of CRZ Rules. The committee submitted its report in 2015.

- Simultaneously, the Chennai-based National Centre for Sustainable Coastal Management defined a new high-tide line along India's entire coastline to remove ambiguities.
- Separately, the Survey of India defines a hazard line along the coasts to be used mainly for disaster management planning.

2018 CRZ Rules

Based on these and other inputs, the Environment Ministry issued fresh CRZ Rules in December 2018, which removed certain restrictions on buildings, streamlined the clearance process and aimed to encourage tourism in coastal areas.

The Current situation

In January, the government notified new CRZ Rules with the stated objectives of promoting sustainable development and conserving coastal environments.

CRZ-III (Rural)

For the so-called CRZ-III (Rural) areas, two separate categories have been stipulated.

CRZ-IIIA

In the densely populated rural areas (CRZ-IIIA) with a population density of 2,161

per sq km as per the 2011 Census, the no-development zone is now 50 m from the high-tide level, as against the 200 m stipulated earlier.

CRZ-IIIB

- The CRZ-IIIB category (rural areas with population density below 2, 161 per sq km) continues to have a no-development zone extending up to 200 m from the high-tide line.
- The new Rules have a no-development zone of 20 m for all islands close to the mainland coast and all backwater islands on the mainland.

Cases in Kerala

- There have been cases of courts in Kerala ordering the demolition of resorts or apartments for violating CRZ norms earlier.
- But stakeholders have either obtained stays or have got relief in the Supreme Court.
- In 2014, a Single Bench of Kerala High Court ordered the demolition of a waterfront residential complex of DLF in Kochi
A Division Bench cancelled the demolition order but fined the builder Rs 1 crore.
- After KCZMA appealed, the Supreme Court in January 2018 upheld the verdict of the Division Bench.
- In 2013, the High Court ordered a Rs 350 crore resort in Alappuzha pulled down.

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- The order was stayed by the Supreme Court.
- Kochi's Lakeshore Hospital was in the Dock for violating CRZ norms.
- But in 2003, the project got a breather from the High Court, which dismissed a public interest plea that had come after the construction had been completed.
- Some 26 resorts and hotels on Thiruvananthapuram's Kovalam beach have been served notices for violations of CRZ Rules.
- In the Kochi Municipal Corporation area, 35 violations have been reported.

General Studies III: Science & Technology

CRISPR-Cas9

Background

- CRISPR-Cas9 is a genome editing tool.
- It is faster, cheaper and more accurate than previous techniques of editing DNA and has a wide range of potential applications.

CRISPR-Cas9 is a unique technology that enables geneticists and medical researchers to edit parts of the genome by removing, adding or altering sections of the DNA Sequence.

It is currently the simplest, most versatile and precise method of genetic manipulation and is therefore causing a buzz in the science world.

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Palindromic Repeats, is a piece of DNA, a so-called DNA sequence.

- CRISPR sequences were first discovered in bacteria and archaea, which are part of an adaptive immune system that can recognize infectious viruses.

Effective treatment of diseases

- This method offers an enormous range of options to intervene with the genetic code of living organisms, both people and animals as well as micro-organisms and plants.
- This can be beneficial when treating diseases, such as cancer and genetic diseases.
- The CRISPR/Cas9 technology can also be applied to crops.
- By editing the genome, you can give the crop the desired characteristics, whereby it becomes resistant to pathogens or grows faster and eventually provides a higher yield.

Once CRISPR recognizes the virus, a mechanism comes into operation whereby enzymes (such as Cas9) can “cut” the genetic material of the viruses and make them harmless.

In this way, disease-causing or other undesirable genes are turned off, or “healthy” and desirable genes can even be inserted into the genome.

- This system has been modified by scientists in such a way that it also works in animal and

How the genetic scissors work

- CRISPR, which stands for Clustered Regularly Interspaced Short
- plant cells.
- CRISPR sequences are developed so that they specifically recognize the relevant part of the genome of these cells.
- The CRISPR sequence leads the Cas9 enzyme, for example, to that part of the genome which is selectively cut.

The ethical Dilemma

Cases of creating a ‘designer baby’, and caused widespread concern in the scientific community.

Preventive interventions to obtain special traits is not something that scientists are not something that scientists currently want the technology to be used for.

Socioeconomic disparities

Multiple polls have shown that the majority of people around the world are opposed to the use of genetic engineering of embryos for enhancement, such as athletic ability and intelligence, or for altering physical characteristics, such as eye colour and height. ⁸⁹ It is easy to conceive of the risk of a new age of eugenics.

Possible stigma

Especially while the concept is still novel, it is difficult to predict how society will feel about gene-edited babies.

Insurance

Because gene editing will be a tool to cure and prevent illness, the insurance coverage will be an important part of the conversation.

Glossary

- **DNA:** Deoxyribonucleic acid, a molecule present in all cells that carries genetic instructions.
- **RNA:** Ribonucleic acid, a single-stranded molecule sometimes referred to as DNA's "**cousin.**"
- **CRISPR:** clustered regularly interspersed short palindromic repeats – arrays of repeated DNA sequences.

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- **Cas:** CRISPR-associated proteins that cleave virus DNA. There are 93 of them, one of which is Cas9.
- **TracrRNA:** trans-activating CRISPR RNA, which enables long RNA created from a CRISPR sequence to mature into its active form.

General Studies II: International relations, Governance

WINDFALL TAX

CONTEXT

The central government on July 1 introduced a windfall profit tax on domestic crude oil production Finance Minister defended the windfall tax imposed by the centre on domestic crude oil producers.

WINDFALL TAX

- It is designed to tax the profits a company derives from an external, sometimes unprecedented event-for instance, the energy price rise as a result of the Russia –Ukraine conflict.
- These are profits that cannot be attributed to something the firm actively did, like an investment strategy or an expansion of business.
- The U.S Congressional Research Services (CRS) defines a windfall as an unearned, unanticipated gain in

income through no additional effort or expense.

- Government typically levies this as a one-off tax retrospectively over and above the normal rates of tax.
- Finance Minister explained the introduction of the windfall tax as a way to rein in the “**phenomenal profits**” made by some oil refineries who chose to export fuel to reap the benefits of skyrocketing global prices which affected domestic supplies.

RATIONALE BEHIND TAX

- Pandemic recovery and supply issues resulting from the Russia – Ukraine conflict shored up energy demands, which in turn have driven up global prices.
- The rising prices meant huge and record profits for energy companies while resulting in hefty gas and electricity bills for households in major and smaller economies.
- The UN chief urged all governments to tax these excessive profits and use the funds to support the most vulnerable people through these difficult times.

WINDFALL TAX IN INDIA

- In July, India announced a windfall tax on domestic crude oil producers who it believed were reaping the benefits of the high oil prices.
- It also imposed an additional excise levy on diesel, petrol, and air turbine fuel (ATF) exports.

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- India's case was different from other countries, as it was still importing discounted Russian oil.

Windfall tax was targeted mainly at Reliance Industries Ltd and Russian Oil major Rosneft –backed Nayara Energy, who the government believed were making a killing on exporting large volumes of fuel made from discounted Russian oil at the cost of the domestic market.

PURPOSE OF TAX

Analysts also saw the windfall tax as a way for the centre to narrow the country's widened trade deficit.

FUNDING WELFARE SCHEMES

It will also be led to the redistribution of unexpected gains when high prices benefit producers at the expense of consumers, to funding social welfare schemes, and as a supplementary revenue stream for the government.

ISSUES IN IMPOSING TAX

- Since windfall taxes are imposed retrospectively and are often influenced by unexpected events, they can brew uncertainties in the market about future taxes.
- German economist Andreas Peichl said that such taxes are populist and politically opportune in the short term.

- IMF said that taxes in response to price surges may suffer from design problems given their expedient and political nature.
- It will reduce future investment because prospective investors will internalize the likelihood of potential taxes when making investment decisions.
- There is another argument about what exactly constitutes true windfall profits, how it can be determined, and what level of profit is normal or excessive.

Another issue is who should be taxed only the big companies responsible for the bulk of high-priced sales or smaller companies as well as raising the question of whether producers with revenues or profits below a certain threshold should be exempt.

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- demand from glove makers, took a severe drubbing with its prices.
- With the impact of the falling prices beginning to reflect in their daily lives as well as the local economy.
- The growers are up in arms against the authorities for their perceived delay in checking the slide.

Causes

- The current fall in prices is mainly due to weak Chinese demand & the European energy crisis, along with high inflation & import glut.
- While the unremitting zero COVID strategy in China, which consumes about 42% of the global volume, has cost the industry dearly, analysts have also flagged the acceleration of imports.
- The domestic tyre industry, is sitting pretty in an ample inventory, especially in the form of block rubber from the Ivory coast & compounded rubber from the far east.

General Studies III: Economy

Natural Rubber

Context

After the post-pandemic revival, the price of natural rubber has crashed to a 16-month low in the Indian market.

Key points

- The price of latex, which soared during the pandemic due to huge



India's Position

- India is currently the world's **fifth largest producer of natural rubber, second in consumption of rubber** globally.
- About 40% of India's total natural rubber consumption is currently met through imports.
- During 2022-23, the production & consumption of rubber is 8,50,000 & 12,90,000 tonnes respectively.
- The production of the material improved by 8.4% to 7,75,000 tonnes during 2021-22, compared to 7,15,000 in the previous year.
- On the demand side, domestic consumption rose by 12.9% to 12,38,000 tonnes in 2021-22 from 10,96,410 tonnes in the previous year.
- The auto-tyre manufacturing sector accounted for 73.1% of the total quantity of natural rubber consumption.

- The key demands they have raised to the Union Government include raising the import duties on latex products & compound rubber to make it on par with natural rubber, by 25% per kilogram.
- It demands the state government to raise the replanting subsidy in Kerala, which remains at ₹25,000 per hectare and the support price of

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- Import of the material, meanwhile increased to 5,46,369 tonnes from 4,10,478 tonnes.

Effects

- The turnaround has exposed the growers of small & medium scale, accounting for nearly 75% of total production.
- The impact of the price fall is felt more in the rural areas, where most people are solely dependent on rubber cultivation.
- The precipitous plunge in prices coupled with high costs have left them with an uncertain future, forcing them to stop production for the time being.
- This caused sluggishness in the respective local economies.
- If a reversal in prices seems distant, the trend may trigger a crop switch or even fragmentation of the rubber holdings in long run.

Farmers demand

the crop under the price stabilisation scheme to ₹200 from ₹170.

Other Implications of falling rubber prices

- A political landscape crystallized through the anguish & anger among the rubber farmers over the past several decades.
- The chairman of the Kerala congress has urged the Kerala government to

hike the support price for the material to ₹200 per kilogram.

- The Bharatiya Janata Party, which governs the centre and is responsible for the policy decisions has appealed against turning rubber into a political crop.

The Rubber Board

Amidst all gloom, the Rubber board professors to be relatively sanguine as it regards the price fluctuations as cyclical & rests its hopes on the projections of a remarkable shortage of rubber, seven years from now due to slow replanting in place of old trees in existing plantations.

General Studies II: International relations

ORGANISATION OF ISLAMIC COOPERATION(OIC)

CONTEXT

OIC called on the UN Human Rights Council to take necessary measures on the issue of Muslim girl students being told not to wear the hijab in Karnataka schools.

Key Points

- The OIC also urged India to "ensure the safety, security, and well-being of the Muslim community while protecting their way of life" and bring to justice the "instigators and

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propagators of violence and hate crimes" against Muslims while India slashed OIC being communal-minded.

- India's response to OIC is that India is a democracy and issues within the country are resolved under our constitutional framework and mechanism, as well as democratic ethos and polity.

ABOUT OIC

The Organization of the Islamic Cooperation is the world's second largest multilateral body after the UN.

MEMBERS: It counts 57 members, all of which are Islamic countries or Muslim majority members.

OBJECTIVE: To safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony among various people of the world

OBSERVER STATUS: The Central African Republic, Russia, Thailand, Bosnia & Herzegovina, and the unrecognized Turkish Cypriot state

EVOLUTION

- The Organisation of the Islamic Conference was established by the First Islamic Summit Conference held in Morocco in September 1969, to marshal the Islamic world after an act of arson at the Al-Aqsa Mosque in Jerusalem by a 28-year-old Australian in 1969.

- It plunged the Middle East into its worst crisis after the 1967 Arab-Israeli war. It was known as the Organisation of Islamic Conference until 2011.

INDIA AND OIC

- As a country with the world's second-largest Muslim community, India had been invited to the founding conference at Rabat in 1969 but was humiliatingly rejected at Pakistan's behest.
- Then Agriculture Minister Fakhruddin Ali Ahmed was dis-invited upon arrival in Morocco.
- In 2006, as India turned the economic corner and improved ties with the US, Saudi Arabia invited Delhi to join as an observer.

The invitation came again at the 45th session of the Foreign Ministers' Summit in 2018, when Bangladesh, the host, suggested that India, where more than 10 per cent of the world's Muslims live, should be given observer status but Pakistan opposed the proposal.

- The OIC is mainly controlled by Saudi Arabia, but Pakistan, as the only Islamic country with nuclear weapons, has had a large say since its inception.

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WHY INDIA STAYED AWAY FROM JOINING THE ORGANISATION

- As a secular country, it did not want to join an organization founded on religion.
- There was the risk that improving bilateral relations with individual member states would come under pressure in a grouping, especially on issues such as Kashmir.
- Over the years, the organisation has issued several statements on Kashmir that have been supportive of Pakistan and critical of Indian "atrocities".
- In the 1990s, Delhi got used to combating these statements at home and abroad.

CHANGING TERMS

- After building close ties with powerful members such as UAE and Saudi Arabia.
- India has been confident of riding over any statement by the grouping.
- India has consistently underlined that J&K is an **"integral part of India and is a matter strictly internal to India"**, and that the OIC has no locus stand on the issue.
- In 2019, India made its maiden appearance at the OIC Foreign Ministers' meeting, as a **"guest of honour"**.
- Then External Affairs Minister Sushma Swaraj addressed the Inaugural Plenary in Abu Dhabi on March 1, 2019, after having been invited by Sheikh Abdullah bin

Zayed Al Nahyan, UAE Foreign Minister.

The Ministry of External Affairs said then that the invitation was a **“welcome recognition of the presence of 185 million Muslims in India and their contribution to its pluralistic ethos and India's contribution to the Islamic world”**.

- This first-time invitation was seen as a diplomatic victory for New Delhi, especially at a time of heightened tensions with Pakistan following the Pulwama attack.
- Mohamed bin Salman, the Saudi crown prince had visited Delhi just before the OIC invitation.
- Pakistan had opposed the invitation to Swaraj, and its Foreign Minister Shah Mehmood Qureshi boycotted the plenary after the UAE turned down his demand to rescind the invitation.
- Within months of this, when India's dramatic changes in Jammu & Kashmir took the world by surprise, while OIC flagged its concerns and the **"internationally recognized status of the J&K dispute, UAE and Saudi Arabia individually took more nuanced positions"**.

INDIA'S RESPONSE TO HIJAB ROW

- Given India's sanguine response to OIC's Kashmir statements, the

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strongly worded statement on the hijab row may appear unusual.

- But Delhi had already conveyed a different approach with OIC back in 2020.

OIC once again hit out at India on Kashmir, Delhi went a step further than its usual boilerplate statements, and said the grouping continues to allow itself to be used by a certain country **“which has an abominable record on religious tolerance, radicalism, and persecution of minorities”**.

- Officials then said it was untenable that individual members with good bilateral relations with India are happy to sign off on anti-India OIC statements.

General Studies I: World Geography

CLOUDBURST FORECAST

Cloudbursts

They are the violent and voluminous amounts of rain pouring down in a short duration over a small area

Cloudburst events are often associated with cumulonimbus clouds that cause thunderstorms and occasionally due to monsoon wind surges and other weather phenomena.

Clouds-blanket 70% of the Earth's surface at any given time. They are like a thin layer of the floating ocean, with enough water to cover the entire surface of the earth with about one inch of rain. A modest-sized cloud (1 cubic km) may contain more than 5, 00,000 liters of water –equivalent to the mass of hundred elephants.

Cumulonimbus clouds can grow up to 12-15 km in height through the entire troposphere(occasionally up to 21 km)and can hold huge amounts of water.



CLOUSBURST CHARACTERISTICS

- Cloudbursts are not defined based on cloud characteristics and do not indicate clouds exploding. Cloudbursts are defined by the amount of rainfall. According to the Indian Meteorological Department, 100 mm of rain in an hour is called a cloudburst.

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- Usually, cloudbursts occur over a small geographical region of 20 to 30 sq .km
- In India cloudbursts often occur during the monsoon season, when the southwesterly monsoon winds bring in copious amounts of moisture inland. The moist air that converges over land gets lifted as they encounter the hills.
- The moist air reaches an altitude and gets saturated, and the water starts condensing out of the air forming clouds. This is how clouds usually form, but such an orographic lifting together with a strong moisture convergence can lead to intense cumulonimbus clouds taking in huge volumes of moisture that are dumped during cloudbursts.
- Tall cumulonimbus clouds can develop in about half an hour as the moisture updraft happens rapidly, at a pace of 60 to 120 km/hr
- A single-cell cloud may last for an hour and dump all the rain in the last 20 to 30 minutes, while some of these clouds merge to form multi-cell storms and last for several hours.

CLOUSBURST PRONE AREAS

- Cloudbursts hence occur mostly over the rugged terrains of the Himalayas, the Western Ghats, and northeastern hill states of India. The heavy spells of rain on the fragile steep slopes trigger landslides, debris flows, and flash floods, causing large-scale destruction and loss of people and property.

- Recent cloudbursts –Himalayan foothills in Himachal Pradesh in 2003, Ladakh 2010, Uttarakhand 2013. Cloudbursts were reported from the northeastern states and western Ghats states during the current monsoon season 2022. On July 8, 2022, flash floods occurred in the Lidder valley en route to Amarnath Temple in Jammu and Kashmir. Heavy rains and water logging brought Bengaluru to a standstill during the first week of September 2022. Strong monsoon winds surge along the coast and also result in cloudbursts, as in the case of Mumbai in 2005, and Chennai in 2015.

PROBLEMS IN DETECTING CLOUDBURSTS

- The resolution of the precipitation radars of these satellites can be much smaller than the area of individual cloudburst events and hence they go undetected.
- Weather forecast models also face a similar challenge in simulating the clouds at a high resolution.
- The skillful forecasting of rainfall in hilly regions remains challenging due to the uncertainties in the interaction between the moisture convergence and the hilly terrain, the cloud microphysics, and the heating-cooling mechanism at different atmospheric levels.

SOLUTIONS

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- Multiple Doppler weather radars can be used to monitor moving cloud droplets and help to provide now casts (forecasts for the next three hours). This can be a quick measure for providing warnings, but radars are an expensive affair, and installing them across the country may not be practically feasible.
- A long-term measure would be mapping the cloud burst-prone regions using automatic rain gauges. If cloud burst-prone regions are co-located with landslide-prone regions, these locations can be designated as hazardous. The risk at these locations would be huge and people should be moved and construction and mining in nearby regions should be restricted as that can aggravate the landslides and flash flood impacts.

CLAUSIUS CLAPEYRON RELATIONSHIP

- As the air gets warmer, it can hold more moisture for a longer time.
- A 1- degree Celsius rise in temperature may correspond to a 7-10 % increase in moisture and rainfall.
- This increase in rainfall amount does not get spread moderately throughout the season. As the moisture holding capacity of air increases, it results in prolonged dry periods intermittent with short spells of extreme rains. Deeper cumulonimbus clouds form and the chances of cloudbursts also increase.

CONCLUSION

As emissions continue to increase and global commitment to reduce emissions proves insufficient, these temperatures are set to hit 1.5 degrees Celsius during 2020-2040 and 2 degree Celsius during 2040 - 2060.

we will need urgent action and policies to protect lives and property from extreme events that will amplify as the global temperature change doubles.

General studies I: World geography

KUSHIYARA RIVER TREATY

Context

During Bangladesh Prime Minister Sheikh Hasina's visit to India, the two sides signed a slew of agreements, including the first water-sharing agreement since the landmark Ganga Waters Treaty, of 1996.

A memorandum of Understanding (MoU) was signed on sharing of waters of the Kushiyara river, a distributary of the Barak river which flows through Assam and then on to Bangladesh.

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Key points

- The agreement comes in a year when both lower Assam in India and Sylhet in Bangladesh witnessed deadly floods.
- It highlights the requirement for greater cooperation on flood control and irrigation-related issues between the two countries.

Kushiyara agreement

- Over the last century, the flow of the Barak river has changed in such a way that the bulk of the river's water flows into Kushiyara while the rest goes into Surma.
- The agreement is aimed at addressing part of the problem that the changing nature of the river has posed before Bangladesh as it unleashes floods during the monsoon and goes dry during the winter when the demand for water goes up because of a crop cycle in Sylhet.

Under this MoU, Bangladesh will be able to withdraw 153 cusecs (Cubic feet per second) of water from the Kushiyara out of the approximately 2,500 cusecs of water that is there in the river during the winter season.

Boro Rice

- There are various estimates about the area that will benefit from this supply but it is generally understood

that the approximately 10,000 hectares of land and millions of people will benefit from the water that will flow through a network of canals in Sylhet benefiting the farmers involved in Boro rice.

- This rice is cultivated during the dry season of December to February and harvested in early summer.
- Bangladesh has been complaining that the Boro rice cultivation in the region had been suffering as India did not allow it to withdraw the required water from the Kushiya.

The agreement addresses Bangladesh's concern over water supply along the river, during the winter months but flood control in the basin of Kushiya is expected to require much more work.

Bangladesh uses the water

- The water of Kushiya will be channelled through the Rahimpur Canal project in Sylhet.
- The Rahimpur Canal project in the Zakiganj subdivision of Sylhet was built to help the farmers access Kushiya's water but the facility used to remain dry during the lean season without serving the purpose for which it was built.
- The eight km long canal is the only supplier of water from the Kushiya to the region and Bangladesh has built a pump house and other facilities for the withdrawal of water that can now be utilised.

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Importance of Rahimpur canal

- The water of the Kushiya has been used for centuries in Sylhet's subdivisions like the Zakiganj, Kanaighat and Beanibazar areas.
- But Bangladesh has witnessed that the flow and volume of water in the canal have reduced during the lean season.
- The utility of the river and the canal during the lean/ winter season had gone down affecting the cultivation of rice as well as a wide variety of vegetables for which Sylhet is famous.
- The additional water of Kushiya through the Rahimpur Canal is the only way to ensure a steady supply of water for irrigation of agriculture fields and orchards of the subdivisions of Sylhet.

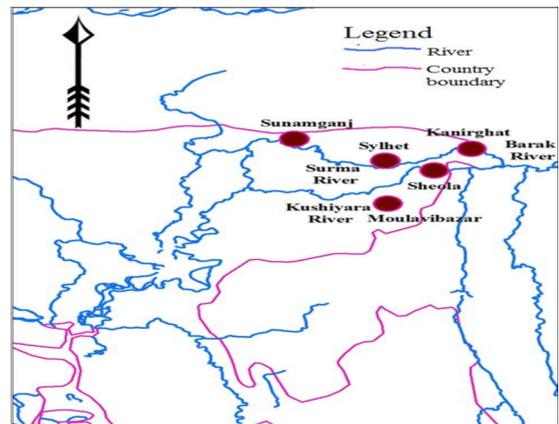
India's objection

- The Kushiya water sharing agreement was finalised during the August 25 Joint River Commission.
- It was signed during Prime Minister Hasina's visit and was made possible as India withdrew its objection to the withdrawal of Kushiya's waters by Bangladesh through the Rahimpur Canal.
- Withdrawal of India's objection is likely the main part of the agreement.
- Before this, Bangladesh had carried out the Upper Surma Kushiya Project which included clearing and dredging of the canal and other connected channels of water.

- But the channels could not be of much use to Bangladesh because India objected to the move and claimed that the dyke and other infrastructure interfered with border security as Kushiyara itself forms part of the border between the two sides.
- The agreement indicates that the economic benefits possible from the river outweighed the security concerns.

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visible with water levels going down in several cross-border rivers.



Hurdles to the Teesta agreement

- The Kushiyara agreement is relatively smaller in scale in comparison to Teesta which involves West Bengal and has problems with the proposal.
- It did not require a nod from any of the States like Assam from which the Barak emerges and branches into Kushiyara and Surma.
- The reduced water flow of the Kushiyara during winter and Teesta too and raises important questions about the impact of climate change on South Asian rivers that can affect communities and trigger migration.

Conclusion

- Bangladesh has cited low water flow in its rivers during the winter months as a matter of concern as it affects its agriculture sector.
- The coming decades will throw up similar challenging issues involving river water sharing as the impact of the climate crisis becomes more

Prelims Corner

1. Consider the following statements about the Barak River

1. Barak River is the second largest river system in the North-Eastern part of India.
2. The sixth national inland waterway of India is between Lakhipur and Bhanga of the Barak River.
3. Barak River is also called Meghna in Bangladesh

Which of the above-mentioned statement is/ are true?

A- 1 and 2 B- 2 and 3 C- 1 and 3 D- 1, 2, 3

2. Which of the following is the only structural flood control measure

A-Dikes B-Terraces C-Cutoffs D-Flood plain zoning

3. Which virus cause Rabies?

A-variola virus B-lyssa viruses C-
paramyxo virus D-morbilli virus

4. Consider the following statements

1.The Hattis is a close-knit community that got its name from their tradition of selling homegrown vegetables, crops, meat, wool, etc. at small markets called ‘haat’ in towns.

2.The Hattis who live in the trans-Giri area and Jaunsar Bawar in Uttarakhand were once part of the royal estate of Sirmaur until Jaunsar Bawar’s separation in 1815.

3.Inter-caste marriages have traditionally remained a strict no. Due to topographical disadvantages, the Hattis living in the Kamrau, Sangrah, and Shilliai areas lag in education and employment

Which of the above given statement is/ are correct

A- 1 and 2 B- 2 and 3 C- 1 and 3 D-
1, 2, 3

5. Consider the following statements

1.The Hattis is a close-knit community that got its name from their tradition of selling homegrown vegetables, crops, meat, wool, etc. at small markets called ‘haat’ in towns.

2.The Hattis who live in the trans-Giri area and Jaunsar Bawar in Uttarakhand were once part of the royal estate of Sirmaur until Jaunsar Bawar’s separation in 1815.

3.Inter-caste marriages have traditionally remained a strict no. Due to topographical

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disadvantages, the Hattis living in the Kamrau, Sangrah, and Shilliai areas lag in education and employment

Which of the above given statement is/ are correct

A- 1 Only B- 2 Only C- Both 1 and 2
D- Neither 1 Nor 2

Answer Key

1	2	3	4	5
D	A	B	D	B

Mains Corner

1. What is DART Mission and Explain Kinetic Energy Method (150 words)

2. Define Coastal regulation zone (CRZ) rules and Critically analyse the evolution (150 words)

3. What is CRISPR-Cas9 and explain the ethical dilemmas associated with it? (150 words)

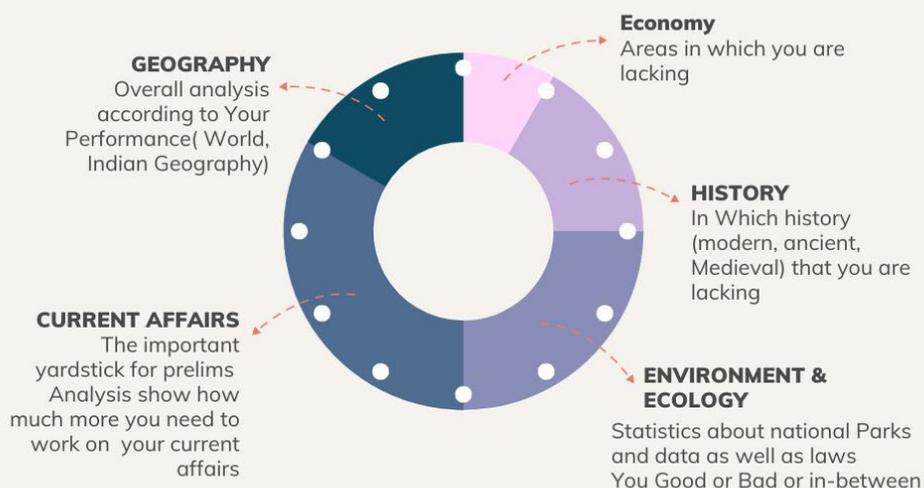
4. What is windfall tax and what are the reasons imposing it in India. (150 words)

5. Discuss the water-sharing treaties between India and Bangladesh. Explain the Teesta agreement. (150 words)

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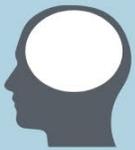
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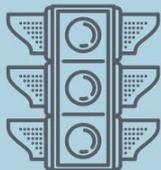
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