



## Current Affairs of the Day

### GS III

- NITI Ayog vision for Great Nicobar ignores tribal, ecological concerns
- Mining threat looms over Aravallis in Haryana
- 'ART not appropriate for live-in or same-sex couples'
- The emerging crisis of obtaining helium in India
- Detecting the unified call of black holes



## NITI Aayog vision for Great Nicobar ignores tribal, ecological concerns

**News:** Wildlife Board denotifies Galathea bay sanctuary to build the port, trade zone.

### Highlights:

1. More than 150 sq. km. of land is being made available for Phase I of a NITI Aayog-piloted 'holistic' and 'sustainable' vision for Great Nicobar Island, the southernmost in the Andaman and Nicobar group. This amounts to nearly 18% of the 910 sq. km. the island, and will cover nearly a quarter of its coastline.
2. Projects to be executed in Phase I include a 22 sq. km. airport complex, a transshipment port (TSP) at South Bay at an estimated cost of ₹12,000 crores, a parallel-to-the-coast mass rapid transport system and a free trade zone and warehousing complex on the southwestern coast.
3. What stands out prominently in the whole process, starting with the designation in mid-2020 of the Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO) as the nodal agency, is the speed and coordination with which it has all unfolded.
4. The other is the centrality of the NITI Aayog. Significant changes have also been affected by the legal regimes for wildlife and forest conservation.

### Ecological uniqueness ignored

1. In its meeting on January 5, 2021, the Standing Committee of the National Board for Wildlife (NBWL) denotified the entire Galathea Bay Wildlife Sanctuary to allow for the port there.
2. The NBWL committee seemed unaware that India's National Marine Turtle Action Plan that was under preparation then (it was released on February 1, 2021) had listed Galathea Bay as one of the 'Important Coastal and Marine Biodiversity Areas' and 'Important Marine Turtle Habitats' in the country. It is included in the Coastal Regulation Zone (CRZ)-I, the zone with maximum protection.
3. Then, on January 18, another Environment Ministry expert committee approved a "zero extent" Ecologically Sensitive Zone (ESZ) for the Galathea NP to allow the use of land in the south-eastern and south-western part of the island for the NITI Aayog plan.



4. The October 2020 draft notification for this zero extent ESZ had ironically listed out in great detail the park's ecological uniqueness — that it is part of a UNESCO World Heritage Site, houses a range of forest types, has one of the best-preserved tropical rainforests in the world, is home to 648 species of flora and hosts 330 species of fauna including rare and endemic ones such as the Nicobar wild pig, Nicobar tree shrew, the Great Nicobar crested serpent eagle, Nicobar paradise flycatcher and the Nicobar megapode. It also notes that the park is home to the indigenous Shompen community.
5. The notification says that an ESZ is needed to protect the park from an ecological, environmental and biodiversity point of view, but goes on in the very next para to propose a zero extent ESZ for nearly 70% of the periphery of the park.

### **The Giant leatherback turtle and the Nicobar megapode**

1. It is almost as if the unique diversity of life just listed suddenly disappeared because of an arbitrary line drawn to allow a slew of high-value projects. This is illustrated in the case of the Giant leatherback turtle and the Nicobar megapode, two charismatic species for whom Great Nicobar is very important.
2. The beaches here, like at the mouth of the river Galathea in South Bay, are among the most prominent nesting sites globally of the Giant leatherback. It is for this reason that the bay was declared a wildlife sanctuary in 1997, but has now been denotified to allow for the transshipment port.
3. In his 2007 study of the Nicobar megapode, the globally endangered bird unique to the Nicobars, K. Sivakumar of the Wildlife Institute of India documented 90% of this ground-nesting bird's nests to be within a distance of 30 m from the shore.
4. He notes that the existing protected area network in Great Nicobar is not designed for the protection of the megapode and recommends that the entire west and southern coast of Great Nicobar – precisely the area sought for the NITI Aayog proposals – be protected for the megapode and other wildlife like nesting marine turtles. This is also in stark contrast to the current move to create a zero extent ESZ for the Galathea National Park.

### **Threat to Shompen**

Similar concerns exist about the impact on the Shompen community. The proposed project areas are important foraging grounds for this hunter-gatherer



nomadic community and the official Shompen Policy of 2015 specifically noted that the welfare and integrity of these people should be given priority “with regard to large-scale development proposals in the future for Great Nicobar Island (such as trans-shipment port/container terminal etc.)”. Now, large forest areas here could become inaccessible and useless for the Shompen.

### Geological Instability

1. Available evidence suggests that issues of the geological volatility of these islands are also not being factored in.
2. Yet, a 2005 Earthquake Engineering Research Institute (EERI) Special Earthquake Report by a team from the Indian Institute of Technology Kanpur, recorded witness accounts of 8-metre-high tsunami waves hitting the Great Nicobar coast on December 26, 2004.
3. “The lighthouse at Indira Point, the southernmost tip of the Great Nicobar Island, which was on high ground before the earthquake,” the report notes, “is now underwater, indicating a land subsidence of about 3-4 m.”

Loss of life and property then was limited because the Great Nicobar coast is largely uninhabited. This raises questions over the safety of life, property and the investments in this zone and that too without accounting for the complex ecological, social and geological vulnerabilities here.

## Mining threat looms over Aravallis in Haryana

**News:** Environmentalists raise a red flag as State govt. moves to seek SC’s permission to resume mining, argue it could cause damage to habitat. Activists say that with the ban on mining in Gurugram and Faridabad, there has been a significant improvement in forest cover.

### Highlights:

1. Around two years after the Haryana Assembly passed the Punjab Land Preservation (Haryana Amendment) Bill, 2019, amid opposition by the environmentalists and the Gurugram residents, the State government’s recent move to seek permission from the Supreme Court to begin mining in the Aravallis in Gurugram, Faridabad and Nuh is being viewed as another threat to one of the oldest mountain ranges with adverse impacts to the environment in the region.
2. Strongly opposed to legalising mining in the Aravallis in the National Capital Region, the environmentalists argue that this could cause colossal damage to



the environment, especially when the region is already grappling with poor air quality and fast depleting groundwater level.

### **Worst air quality**

1. Faridabad has the worst air quality in Haryana and figures among the most polluted cities in the world. Gurugram, too, had topped the list of most polluted cities in the world in 2018. It is also argued that Gurugram and Faridabad have a high population density, but low per capita forest cover.
2. “With the ban on mining in Gurugram and Faridabad, there has been a significant improvement in the forest cover. The wildlife surveys show that Gurugram and Faridabad hills act as significant wildlife habitat and corridor, especially for the leopards.
3. There is also a movement from and into the Asola wildlife sanctuary. The resumption of mining here will be disastrous for the wildlife, air quality and health of the residents.
4. He added that mining should be confined to isolated hillocks in distant areas with minimal impact on wildlife corridors and air quality. “Mining should not be done in NCR districts adjacent to Delhi which are important wildlife habitats and corridors, have poor air quality and high population.

### **Mines allocated**

1. Besides, as many as 58 mines of the total 119 in the State have already been allocated. More than 26,000 cases of illegal mining, including 1,358 till September 2020 for the current financial year have been reported.
2. Mining is banned in Gurugram and adjoining districts for more than a decade now as per the Supreme Court orders.
3. Mining, when earlier allowed, was carried out in a haphazard manner without adhering to the norms causing huge damage to the environment and the wildlife. “Mining should not be allowed in thick forest areas such as Mangar.
4. The petition demands include demolition of illegal construction in Aravalis, planting of saplings, notification of 50,000 acres of Aravalis as deemed forest and retaining all Aravalis in south Haryana as a natural conservation zone.

### **Ecological Importance of Aravalis**

5. The residents, in the email, argued that destruction of the Aravalis would worsen the NCR air pollution situation and the mountain range is the only natural barrier against desertification.



6. The Aravallis with their natural cracks and fissures have the potential to accommodate two million litres of water per hectare in the ground every year. Besides, the mountain range is a biodiversity hotspot with 400-odd species of trees, shrubs and herbs; 200-odd native and migratory bird species; 100-odd butterfly species; 20-odd reptile species and 20-odd mammal species, including leopards, says the email.

## ‘ART not appropriate for live-in or same-sex couples’

**News:** Given the Indian family structure, social milieu and norms, it will not be very easy to accept a child whose parents are together but not legally married, says the 129-page report of the Parliamentary Standing Committee on Health and Family Welfare on the Assisted Reproductive Technology (ART) (Regulation) Bill, 2020, submitted in Parliament earlier this week.

### Highlights:

1. The committee, in its report, said that keeping the best interest of the child born through ART services and other parentage issues in case of their separation, it would not be appropriate to allow live-in couples and same-sex couples to avail themselves of ART.
2. “The rights of people in a same-sex relationship and live-in relationships frequently keep getting redefined; however, the ART Bill endorsed the recommendations of the Select Committee on Surrogacy (Regulation) Bill, 2019, wherein the definition of “couple” has been retained and live-in couples and same-sex couples have been excluded from availing surrogacy services,” the Committee said in its report.

### Six IVF clinics

1. In its observation, the committee expressed anguish over the fact there were only six IVF (in vitro fertilisation) clinics in the government sector, while the remaining thousands of IVF centres were in the private sector.
2. “The committee, therefore, recommends that the government should ensure that each medical college or premier Government Hospital/ Institute must have IVF/ART facilities so as to enable the common poor masses to avail the services of ART,” it said.
3. Stating India had become one of the major centres for ART, the committee noted that “there are only guidelines of ART, and no law still exists.”



## The emerging crisis of obtaining helium in India

**News:** Every year, India imports helium worth ₹55,000 crores from the U.S.

### Helium Basics:

1. Helium is colourless, odourless, tasteless, inert and a noble gas. Yet, it finds many applications, mainly in magnetic resonance imaging (MRI) scans, in rockets and in nuclear reactors.
2. India imports helium for its needs, and with the U.S. appearing set to cut off exports of helium since 2021, the Indian industry stands to lose out heavily.

### Helium on Earth

1. Helium is found in natural gas. Despite its overall rarity, helium was concentrated in large quantities under the American Great Plains. The U.S. became the most important exporter of helium across the world. It was soon realised that the U.S. was also the biggest storehouse of helium.
2. The U.S., now, is planning to switch off the export of helium from 2021. Qatar is a possible exporter but acute political and diplomatic wrangles have made Qatar unreliable.

### Emerging project

1. The vast reservoir of helium in the Rajmahal volcanic belt remains untapped. India consumes about 70 million cubic metres per year. But the reserve of helium by far exceeds this.
2. India's Rajmahal volcanic basin is the storehouse of helium trapped for billions of years, since the very birth of our Earth from the Sun. At present, we are mapping the Rajmahal basin extensively for future exploration and harnessing of helium.

In conclusion, helium is not just for balloons but it is the key ingredient for India's high technology and the most sophisticated medical diagnosis.

## Detecting the unified call of black holes

### Background hum

1. Until now, the number of mergers detected by LIGO, VIRGO and KAGRA detectors is minuscule compared with the number of mergers actually taking place in the sky. The idea that the gravitational waves arising from the collection of all these mergers should be present like a background signal has been around for some time.



2. Dr Mitra and a team of researchers have contributed significantly to building up an algorithm that is geared to detect such a so-called stochastic gravitational-wave background. Their recent work has been published in Physical Review D.
3. Just as studying the cosmic microwave background tells us about the early universe, its formation, the stochastic gravitational-wave background would reveal the structure of the universe around us.
4. Detections till now have been of events that were relatively close to us. Distant binary coalescences, millisecond pulsars, etc are expected to produce a background, and detecting any of this would be a great breakthrough.

### **Radiometer algorithm**

The radiometer algorithm which Indian researchers played a key role in developing, comes in useful as a tool for detecting hitherto unknown sources: with recent algorithms developed in India, the radiometer analysis has been made hundreds of times faster and they are now being used by the international collaboration for the official analysis.