



C.A Dated On 30-07-2019

**GS-2**

**National Creche Scheme:**

**Context:**

National Crèche Scheme is being implemented as a Centrally Sponsored Scheme through States/UTs with effect from 01.01.2017.

**About National Creche Scheme:**

- The Scheme is being implemented by the Ministry of Women and Child Development.
- It is a centrally sponsored scheme.
- It aims at providing a safe place for mothers to leave their children while they are at work, and thus, is a measure for empowering women as it enables them to take up employment.

**Coverage:** It is an intervention towards protection and development of children in the age group of 6 months to 6 years.

**Features:**



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- Provides for day care facilities to the children of working mothers.
- Provides supplementary nutrition, health care inputs like immunization, polio drops, basic health monitoring, sleeping facilities, early stimulation (for children below 3 years), pre-school education for children aged between 3-6 yrs.

**Significance:**

- This scheme facility enables the parents to leave their children while they are at work and where the children are provided with a stimulating environment for their holistic development.
- This scheme ensures to improve the health and nutrition status of the children.
- It promotes physical, social, cognitive and emotional/holistic development of the children.
- It also educates and empowers parents/caretakers for the better childcare.
- The scheme is being structurally revised with the enhanced financial norms, stringent monitoring and sharing pattern between the Government of India and the implementing agencies and NGOs.

**Eligibility Criteria:**

- The State Government, Voluntary Institutions, Mahila Mandals with the know report of service in the field of child welfare department and registered under the Societies Registration Act, 1860 or registered as a Public Trust at least for the period for last 2 years are eligible for applying for the financial assistance from the fund.

**Fund sharing:**



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- The fund sharing pattern under National Creche Scheme amongst Centre, States/UTs & Non Governmental Organisations/Voluntary Organisations for all recurring components of the scheme is in the ratio of 60:30:10 for States, 80:10:10 for North Eastern States and Himalayan States and 90:0:10 for UTs.

### **Tiger survey**

#### **Why in news?**

The four-year tiger census report, Status of Tigers in India, 2018, released by Prime Minister Narendra Modi on Monday, shows numbers of the big cat have increased across all landscapes.

#### **Salient observation of report**

- The total count has risen to 2,967 from 2,226 in 2014 — an increase of 741 individuals (aged more than one year), or 33%, in four years.
- This is by far the biggest increase in terms of both numbers and percentage since the four-yearly census using camera traps and the capture-mark-recapture method began in 2006.
- The number that year was 1,411; it rose by 295 (21%) to 1,706 in 2010; and by 520 (30%) to 2,226 in 2014.
- Tiger numbers are always projected in a range — 2,967, is the mean of an estimated range of 2,603 to 3,346.
- The 2018 figure has a great degree of credibility because, according to the report, as many as 2,461 individual tigers (83% of the total) have actually been photographed by trap cameras. In 2014, only 1,540 individuals (69%) were photographed.
- The report does not contain numbers of other predators like leopards. But better tiger numbers are generally seen as indicating good prey bases and habitat.

#### **Why is a tiger census needed?**

- The tiger sits at the peak of the food chain, and its conservation is important to ensure the well-being of the forest ecosystem.



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- The tiger estimation exercise includes habitat assessment and prey estimation.
- The numbers reflect the success or failure of conservation efforts.
- This is an especially important indicator in a fast-growing economy like India where the pressures of development often run counter to the demands of conservation.
  
- The Global Tiger Forum, an international collaboration of tiger-bearing countries, has set a goal of doubling the count of wild tigers by 2022. More than 80% of the world's wild tigers are in India, and it's crucial to keep track of their numbers.

### **Where has the tiger population increased the most?**

- The biggest increase has been in Madhya Pradesh — a massive 218 individuals (71%) from 308 in 2014 to 526. In Maharashtra, the number has gone up from 190 to 312 (64%), and in Karnataka, from 406 to 524 (118, or 29%). Uttarakhand has gained over 100 tigers (340 to 442; 30%)
- However, since tigers keep moving between states, conservationists prefer to talk about tiger numbers in terms of landscapes. India's five tiger landscapes are: Shivalik Hills and Gangetic Plains, Central Indian Landscape and Eastern Ghats, Western Ghats, North-East Hills and Brahmaputra Plains, and the Sundarbans.

### **Which states/regions have done badly?**

- Only one of the 20 tiger-bearing states has seen a fall in numbers — Chhattisgarh, where the census counted 19 tigers, significantly fewer than the 46 of 2014.
- The report has cited law and order as the reason — large parts of the state are hit by the Maoist insurgency.
- Greater conservation efforts are needed in the “critically vulnerable” Northeast hills and Odisha.
- No tiger has been found in the Buxa, Palamau and Dampa reserves.

### **How were the estimates reached?**



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- The census was carried out in four phases. Phases 1 and 2 covered forest beats, generally spread over 15 sq km each, by Forest Departments, to collect signs of tiger presence like scat and pugmarks.
- Enumerators walked paths called line transects to estimate the abundance of prey.
- This was followed by sampling of plots along the transects to assess habitat characteristics, human impact, and prey dung density.
  
- In phase 3, the information was plotted on the forest map prepared with remote-sensing and GIS application. Sample areas were divided in 2-sq-km parcels, and trap cameras were laid in these grids.
- In the last phase, data were extrapolated to areas where cameras could not be deployed.
  
- Authorities say the census is the world's most extensive biodiversity mapping exercise.
- A total 3,81,400 sq km of forests were surveyed; 5,22,996 km on foot. 3,17,958 habitat plots were sampled for vegetation and prey dung.
- There were 26,838 camera trap locations, which covered 1,21,337 sq km.

**So, why have the numbers gone up?**

- The success owes a lot to increased vigilance and conservation efforts by the Forest Department.
- From 28 in 2006, the number of tiger reserves went up to 50 in 2018, extending protection to larger numbers of tigers over the years.
- Healthy increases in core area populations eventually lead to migrations to areas outside the core; this is why the 2018 census has found tigers in newer areas.
- Over the years, there has been increased focus on tigers even in the areas under the territorial and commercial forestry arms of Forest Departments.
- The brightest spot in the non-protected tiger-bearing areas is the Brahmapuri division of Chandrapur district of Maharashtra, which has more than 40 tigers.



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- The other important reason is increased vigilance, and the fact that organised poaching rackets have been all but crushed. According to Nitin Desai of Wildlife Protection Society of India, there has been no organised poaching by traditional gangs in Central Indian landscapes since 2013.
- The increased protection has encouraged the tiger to breed. According to Wildlife Institute of India Director V B Mathur, tigers are fast breeders when conditions are conducive.
- The rehabilitation of villages outside core areas in many parts of the country has led to the availability of more inviolate space for tigers.

Also, because estimation exercises have become increasingly more accurate over the years, it is possible that many tigers that eluded enumerators in earlier exercises were counted this time.

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## **AMBIS**

### **Why in news?**

On Monday, Maharashtra became the first state in the country to adopt a digital fingerprint and iris scanning system to aid police investigations.

### **What is it?**

The system, Automated Multi-modal Biometric Identification System (AMBIS), will include portable systems to dust off and capture fingerprints from crime scenes.

### **So what does AMBIS do and how it will help the police in their investigation**

- In 2015, when Indian authorities were alerted about the detention of gangster Chhota Rajan in Indonesia, the Mumbai Police rushed to put together a dossier of cases registered against him in the city.
- However, providing a record of his fingerprints from the 1980s would prove essential in gaining his custody, as per international protocol.
- That's when the need to digitise fingerprint records, numbering in crores, was felt.



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### **The trial stage**

- In 2017, the cyber department of the Maharashtra Police selected a French firm through tendering to provide both hardware and software for a unit comprising a computer, camera, and iris, fingerprint and palm scanners.
- Apart from scanning and permanently storing biometric data, the police also tops files of arrested persons with their photos.
- Before Monday's formal launch, the system was trailed at a select few police stations in Mumbai, which have seen an upgrade in technological infrastructure after the CCTV project and Crime and Criminal Tracking Network and System (CCTNS) were implemented.
- All the while, the cyber police department digitised over 6.5 lakh fingerprints recorded on paper from the 1950s onwards.

### **Future plans**

- With Chief Minister Devendra Fadnavis announcing the project implementation across all 94 police stations in Mumbai, the next step is to roll it out in all 1160 police stations in the state's 42 police districts, 7 police ranges, 10 central jails, 12 police training centers, and 4 fingerprint bureaus.
- With the integration of the system with facial recognition from CCTV cameras, AMBIS has enabled the police to cross-reference to put faces to criminals whose fingerprints have been captured on paper over the decades apart from solving fresh crimes.

### **"RoboBee X-Wing**

#### **Why in news?**

It is essentially a flying machine, which can flap its wings 120 times a second and is half the size of a paperclip, as a report in The Wired describes it.

#### **Details**



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- In a recently published paper in Nature, researchers from the Harvard Microrobotics Laboratory in Cambridge have claimed to have made possible the “lightest insect-scale aerial vehicle so far to have achieved sustained, untethered flight.”
- The robot can sustain a flight for less than a second. Initially, the researchers called this lightest centimetre-sized vehicle, “RoboBee”, but with the current advancement which makes it possible for RoboBee to fly untethered, its name has been upgraded to, “RoboBee X-Wing”.
- Along with the electronics required to give RoboBee X-Wing its flight, the robot weighs 259 mg and uses 110-120 milliwatts of power using solar energy, matching the “thrust efficiency” of similarly sized insects such as bees.
- Much like aircraft, the robot is heavier than the air it displaces — a concept referred to as “heavier-than-air flight”. However, when objects become smaller, achieving a heavier-than-air flight becomes more complicated.

### **Significance**

- Studying the mechanisms that insects use to flap their wings and navigate in the air is a matter of interest to biologists.
- Flapping-wing robots can help in addressing questions related to the evolution of flight, the mechanical basis of natural selection and environmental monitoring.

Others are interested in replicating these abilities to build a new array of machines.

### **Odisha Rasagola**

#### **Why in news?**

A long drawn battle of ownership has come to a draw now with each State receiving a Geographical Indication (GI) tag for the syrupy sweet from their respective States.

#### **Background**

- The 'Odisha Rasagola' has been awarded the GI tag in July 2019.
- Back in November 2017, West Bengal has received the GI tag for its Rasgulla.





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- Prior to which both States vehemently claimed the origin of the Indian sweet.
- The 'Odisha Rasagola', according to the application submitted to the Registrar of GI, is a sweet from the state of Odisha made of chhena (cottage cheese) cooked in sugar syrup, which is very soft to feel, is juicy and non-chewy in consistency and can be swallowed without teeth pressure.

### **LCU L-56**

#### **Why in news?**

Indian Navy Ship LCU L-56, the sixth of the Landing Craft Utility (LCU) MK IV class ships, was commissioned into the Indian Navy .

Commissioning the ship, the Vice-Admiral congratulated the GRSE (Garden Reach Shipbuilders and Engineers) for being the first shipyard in the country to have built the 100th warship.

#### **Benefits**

- The induction of LCU 56 will add to maritime and HADR (Humanitarian Assistance and Disaster Relief) capability of ANC (Andaman Nicobar Command), as the ship will be deployed for multi-role activities such as beaching operations, search and rescue missions, disaster relief operations, coastal patrol, and surveillance operations along the Andaman and Nicobar Group of Islands.

#### **About the ship**

- LCU 56 is an amphibious ship with its primary role being transportation and deployment of main battle tanks, armoured vehicles, troops and equipment from ship to shore.
- The ship would be administered and based in Port Blair under the NAVCC in ANC.
- With a displacement of 900 tonnes, the ship measures 62 metres in length and is fitted with two MTU diesel engines, which provide a sustainable speed of over 15 knots.
- The ship is equipped with the state-of-art equipment and is armed with two 30 mm CRN-91 guns manufactured by Ordnance Factory, Medak.
- The ship is manned by a team comprising four officers and 56 sailors and is also capable of carrying 150 troops.

### **Kodaikanal Malai Poundu**



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### **Why in news?**

This particular garlic species is known for its medicinal and preservative properties

The Geographical Indications Registry has granted the Geographical Indication (GI) tag to Kodaikanal Malai Poonda (Kodaikanal Hill Garlic).

### **Details**

- The application was made by the Department of Biotechnology, Mother Teresa Women's University and Tamil Nadu State Council for Science and Technology.

### **What is special about it?**

- Also known by its scientific name *Allium Sativum*, this particular garlic is known for its medicinal and preservative properties.
- It has anti-oxidant and anti-microbial potential, which is attributed to the presence of higher amount of organosulfur compounds, phenols and flavonoids compared to other garlic varieties.
- It is grown in the Kodaikanal Hills, Dindugul district.
- Its usually white or pale yellow and each bulb weighs 20-30g on an average.

### **Cultivation of garlic**

- According to the GI application, Kodaikanal Hill Garlic cultivation is done twice in a year, once around May and for second time in November depending upon the suitability of the climate.
- The hill altitude, the misty condition and the soil prevailing in the Kodaikanal region are responsible for its medicinal property and the long storage shelf life of the garlic.
- In India, garlic is planted as both kharif (June-July) and rabi (October-November) crop and it depends on the regions.
- It is planted as a rabi crop in Andhra Pradesh, Bihar, Haryana, Uttar Pradesh, Orissa, Punjab, Uttarakhand, Rajasthan, Bengal and hilly regions.
- It is both kharif and rabi crop in T.N., Karnataka, Maharashtra, Gujarat, Madhya Pradesh and Chhattisgarh.

### **About GI tag**

- A GI tag indicates that the product originates from a definite territory in India and has unique characteristics or quality.



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- Having a GI tag prevents unauthorised use of a registered Geographical Indication by others, boosts exports of Indian Geographical indications by providing legal protection and also enables seeking legal protection in other WTO member countries.
- Some of the examples of Geographical Indications in India include Basmati Rice, Darjeeling Tea, Kancheepuram silk saree, Alphonso Mango, Nagpur Orange and Kolhapuri Chappal.