

**25 FEBRUARY 2019**

**1. In a first, Air Force commissions aerial surveillance**

**In News:**

The Indian Air Force (IAF) has commissioned the development of an aerial surveillance system for monitoring suspicious movements under dense foliage cover along the international border and some parts within the country.

**Explained:**

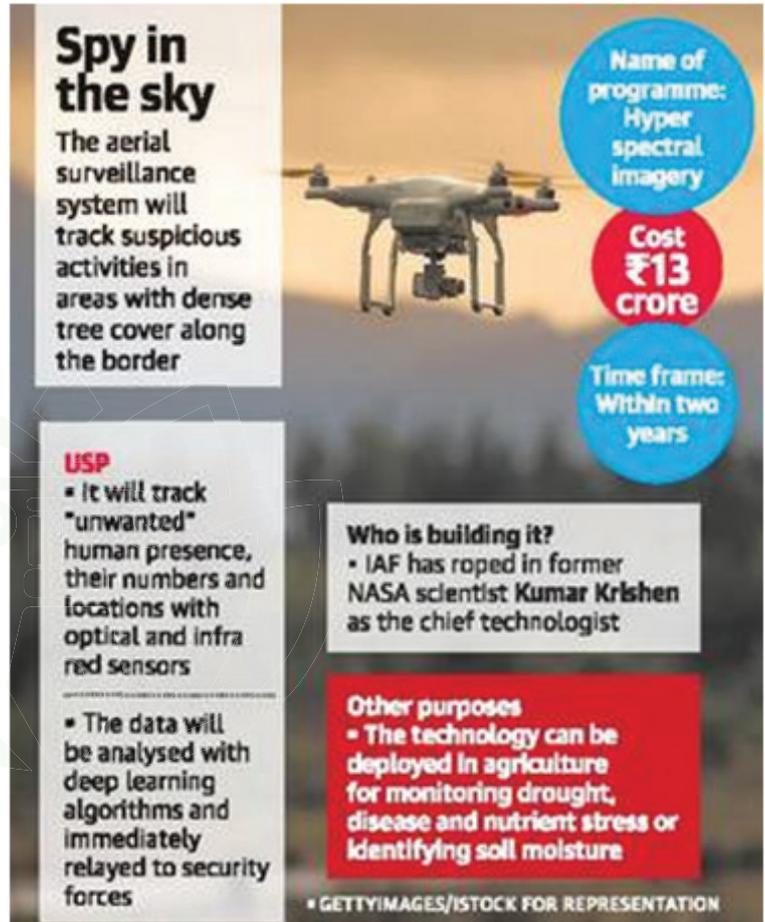
In the recent years, terrorist movements, smuggling, forest exploitation is frequently increasing in the border areas.

All these issues pose a challenge to the security personnel to be alert or to react to against these issues because of the geographical terrain topography and dense forest.

So with the data gathered from aerial sources would be processed within minutes, and researchers would be able to tell security forces on the ground of unwanted human presence in the area, their numbers and locations, among other inputs.

This is a unique patent application, which will help identify the presence of a human below trees, dense foliage, shrubs or inside a structure, whether it is day or night. It can detect human presence from air even if there a cloud cover, dense fog or snow cover.

Data/images will be captured through optical and infra red sensors to be most likely mounted on an unmanned aerial vehicle and processed through deep learning algorithms.



**2. DNA forensics a vital tool in cracking wildlife crimes**

**In News:**

With investigating agencies facing increased challenges of collecting evidence to ensure convictions in wildlife crimes, DNA forensics are providing a major headway.

**Explained:**

**Note**



## An Example

23-year-old youth from North 24 Parganas in West Bengal killed a wild animal and posted photographs on a social media platform. State Forest Department officials tracked down the man but by then the meat was half cooked and the accused denied all allegations.

However, a few samples of the cooked meat brought to the Zoological Survey of India (ZSI), Kolkata, were enough to nail the accused. A forensic DNA analysis showed that the meat was that of the Asian Palm Civet (Paradoxurus hermaphroditus), a Schedule II species protected under the Wildlife (Protection) Act, 1972. The analysis helped Forest Department officials press charges against the youth and in further prosecution of the case.

Like the above example many wildlife crime happening around goes clueless because of lack of data.

Details of case studies, where advanced DNA forensics were used to help prosecute wildlife related crimes, have been documented recently.

## Wildlife Protection Act, 1972:

- The act provides for the protection of wild animals, birds and plants and matters connected with them, with a view to ensure the ecological and environmental security of India.
- Extends to the whole of India, except the State of Jammu and Kashmir which has its own wildlife act
- It provides for prohibition on use of animal traps except under certain circumstances
- It provides for protection of hunting rights of the Scheduled Tribes in Andaman and Nicobar Islands
- Has provisions for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

It has six schedules which give varying degrees of protection

- Species listed in Schedule I and part II of Schedule II get absolute protection, offences under these are prescribed the highest penalties
- Species listed in Schedule III and Schedule IV are also protected, but the penalties are much lower
- Schedule V includes the animals which may be hunted
- The plants in Schedule VI are prohibited from cultivation and planting

## 3. SC eviction order only against encroachers

### In News:

The order of the Supreme Court to several States to evict lakhs of claimants finally rejected under the Forest Rights Act (FRA), 2006, is an outcome of the consistent stand taken by the top court in the case since 2016 that encroachers should be evicted from forest land after due process.

### Explained:

The earlier three orders in 2016, 2018 and 2019 passed by the Supreme Court do not question the three-tier verification process which forest rights claims undergo under the 2006 Act.

The process of verification of the claims of forest-dwelling Scheduled Tribes and Other Traditional Forest Dwellers (OTFD) is initiated by none other than the gram sabha.

### Note



The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Rules of 2007 mandate that the gram sabha should have adequate representation from the Scheduled Tribes, particularly vulnerable tribal groups and pre-agricultural communities.

### **Forest Rights Act (FRA), 2006:**

It concerns the rights of forest-dwelling communities to land and other resources, denied to them over decades as a result of the continuance of colonial forest laws in India.

The Act grants legal recognition to the rights of traditional forest dwelling communities, partially correcting the injustice caused by the forest laws.

#### **Rights under the Act:**

**Title rights** – i.e. ownership to land that is being farmed by tribals or forest dwellers subject to a maximum of 4 hectares; ownership is only for land that is actually being cultivated by the concerned family, meaning that no new lands are granted.

**Use rights** – to minor forest produce (also including ownership), to grazing areas, to pastoralist routes, etc.

**Relief and development rights** – to rehabilitation in case of illegal eviction or forced displacement; and to basic amenities, subject to restrictions for forest protection.

**Forest management rights** – to protect forests and wildlife.

#### **Eligibility:**

Eligibility to get rights under the Act is confined to those who “primarily reside in forests” and who depend on forests and forest land for a livelihood. Further, either the claimant must be a member of the Scheduled Tribes scheduled in that area or must have been residing in the forest for 75 years.

#### **Process of recognition of rights:**

The Act provides that the gram sabha, or village assembly, will initially pass a resolution recommending whose rights to which resources should be recognised. This resolution is then screened and approved at the level of the sub-division (or taluka) and subsequently at the district level. The screening committees consist of three government officials (Forest, Revenue and Tribal Welfare departments) and three elected members of the local body at that level. These committees also hear appeals.

## **4. India-built houses handed over to Sri Lanka estate workers**

#### **In News:**

As many as 155 houses, built as part of India’s ongoing housing project in Sri Lanka, were handed over to estate workers in Hatton, located in the Central Province.

#### **Explained:**

#### Note



The effort is part of India's pledge to help construct 63,000 houses in Sri Lanka including 46,000 homes built in the war-hit north and east with a grant of \$350 million, the largest Indian grant assistance project in any country abroad.

**Other development projects:**

- China and Sri Lanka have decided to develop into a financial hub which is concern for India from strategic point of view.
- However Sri Lanka rejected the contention that like Gwadar in Pakistan, the Chinese will manage the operations of the Hambantota port.
- Importance of India-SL cultural ties underscored when Indian Priminister and SL President declared "Simhastha Declaration"
- Simhastha Declaration has 51 sacred points for betterment of mankind that will start new discourse not only in India but around the world.
- It is also a prescription on how a duty-centred system that had been the origin of Indian philosophy of life is relevant in today's India.
- India and Sri Lanka have a Free Trade Agreement since 1998.

**ETCA:** The Indo-Lanka Economic and Technology Cooperation Agreement better known as ETCA (formerly CEPA) is a trade agreement. The ETCA agreement seeks to boost cooperation in technical areas, scientific expertise and research amongst institutions, boost standards of goods and services able to compete on the global market and improve opportunities for manpower training and human resource development.

The bilateral trade between India and Sri Lanka in 2015 was 4.6 billion dollars, of which Indian exports were valued at about 4 billion dollars and Sri Lankan exports 645 million dollars.

**5. Idukki cardamom planters get 'dry' succour from this start-up**



**In News:**

Planters in Idukki district of Kerala, has nearly 50 acres under cardamom cultivation. The harvest goes on for almost nine months in a year and the fresh cardamom should be dried within a day or two.

**Explained:**

**The Problem:**

Both firewood and diesel are used to operate the dryer. Since the moisture content is high in cardamom, dryers are used. There is shortage of firewood, which is expensive too that costs about Rs. 8 to dry a kilogram of cardamom in the dryer.

This problem is faced by several cardamom planters in the district, which is among the largest cardamom producing areas in the country.

Further, when 600 kg of cardamom is dried, the weight comes down to nearly 140 kg, reducing it to just one fourth.

**Note**



**The Solution:**

A machine that removes the moisture using “low heat dehumidified dry air technology with unique airflow system”.

The machine runs on electricity and can dry about 500 kg of cardamom in 14 to 18 hours. (The firewood dryer takes 20 to 22 hours for 600 kg of cardamom.)

The real challenge was to remove the surface, inner, and core moisture to a specific level without affecting the colour of cardamom.

The new machine is a complete unit with multiple chambers that removes the moisture in two stages and it was successful as the properties were retained and the weight did not reduce much even as the moisture content reduced.

**6.Humans had pet foxes in Bronze Age: Study**



Humans domesticated foxes, along with dogs, between the third and second millennium BC, claim scientists who found that during the time the diet of these animals was similar to that of their owners.

The discovery of four foxes and a large number of dogs at the Can Roqueta (Barcelona) and Minferri (Lleida) sites stands out among the many examples of tombs in different parts of in the northeast of Iberian Peninsula.

These burials showed a generalised funeral practice that proliferated in the Early to Middle Bronze Age that of burying humans together with domestic animals.

**Note**





Note

