14TH AUGUST 2017
CURRENT AFFAIRS

- Navic – satellites
- Sculpture Of Hookah
- Gorkhaland - Darjeeling
- CRISPR / Cas9
- Pest resistant crops
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14 AUGUST 2017 CURRENT AFFAIRS

**Navic – IRNSS-1H**

**NAVIC**

- The Indian Regional Navigation Satellite System (IRNSS) with an operational name of NAVIC.
- It is an autonomous regional satellite navigation system, that provides accurate real-time positioning and timing services.
- The system at-present consist of a constellation of 7 satellites with two additional satellites on ground as stand-by.

**IRNSS-1H**

- For the first-time, Indian satellite building industry looking for closer links with private participants.
- Public – Private partnership in satellite industry will get more investments in satellite building, which is a great welcoming step.
- IRNSS-1h was one of the NAVIC satellites, which will be used as a spare or a replacement satellite and assembled with a private partnership.

**Darjeeling protests**

**Demand for Gorkhaland**

- The recent turn of events following the proposed Bengali language imposition plans in Darjeeling Hills, Terai and Dooars region by the West Bengal
government has led to the resurgence of the demand for a separate state of Gorkhaland within India.

• this century-old demand began with the Hillmen's Association that had first raised the need for a separate administrative unit for the Darjeeling-Dooars region way back in 1907.

• In a place which is linguistically and culturally poles apart from the state that is currently governing it, spotting the bully is easy

• It has now cut across party lines and has evolved into a mass movement.

Major reasons and Issues

➢ making Bengali a compulsory subject in all schools (Nepali-speaking majority)
➢ Violence that spread quickly and clashed with police (Deployment of army)
➢ On June 15, arrest of its leader, Bimal Gurung, after the outfit called for an indefinite shutdown that continues to this day (blocked internet services).

**Hookah(sculpture) Rock work found**

- at Chinnaianpettai in Tiruvannamalai (TamilNadu)
- The hookah came to India with Mughals (A Persian origin import)

- Terracotta pots and pipes found in the archaeological sites at Adichanallur, Arikkamedu and Kodumanal stand testimony to it.
- The sculpture found in Chinnaianpettai tank in Tiruvannamalai shows that the hookah habit was not uncommon during the reign of Nayak and Vijayanagar Kings.

**CRISPR / Cas9 (Targeted Genome Editing)**

A New Era in Molecular Biology

- The development of efficient and reliable ways to make precise, targeted changes to the genome of living cells is a long-standing goal for biomedical researchers.
- A new tool based on a bacterial CRISPR-associated protein-9 nuclease (Cas9) from Streptococcus pyogenes has generated
  - I. This follows several attempts over the years to manipulate gene function, including homologous recombination
  - II. RNA interference (RNAi, in particular, became a laboratory staple enabling inexpensive and high-throughput interrogation of gene function.
IV. providing only temporary inhibition of gene function and unpredictable off-target effects

V. approaches to targeted genome modification

VI. transcription-activator like effector nucleases

VII. Enable researchers to generate permanent mutations by introducing double stranded breaks to activate repair pathways.
These approaches are costly and time-consuming to engineer, limiting their widespread use, particularly for large scale, high-throughput studies.

**Pest resistant crops**

Pest resistant GM crops have been genetically modified so they are toxic to certain insects.

- They are often called BT-crops because the introduced genes were originally identified in a bacterial species called Bacillus thuringiensis. These bacteria produce a group of toxins called Cry toxins.

- BT-crops are grown widely in the USA, where an estimated 40% of GM maize is used in industrial-scale biofuels (agrofuels) subsidised by the US government.

- non-GM crops and plants to reduce the likelihood of the targeted pests developing resistance

- To deal with the problem of resistant pests, one experiment in the US used releases of pests sterilised using radiation to try to reduce the population of pests in fields of BT-crops.
• The insects are genetically programmed to die before adulthood and are supposed to reduce the population by mating with wild insects.

    India – China Navel drill @ Dhaka (Bangladesh)

• India (Indian Navy) – China (People liberation Army – navy) were planning to have a navel drill, hosted by Dhaka in November 2017.