Prelim Bits 06-05-2018

National Centre for Antarctic and Ocean Research

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- The National Centre for Antarctic and Ocean Research (NCAOR) was established as an autonomous Research and Development Institution of the Ministry of Earth Sciences.
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- It is designated as the nodal organization for the co-ordination and implementation of the Indian Antarctic Program.
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- It is also responsible for the maintenance of India’s permanent station in Antarctica.
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- It is located in the state of Goa.
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- It has the Governing Council comprising 12 members representing a cross section of the country's leadership in Polar and Ocean Sciences, research education and administration.
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- Secretary, Ministry of Earth Sciences, is the Chairman (exofficio) of the Governing Council.
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Cryoconite Holes

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- National Centre for Antarctic and Ocean Research (NCAOR), Goa, scientists found a crowd of shallow circular puddles of water in Spiti’s Chandra basin.
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- The holes about 5-50 cm in diameter and up to 20 cm in depth—with dark brown sediments deposited at the bottom.
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- The sediment is actually mineral dust which is alien to this place.
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- In the presence of sunlight and water, chemical and biological processes are

powered in the dust and are leading to the evolution of life.
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- Alien dust carried and deposited on the glacier surfaces by winds absorb more solar radiation owing to their darker color.
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- These dust holes are also called as cryoconite holes.
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- The word “cryoconite” is derived from the combination of two Greek words—“kryos” meaning ice and “konis” meaning dust.
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- Cryoconite holes were first observed by ships traversing the edges of the Arctic Circle in the 19th century.
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- These holes might also be contributing to the problem of accelerated glacier melting.
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National Resource Centers

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- Human Resource Development Ministry notifies 75 National Resource Centres (NRCs) for online refresher programs for Higher Education faculty through SWAYAM.
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- It is a major and unique initiative of online professional development of 1.5 million higher education faculty using the MOOCs platform SWAYAM.
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- Under this initiative, all in-service teachers, irrespective of their subject and seniority will have an enabling opportunity to keep abreast of the latest developments in their disciplines.
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- The NRCs will revolutionize professional development of faculty by catering to massive numbers by leveraging ICT and online technology platform of SWAYAM.
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- This initiative will benefit faculty can as it is highly flexible and can be done at one’s own pace and time.
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New way to combat the chikungunya

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- Researchers at the Indian Institute of Technology-Roorkee have identified a molecule that exhibits anti-viral activity against the chikungunya virus.
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- It might help in finding a new way to combat the mosquito-borne viral disease.
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- The team used chikungunya virus-specific nsP2 protease to identify two molecules — Pep-I and Pep-II.
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- Of the two molecules, the researchers found PeP-I to be more effective as an anti-viral molecule.
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- Chikungunya causes severe fever and joint pain.
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- Also, there are no drugs or vaccine available to treat it.
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Directorate General of foreign Trade

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- Directorate General of Foreign Trade (DGFT) organized a meeting of port officers recently.
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- Directorate General of Foreign Trade (DGFT) organization is an attached office of the Ministry of Commerce and Industry.
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- It is headed by Director General of Foreign Trade.
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- It is essentially involved in the regulation and promotion of foreign trade through regulation.
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- It is headquartered at New Delhi.
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- It is responsible for formulating and implementing the Foreign Trade Policy with the main objective of promoting India’s exports.
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Role of Western Ghats in monsoon

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- Researchers have found that the dense vegetation in the Western Ghats determines the amount of rainfall that Tamil Nadu gets during the summer monsoon.
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- The Western Ghats contribute as much as 40% of moisture to the southwest monsoon rainfall over Tamil Nadu during normal monsoon years.
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- The average contribution is 25-30%, however during monsoon deficit years, the contribution increases to as high as 50%..
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- It was also found that deforestation of the Ghats led to 0.25 degree C increase in surface temperature across the State.
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Source: PIB, The Hindu, Down to earth

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