Prelim Bits 20-12-2017

Kepler 90i

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- NASA has recently announced that it found another solar system with 8 planets.
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- The historic discovery was made by new scientific analysis of data obtained by the Kepler space telescope.
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- Kepler 90 is the first star to host as many planets as our own solar system.
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- The new planet “Kepler 90i” is a small rocky planet, but very close to the sun which is hotter than Earth
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- It is located 2,500 light years from Earth and it orbits its home star every 14 days and is about 30% bigger than Earth.
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- The planets in the Kepler 90 system orbit much closer to their host star than Earth is to the sun.
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- It is similar to the seven planets in the TRAPPIST-1 system, previously thought to be the next biggest solar system.
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Institute of National Importance (INI)

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- INI is a status conferred to a premier public higher education institution in India by an Act of Parliament.
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- It is conferred on an institution which "serves as a pivotal player in developing highly skilled personnel within the specified region of the country/state".
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- INIs receive special recognition and funding.

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- All IITs, NITs, AIIMS', School of Planning and Architecture and Indian Institutes of Science Education and Research are considered Institutes of National Importance.
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SAKALA Scheme

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- The scheme is being implemented in the **State of Karnataka** to curb corruption in public service delivery in key departments.
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- More than 725 services are being provided under this mission.
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- Now, the state government has proposed to launch the version 2 of SAKALA scheme with the existing SAKALA-1 fails to curb corruption.
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- SAKALA -2 will address shortcomings in the existing Act by including a provision for imposing penalty of Rs. 250 per day for delay in addressing complaints.
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- The proposed Bill includes mandatory display of citizens' charters and job charts in all government departments, social audits, public hearings and district & state level grievance redress processes.
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Kapra Lake

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- Kapra Lake is located in north east part of Greater Hyderabad.
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- The lake is polluted, choked by water hyacinth and acts as a breeding ground for mosquitoes.
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- The discharge of industrial waste and sewage into waterbodies leads to the growth of water hyacinth which affects the lake's ecosystem and causes groundwater contamination.
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- The Indian Institute of Chemical Technology (IICT) has come out with a plan that turns the water hyacinth into organic manure.

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- Good quality organic fertilizer with adequate content of carbon, nitrogen, phosphorus and potassium is produced through the process of **anaerobic composting** method.
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Water Hyacinth

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- Water hyacinth is a free-floating perennial plant, native to South America.
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- It can grow to a height of 3 feet with dark green leaves with flowers above the water and heavily branched, dark fibrous root system underneath.
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- It is a very aggressive invader forming thick mats which can cause oxygen depletion in the waterbodies and kills the aquatic plants and fish.
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- Submerged portion provide habitats for many micro and macro invertebrates.
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- After aquatic plants die, their decomposition by bacteria and fungi provides food for many aquatic invertebrates.
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- It has no known direct food value to wildlife and is considered a pest species.
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National Programme on use of Space Technology for Agriculture (NPSTA)

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- NPSTA is a proposed programme which envisages integrated use of Space and Geospatial Tools for Mapping, Monitoring and Management of Agriculture.
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- The current running programmes will be subsumed under this. They are
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i. Project FASAL (for crop forecasting),
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ii. Project NADAMS (for drought assessment),
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iii. Project CHAMAN (for horticultural assessment and development),
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iv. Project KISAN (for crop insurance) and Crop Intensification planning.
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- The programme will have four sub-programmes
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i. Crop Assessment & Monitoring;
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ii. Agricultural Resources Management;
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iii. Disaster Monitoring and Mitigation
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iv. Satellite Communication and Navigation Applications.
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Source: The Hindu, PIB

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