Prelim Bits 04-05-2018

Most Polluted Cities in the world

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- According to the data released by the World Health Organization, the south Asian region accounts for 34 pc or 2.4 million of the 7 million premature deaths caused by household and ambient air pollution together globally every year.
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- Delhi and Varanasi are among the 14 Indian cities that figured in a list of 20 most polluted cities in the world in terms of PM2.5 levels in 2016.
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- Indian cities that registered very high levels of PM2.5 pollutants were Kanpur, Faridabad, Gaya, Patna, Agra, Muzaffarpur, Srinagar, Gurgaon, Jaipur, Patiala and Jodhpur.
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- It is followed by Ali Subah Al-Salem in Kuwait and a few cities in China and Mongolia.
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- In terms of PM10 levels, 13 cities in India figured among the 20 most-polluted cities of the world in 2016.
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Water-based battery

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- Stanford scientists have developed a water-based battery that could provide a cheap way to store wind or solar energy.
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- The stored energy fed back into the electric grid and redistributed on high demand.
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- The prototype manganese-hydrogen battery stands three inches tall and generates a mere 20 mill watt hours of electricity, which is on par with the energy levels of LED flashlights.
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- It is a way to store unpredictable wind or solar energy so as to lessen the need to burn reliable but carbon-emitting fossil fuels when the renewable sources are not available.
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- The researchers coaxed a reversible electron-exchange between water and manganese sulphate.
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- Magnesium Sulphate is a cheap, abundant industrial salt used to make dry cell batteries, fertilizers, paper and other products.
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Ganymede

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- The data from NASA’s Galileo spacecraft shows that the Jupiter’s moon Ganymede has a magnetic field unlike any other.
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- Ganymede is a unique solar-system body because it's the only moon with an internally generated magnetosphere.
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- This magnetic-field region surrounds Ganymede like a bubble and shelters it from cosmic radiation.
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- Just like on Earth, the magnetosphere causes auroras near this moon's poles.
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- Galileo mission was the first to enter orbit around the planet.
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- Galileo data allowed the creation of the first detailed maps of Jupiter’s major moons.
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Rainbow Mountain

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- The Rainbow Mountain, also called as Vinicunca, is in Peru.
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- It is situated at 16,000 feet (5,000 meters) above sea level in the Andes.
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- The ridge is blanketed in an array of turquoise, lavender and gold stripes.
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- It is a ridge of multicolored sediments laid down millions of years ago and pushed up as tectonic plates clashed.
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- The tourism has provided a much-needed economic boost to this region.
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- The region is populated by Pampachiri indigenous community who are alpaca herders.
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- It is facing various threats at present, one of which is dirt trail left by tourists to reach Rainbow Mountain which has badly eroded in the last 18 months.
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Yangli festival

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- Tiwa tribes people celebrate Yangli festival.
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- It is celebrated in Assam’s Karbi Anglong.
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- Yangli is an important festival for the Tiwas because of its relation to agriculture, a main source to their economy.

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- During Yangli the Tiwas pray for a bountiful harvest as well as protection for their crops against pests and other harmful natural calamities.
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- They celebrate Yangli every three years.
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- Sowing of paddy starts immediately after this festival.
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Dust storm

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- A severe dust storm followed by thunder showers hit parts of Uttar Pradesh and Rajasthan.
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- The dust storm has been declared a disaster as per the State Disaster Response Force of Rajasthan norms.
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- The relentless heat wave conditions added to the situation.
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- Dust storms are an annual weather pattern seen in the region.
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- A dust storm is a strong, turbulent wind which carries clouds of fine dust, soil, and sand over a large area.
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- A huge thunderstorm complex that swept through the area overnight generated high winds which also carried lots of dust.
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- The strong winds were probably downburst which is characterized by intense, downward air movements during thunderstorms.
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- Downbursts can span distances over 200 miles, some are more concentrated.
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- Downbursts smaller than 2.5 miles are called microbursts.
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Source: PIB, The Hindu, Down to Earth

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