

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. n
- 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. \n
- 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. \n
- Ganymede is a unique solar-system body because it's the only moon with an internally generated magnetosphere. \n
- 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. $\ensuremath{\sc n}$
- Galileo mission was the first to enter orbit around the planet. \slashn
- 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. \n
- The ridge is blanketed in an array of turquoise, lavender and gold stripes. $\ensuremath{\sc n}$
- It is a ridge of multicolored sediments laid down millions of years ago and pushed up as tectonic plates clashed. \n
- The tourism has provided a much-needed economic boost to this region. $\ensuremath{\sc n}$

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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. \n

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Yangli festival

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- Tiwa tribes people celebrate Yangli festival. \n
- It is celebrated in Assam's Karbi Anglong. $\normalized{\n}$
- Yangli is an important festival for the Tiwas because of its relation to agriculture, a main source to their economy.
- 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. \nphin

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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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- \bullet The dust storm has been declared a disaster as per the State Disaster Response Force of Rajasthan norms. \n
- The relentless heat wave conditions added to the situation. $\space{1mm}\s$
- Dust storms are an annual weather pattern seen in the region. \slashn
- A dust storm is a strong, turbulent wind which carries clouds of fine dust, soil, and sand over a large area. \n
- A huge thunderstorm complex that swept through the area overnight generated high winds which also carried lots of dust. \n
- The strong winds were probably downburst which is characterized by intense, downward air movements during thunderstorms.
- Downbursts can span distances over 200 miles, some are more concentrated. $\space{\space{1.5}n}$
- Downbursts smaller than 2.5 miles are called microbursts. $\space{\space{1.5}n}$

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Source: PIB, The Hindu, Down to Earth

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