Prelim Bits 29-08-2017

Kamov Ka-226T

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- Russia plans to deliver 10 Kamov Ka-226T military helicopters to India in a first tranche as part of a $1-billion deal, signed in Indo-Russia Summit in Moscow, 2015.
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- The Kamov 226T is a light weight, twin-engine multi-role chopper offers services for both military and civilian purposes.
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- It will replace India's ageing fleet of Cheetah and Chetak.
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- The military version is capable of working in extreme and difficult weather conditions such as hot climate, marine areas and high mountains.
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- The helicopter has a maximum speed of 250 km/hour and maximum takeoff weight is 3,600 kg.
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Renewable Energy Pact

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- India and Germany signed an agreement on technical cooperation under the Indo-German Energy Programme – Green Energy Corridors (IGEN-GEC).
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- The main objective of this programme is to improve the conditions for grid integration of renewable energy.
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- This programme component supports the implementation of the Renewable Energy Management Centre (REMCs), Green Energy Corridors (GEC) scheme which is a prerequisite for large scale grid integration of renewable energy.
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- Thus the programme contributes to achieve the 175 GW target for renewable

energy generation capacity by 2022.
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REMC and GEC

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- Green Energy Corridor is grid connected network for the transmission of renewable energy produced from various renewable energy projects.
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- It helps in synchronising the electricity produced from solar, wind and other renewable energy resources.
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- This dedicated transmission network has been divided into two parts. Intra state network is being implemented by State Transmission Utilities and Inter-state network by Power Grid Corporation of India Ltd.
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- Germany has agreed to provide Euro 1 billion soft loan to this project in 2013.
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- Renewable Energy Management Centre (REMC) will monitor renewable energy generation on a real-time basis and also make forecasts for hassle-free integration of solar and wind energies with the grid.
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Enterprise Survey by NITI Aayog

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- Recently, Niti Aayog and Mumbai-based IDFC Institute have conducted an enterprise survey on ease of doing business.
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- The findings of the survey are at sharp variance with the World Bank’s ease of doing business report.
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- The WB’s report showed that it took just 26 days to set up a business in India in 2016 whereas NITI Aayog’s report says that it takes 118 days on an average to set up a business.
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- The WB report covered only Delhi and Mumbai, while the NITI surveyed pan-India, except Arunachal Pradesh, Mizoram, Andaman and Nicobar, and

Lakshadweep.
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- The Niti Aayog report is focused on organised manufacturing, while the World Bank report covers both manufacturing and services.
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- The survey also highlighted that Tamil Nadu is the best-performing state. An enterprise can setup a business in 63 days in Tamil Nadu.
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Production of Bio-Ethanol

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- Scientists from CSIR have produced ethanol from discarded cotton-stalks by using a combination of chemical and biological techniques.
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- The cotton stalks were first treated with an acid, alkali and enzymes to convert it to glucose.
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- Then the fermentation using a novel yeast strain was carried out to convert the glucose into ethanol.
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- The final alcohol obtained can be made to fuel grade Bio-ethanol, after distillation and dehydration using molecular sieves.
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- Bio-ethanol has a number of advantages over conventional fuels as it comes from a renewable resource.
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- It is mandatory to blend 10% ethanol with petrol.
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- Presently it is obtained by fermentation of sugar cane molasses which is a by product of sugar production, and has food value.
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- Converting the agro-residues (Cotton Stalks) to ethanol reduces the food and fuel competition.
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Geological Stresses in Indian Ocean

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- A Geological stresses is building along the Indo-Australian tectonic plate

boundary in the Southern Indian Ocean.
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- It has the potential to cause a powerful earthquake, triggering a tsunami across much of South India.
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- This development is mainly due to the presence of diffuse deformation zone between Indian and Australian tectonic plates.
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- Diffuse zones of deformation are in general characterized by complex morphological expressions and scattered seismicity of up to several 100Km width.
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- The zones are capable of generating undersea earthquakes up to a magnitude of 8.
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- Studies have to be conducted to understand how the event will unfold.
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- The largest **strike-slip earthquake** on record had happened along the Indo-Australian boundary in 2012.
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- Strike-slip earthquake occurrs when tectonic plates slips horizontally along a fault line, unlike most large earthquakes which are caused when two plates collided at their boundaries and one plate slid beneath the other.
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