

## **Prelim Bits 04-04-2017**

### **Desalination**

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- The process of converting sea water into potable water can be done using Graphene Oxide.

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- The Graphene oxide (GO) membranes can be used to filter common salts in sea water while allowing water to pass through on a commercial scale.

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- However, there is a problem associated with the use of Graphene Oxide. The membranes have a tendency to slightly swell when immersed in water and this increased spacing between successive sheets allows smaller salts to flow through the membrane along with water without being filtered.

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- Recently, the researchers has addressed this problem by developing Graphene Oxide membranes that do not swell when immersed in water.

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- They have achieved this through having a certain interlayer spacing by storing the membranes in high humidity and then physically restraining the membrane from swelling.

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- This altered the rate at which water permeated through the membranes and efficiency of desalination process has increased.

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### **"Women and Men in India 2016" report**

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- The report is released by Ministry of Statistics and Programme Implementation.

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- According to the report, the mean age of women at the time of marriage in 21 major states was 22 years and 3 months in 2014. That figure was 25

years and 2 months for Jammu & Kashmir.

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- According to the report, the average age of women at the time of marriage in rural India in 2014 was 21 years and 8 months, while that of women in urban India was 23 years and 2 months.

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- It was the lowest for Jharkhand - 21 years.

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- The report also highlighted that the average age of women improved from 18 years in 1991 to 22 years and 3 months in 2014, as the country witnessed economic development, education and literacy levels improved.

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- While J&K has been historically progressive about not forcing women into early marriages.

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<b>MEAN AGE OF MARRIAGE FOR WOMEN</b>		
<b>YEAR</b>	<b>INDIA</b>	<b>J&amp;K</b>
<b>1961</b>	<b>15.7</b>	<b>17.5</b>
<b>1971</b>	<b>16.7</b>	<b>20.1</b>
<b>1981</b>	<b>17.8</b>	<b>21.1</b>
<b>1991</b>	<b>18.7</b>	<b>21.0</b>
<b>2012</b>	<b>21.2</b>	<b>24.6</b>
<b>2014</b>	<b>22.3</b>	<b>25.2</b>

  

<b>THE HIGHEST AND LOWEST, 2014</b>	
<b>Jammu &amp; Kashmir</b>	<b>25.2</b>
<b>Kerala</b>	<b>23.8</b>
<b>Jharkhand</b>	<b>21.0</b>

*Read all figures as 'years.months', and not as arithmetic decimals.  
Source: Ministry of Statistics and Programme Implementation*

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## **National Payment Corporation of India**

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- NPCI has been set up as an umbrella organization owned and operated by the banks and registered under Companies Act, 2013.

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- NPCI has been authorised by Reserve Bank of India under the Payment and Settlements Systems Act, 2000.

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- The authorised payment system operators including NPCI are required to follow the operational and technical standards laid out by RBI, follow the directions issued and submit the information / returns prescribed.

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- RBI also conducts supervision of NPCI (both off-site and on-site) and also empowered to revoke authorisation and impose penalties / initiate prosecution proceedings for violations of the Regulations.

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