



Daily Current Affairs Dated On 13-Aug-2019

GS-1

Perseid meteor shower

What is it?

- On its journey around the Sun, the Earth passes through large swathes of cosmic debris.
- The debris is essentially the remnants of comets — great frigid chunks of matter that leave behind dirty trails of rocks and ice that linger long after the comets themselves have passed.
- As the Earth wades through this cloud of comet waste, the bits of debris create what appears from the ground to be a fireworks display in the sky — known as a meteor shower.

Recent cases

- Several meteor showers can be seen around the year.
- Among the brightest and best known of them is the Perseid Meteor Shower, which has been active from July 17 onward, and can be seen until August 26.
- The showers peaked on the night of Monday-Tuesday.

What is special about perseid?

- The Perseids occur as the Earth runs into pieces of cosmic debris left behind by the comet Swift-Tuttle.
- The cloud of debris is about 27 km wide — and at the peak of the display, between 160 and 200 meteors streak through the Earth's atmosphere every hour as the pieces of debris, travelling at some 2.14 lakh km per hour, burn up a little less than 100 km above the Earth's surface.
- The Perseids currently visible in the night sky are not due to the debris left behind by the comet Swift-Tuttle during its most recent pass, which happened in 1992.
- This particular comet goes around the Sun once in 133 years, and the meteors now visible were left behind by the pass before the last one — or perhaps even earlier.

When are they visible?

- Meteors are best seen on a cloudless night, when the entire sky is visible, and when the Moon is not extremely bright.
- Chances of a successful viewing are higher from locations far away from the lights of cities.
- Pollution and monsoon clouds make the Perseids difficult to view from India.

- The showers peak when the Earth passes through the most dense part of the debris cloud. Peaks can last for a few hours or several nights.



Daily Current Affairs Dated On 13-Aug-2019

- They tend to be most visible after midnight and before dawn.
- The showers should be seen with naked eyes; binoculars and telescopes narrow the field of vision.

River interlining project

Background

- IT IS an idea that has been in circulation for nearly four decades: can India build from scratch a national water grid, which will help transfer water from water-rich to water-deficit regions?
- This has led to proposals for water transfer from one river basin to another.
- The Special Committee for Inter-Linking of Rivers has submitted its progress report for the work done from July 2016 to March 2018, and the Union Cabinet chaired by the Prime Minister was updated on the report recently.

The reasons for?

- The Inter-Linking of Rivers programme aims to connect various surplus rivers with deficient rivers.
- The idea is to divert excess water from surplus regions to deficient regions to help improve irrigation, increase water for drinking and industrial use, and mitigate drought and floods to an extent.
- It is to be in accordance with the National Perspective Plan.
- This plan was formulated in 1980 by the Ministry of Irrigation (now Water Resources) to look into inter-basin transfers.
- The plan comprises two components: peninsular rivers development and Himalayan rivers development.
- India also has a National Water Development Agency (NWDA), which was set up in 1982, to conduct surveys and see how feasible proposals for interlinking river projects are.



Daily Current Affairs Dated On 13-Aug-2019

Three projects

The status report of three priority links was shared with the Cabinet.

These were Ken-Betwa, Damanganga-Pinjal and Par-Tapi-Narmada.

KEN-BATWA:

- The project aims to link the rivers Ken (in the Bundelkhand region) and Betwa, both flowing through Uttar Pradesh and Madhya Pradesh.
- It proposes to “divert the surplus waters of river Ken through the Ken-Betwa link canal to river Betwa for meeting water requirements in the water-deficit Betwa basin”. Dams will be built across the Ken for storing and transferring water through the link canal.

DAMANGANGA-PINJAL:

- The project aims to divert excess water from rivers in western India to meet the domestic and industrial water requirements of Greater Mumbai.
- It proposes to move available water at the proposed Bhugad reservoir across the Damanganga and at the proposed Khargihill reservoir across the Vagh, a tributary of the Damanganga.
- These two reservoirs, proposed by the NWDA, will be linked to the Pinjal reservoir (proposed by Maharashtra) through pressure tunnels.

PAR-TAPI-NARMADA:

- The project proposes to transfer water from the Western Ghats to water-deficit regions of Saurashtra and Kutch via seven reservoirs proposed in northern Maharashtra and southern Gujarat.
- It is an attempt to save water at the Sardar Sarovar project by using feeder canals to service a part of the command area of the dam, officials say.



Daily Current Affairs Dated On 13-Aug-2019

Issues and challenges

- Many experts and activists have questioned the idea of inter-basin transfer, for various reasons. The ecology of every river being unique, experts have stressed that letting the waters of two rivers mix may affect biodiversity.
- Because the programme proposes the construction of a massive network of canals and dams, it would lead to large-scale displacement of people and changes in agricultural patterns, and affect livelihoods.
- Experts have also objected to interlinking for financial reasons.
- In 2001, the total cost for linking the Himalayan and peninsular rivers was estimated at Rs 5,60,000 crore, excluding the costs of relief and rehabilitation, and other expenses such as measures to deal with submergence in some areas.
- Two years ago, a committee of the Ministry suggested that this cost was likely to be substantially higher now and the cost-benefit ratio might no longer be favourable.
- Another objection raised is that rainfall patterns are changing due to climate change, so the basins now supposed to be surplus, might cease to be so in a few years.

Gulf war

Why in news?

In an emotive gesture, Iraq on Thursday handed over the remains of 48 Kuwaiti nationals, more than 28 years after the Gulf War ended.

Background

- The Gulf War, which lasted between August 1990 and February 1991, was an international conflict that erupted after Iraq, under dictator Saddam Hussain, invaded neighbouring Kuwait, claiming it as its “19th province”.
- After Hussain defied UN warnings, the US and its allies forced Iraqi forces out of Kuwait.

What happened during the Gulf War?

- On August 2, 1990, Iraq annexed Kuwait, its south-eastern neighbour 25 times smaller in size.



Daily Current Affairs Dated On 13-Aug-2019

- Although Hussain claimed Kuwait to be a part of Iraq, he invaded the region so that Baghdad could cancel a massive debt that it owed Kuwait, as well as acquire Kuwait's large oil reserves. Hussain also sought to link the annexation with the Palestinian conflict.
- Immediately after, the United Nations Security Council strongly reprimanded Iraq and warned of military action if its forces did not retreat by January 15, 1991.
- As Hussain refused to pay heed to the UN's many warnings, a US-led coalition, consisting of 7 lakh troops from 35 countries assembled in Saudi Arabia -- Iraq's neighbour also threatened by Hussain's adventures in the region.
- After the January 15 deadline was flouted by Baghdad, coalition forces first launched Operation Desert Storm, which destroyed Iraq's air defences, oil refineries, and key infrastructure.
- This was followed by Operation Desert Sabre, a ground offensive that went on to free Kuwait. The war finally ended on February 28, 1991, when the US declared a ceasefire.
- During the war, the Iraqi military is known to have lost between 8,000-50,000 people, as opposed to around 300 casualties incurred by coalition forces.

India during the Gulf War

- New Delhi had been one of the first powers to recognise the Baathist regime when it came to power, and Baghdad, in turn, had consistently maintained a pro-India stance, especially during the era when the rest of the region was seen to have gravitated towards Pakistan.
- When the Gulf War started, India, which at the time was led by PM Chandra Shekhar, maintained its signature non-aligned stance.
- However, it rejected Baghdad's demand for linking the hostilities that were unfolding then with the Palestinian conflict.
- Between August 13 and October 20 of 1990, India evacuated over 1,75,000 of its nationals from war-torn Kuwait, the biggest such operation by the Indian government.
- The feat has been mentioned in the Guinness Book of World Records as the largest number of people being evacuated by a civilian airliner, and was depicted in the 2016 Hindi film 'Airlift'.



Daily Current Affairs Dated On 13-Aug-2019

GS-3

CIITES

Why in news?

India has submitted proposals regarding changes to the listing of various wildlife species in the CITES secretariat meeting, scheduled later this month in Geneva, Switzerland.

About the proposal

- The proposals submitted are regarding changes in the listing of the smooth-coated otter, small-clawed otter, Indian star tortoise, Tokay gecko, wedgefish and Indian rosewood.
- The country seeks to boost the protection of all the five animal species as they are facing a high risk of international trade.
- For the Indian rosewood, the proposal is to remove the species from CITES Appendix II. The species covered by CITES are listed in three appendices on the degree of protection they require.
- India is among the parties proposing the re-listing of the star tortoise from CITES Appendix II to Appendix I. The species faces two threats: loss of habitat to agriculture and illegal harvesting for the pet trade.

About CITES:

- CITES (Convention on International Trade in Endangered Species on Wild Fauna and Flora) is an international treaty to ensure that trade in wild animals and plants do not threaten their survival.

Iron ion battery

Why in news?

IIT Madras has fabricated a rechargeable iron ion battery and registered initial success.

About

- The rechargeable iron ion battery has been designed using mild steel as the anode.



Daily Current Affairs Dated On 13-Aug-2019

- The iron ion battery is cost-effective and the amount of energy that can be stored in the battery is also high.
- While lithium ions are the charge carriers in lithium ion battery, the Fe^{2+} ions perform that function in the case of iron ion battery.
- When fabricated under controlled conditions, the amount of energy that can be drawn from the iron ion battery is 220 Wh per kg, which is 55-60% of lithium ion battery's performance.
- In iron ion battery, vanadium pentoxide is used as the cathode. Vanadium pentoxide was chosen as it has a layered structure with very large spacing between the layers.
- The large inter-layer spacing in vanadium pentoxide allows iron ions to easily move in and bind to the interlayers of the cathode and also easily get detached and move back to the anode.

Benefits of iron over Lithium:

- Iron has favourable physico-chemical properties like lithium.
- The redox potential of iron ion is higher than lithium ion and the radius of the Fe^{2+} ion is nearly the same as that of the lithium ion.
- Iron is more stable during the charging process and therefore prevents short-circuiting of the batteries.
- This, when compared with the popular lithium metal-based batteries helps cut down the cost and make it safer to handle.