

UPSC Civil Services Examination

Subject – UPSC GS-III

Topic – DISANET

IIT and Japan International Cooperation Agency (JICA) came out together to launch a joint project called DISANET (Information Network for Natural Disaster Mitigation and Recovery Project) in 2017. DISANET is a part of 4 Science and Technology Research Partnership for Sustainable Development (SATREPS) projects to promote joint research for both India and Japan. The topic 'DISANET' can come useful for [IAS Exam](#) GS-III and it can also be helpful from the perspective of India-Japan relations under international relations of GS-II.

This article will provide you with relevant facts about DISANET as a part of India-Japan initiative towards rebuilding science and technology.

What is the significance of DISANET?

- It is a communication system that will enable the rescue workers to communicate with a centre established locally and through this centre to the National Disaster Management Agency (NDMA) in Delhi.
- The communication system was developed by IIT Madras team at a low cost.
- It is a joint research and development project between India and Japan that aims at establishing infrastructure for continuous data collection on earthquake and weather with global information network by applying it to India and Japan as example cases and to develop technical bases for rescue and support for restoration and for disaster recovery support.

Why DISANET is necessary?

Disasters are common in India in the form of floods, cyclones and other natural disturbances and one of the first thing to go down is the Communication Networks. To overcome this challenge and provide a provision during emergency conditions this was a necessity.

Uses of DISANET

- It is a plan that helps citizens within the reach of this centre and the system to communicate basic or emergency messages like “I am safe” with personal information like name, age, gender of those people discovered.
- The system, named DISANET, allows basic services such as voice, text and video communications to be exchanged within this network of rescue workers, Master Operation Centre and the NDMA.
- This allows some of the services that are basic like text, voice and video to be within the zone/network of rescue workers, NDMA and Master operation centre.
- At present, people who are involved in rescue operations, such as police personnel, use walkie/talkie handsets (VHF/UHF).

Design of DISANET

- The design has four subsystems — WiFi, a satellite link, single-carrier GSM and LTE (Long Term Evolution) which is a standard for high-speed wireless communication for mobile phones and data terminals.
- The compact system can be easily transported in trucks to the site of the Master Operation Centre within a few hours of the disaster.
- The wireless system should provide coverage over an area of approximately 1,000 square kilometres.
- Rescue workers with GSM handsets, WiFi cameras and WiFi nodes can spread out over an area of 12-25 square kilometre to form the primary deployment area. These workers supply communication between the affected area and the Master Operation Centre (MOC).
- The MOC has pico- or micro-sized LTE-Base Stations which are mounted at a height of 15 to 20 metres.

Facts about DISANET

The table mentioned-below important points about DISANET:

DISANET - Relevant Facts for UPSC Prelims	
Does it support basic mobile Phones?	This system is compatible as most mobile users in India use basic handsets rather than smartphones.
What are the advantages of DISANET?	<ul style="list-style-type: none"> • The rescue team can directly communicate with citizens about the arrangements using FM broadcast, which citizens receive on their mobiles. • This enables the flow of authenticated information from the authorities to the citizens and prevents rumor-mongering during times of disaster.

Aspirants can refer to the linked articles below as they are important from Science & Technology subject perspective:

National Cyber Security Policy	Acute Encephalitis Syndrome	Zoonotic Diseases
NATGRID	Genetically Modified Crops (GM Crops)	Defence Research & Development Organisation (DRDO)
National Disaster Risk Index	Sendai Framework for Disaster Risk Reduction	Chemical Disaster Risk Reduction