Cell Broadcast Technology | Uttarakhand | 23 Mar 2023

Why in News?

According to the information received from the media on 22 March 2023, in a workshop organised by the Uttarakhand State Disaster Management Authority (USDMA), Ronen Daniel, CEO of Utimaco Company, while giving his presentation on cell broadcast technology, said that this technology can be used to alert people in minimum time in times of disaster.

Key Points

- Cell broadcast technology can prove to be effective for the state of Uttarakhand surrounded by potential disasters. Through this, the damage caused after disasters like cloudburst, lightning, avalanche, landslide can be reduced to a great extent. This technology alerts people through mobile phones in case of disaster.
- In such a situation, all the mobiles present in the potential disaster area will start ringing automatically, even if the network in that area has come to a standstill.
- The cell broadcast technology system can disseminate CMAS alerts, which is the best standard in the world for issuing alerts.
- Utimaco Company CEO Ronen Daniel said that before the CMAS alert, there is a loud beeping sound on the mobile, a continuous vibration in the alarm tone and a pop-up message that does not stop until the concerned person closes it himself. It has the capability to alert millions of people within a few minutes. Meteorological warnings are also issued through this technique.
- It is known that all the countries of the world like Japan, Canada, United Arab Emirates, Israel, Korea, Netherlands, European Union are adopting this technology today. In India, the state of Andhra Pradesh has adopted this technique, where there is a danger of tsunami and cyclone.
- Salient Features of Cell Broadcast -
- Real time and location-based alerts.
- Mobile numbers are not required. SMS can reach one million people in a few seconds.
- There is no subscriber privacy issue, as cell broadcast does not require mobile numbers for transmission.
- Works even when there is a network jam (effective during flare-ups of communal riots, etc.).
- Data is not required, works in multiple languages simultaneously.
- Complies with all emergency standards.

Retrofit Solution Technology' | Uttarakhand | 23 Mar 2023

Why in News?

On 22 March 2023, the 'Retrofit Solution Technology' prepared by the Mechanical Cluster of the University of Petroleum and Energy Studies, Dehradun, was presented in a workshop organised by the Transport Department of Uttarakhand to prevent vehicular air pollution which will give new life to diesel vehicles

more than 15 years old.

Key Points

- Prof. Dr. Ajay Kumar of University of Petroleum and Energy Studies said that according to the University's Engine Laboratory, the pollution emitted from diesel vehicles is reduced to the minimum level in 'Retrofit Solution Technology'. Using this technology, vehicles like BS-6 will emit less pollution.
- With this technology, the old diesel vehicles can get new life and they can be made fit to run on the roads again.
- After burning diesel in old vehicles, the poisonous gas released from it spreads pollution in the atmosphere. To clean it, special filters are used in this technique.
- The 'Retrofit Solution Technology' uses a Diesel Oxidation Catalyst, which is a type of filter. It converts carbon monoxide into carbon dioxide. The fine particles in the smoke get trapped in the Diesel Particulate Filter (DPF). Microwave ovens are used to burn these particles.
- The rays emanating from it burn the microscopic particles. After this they are taken out and the filter is cleaned. Selective Catalytic Reduction (SCR) filters are also used in this. In this, toxic nitrogen oxides are converted into water using liquid ammonia. This prevents the major elements causing air pollution from being emitted.
- According to the University's Engine Laboratory, this technology burns up to 60 percent of the unburned carbon in the exhaust of diesel vehicles. At the same time, 29 percent of carbon monoxide is converted into carbon dioxide. With this technique, up to 91 percent of the fine particles are destroyed by burning.
- It is noteworthy that this technology was created in 2020. An application has been made to patent it. After testing in several stages, the process is in the final stage. Through this technology, it has been successful in bringing the air pollution coming out of the vehicles to the minimum level like BS-6 vehicles.