

DESIGN INTO INNOVATION

Major goals of a disaster recovery plan:

- To minimize interruptions to the normal operations.
- To limit the extent of disruption and damage.
- To minimize the economic impact of the interruption.
- To establish alternative means of operation in advance.
- To train personnel with emergency procedures.
- To provide for smooth and rapid restoration of service.

Disaster recovery procedures

For any disaster recovery plan, the following three elements should be addressed.

Emergency Response Procedures

To document the appropriate emergency response to a fire, natural disaster, or any other activity in order to protect lives and limit damage.

Backup Operations Procedures

To ensure that essential data processing operational tasks can be conducted after the disruption.

Recovery Actions Procedures

To facilitate the rapid restoration of a data processing system following a disaster.

Disaster prevention radio and the telemetry system:

A telemetry system is used to monitor various disaster situations such as earthquakes, volcanos, floods, and environment as well as to operate DRR facilities on a real-time basis. A disaster prevention radio system in aims at sharing disaster information with local residents.

Disaster resilient materials:

Various materials have been developed to mitigate damages caused by disasters. Waterproof materials are used for temporal measures to protect assets from flooding, while embankments, floodgates, and other structural measures are permanent solutions.

To manage fires it is most effective to finish interior decoration of walls and ceilings of buildings with fireproof materials that are hardly ignited with ordinary fire source or do not ignite.

Hazard mapping:

Hazard maps provide graphic information on the risks of disasters such as earthquakes, floods, landslides, tsunamis, and volcanic eruptions. They serve as a basis to formulate relevant policies and countermeasures of disaster risk reduction. In addition, Japanese hazard maps include other information on evacuation routes, shelters, and response resources.

Post Disaster Needs Assessment:

The Post-Disaster Needs Assessment (PDNA) is a methodology for estimating the physical damages, economic losses, and recovery costs following natural disasters. According to PDNA, government, international organizations, and assistant agencies can formulate recovery and rehabilitation frameworks and plans, identify appropriate projects, and arrange financing.

River engineering:

Every country has developed technologies for flood prevention and water resource management according to natural, topographical, and hydrological conditions. However, indigenous technology often has the limitation of the scientific basis. When Japan was established following the Meiji Revolution in the late 19th century, the country introduced western technology in river engineering for preventing floods and developing water resources. Other countries, such as Mexico and China, also started introducing river engineering from western countries, with the Japanese assistance.

Conclusion:

Disaster preparedness planning involves identifying organisational resources, determining roles and responsibilities, developing policies and procedures and planning preparedness activities aimed at ensuring timely disaster preparation and effective emergency response.

