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SATELLITE NAVIGATION IN DISASTER MANAGEMENT HIGHLIGHTING THE USE OF GPS  
AND OTHER SATELLITE NAVIGATION SYSTEMS IN DISASTER RESPONSE AND  
MANAGEMENT, INCLUDING RESCUE OPERATIONS AND LOGISTICS PLANNING

**Abstract**

In the realm of disaster management, the precision, timeliness, and reliability of response activities are paramount to minimizing the impact of disasters on human lives and infrastructure. Satellite Navigation Systems, particularly Global Positioning System (GPS) and other advanced satellite-based navigation technologies, have emerged as indispensable tools in orchestrating effective disaster response and management strategies. This abstract delves into the multifaceted role of satellite navigation in enhancing disaster management, from facilitating accurate rescue operations to optimizing logistics planning.

The integration of satellite navigation systems into disaster management frameworks significantly improves the accuracy of location-based services, essential for rapid response in emergency situations. GPS technology, in conjunction with other satellite-based assets, enables precise mapping and tracking of disaster zones. This capability is crucial for directing rescue teams to affected areas, monitoring evacuation procedures, and assessing the extent of damages. Moreover, satellite navigation aids in the efficient coordination of logistics, ensuring the timely distribution of relief materials to impacted populations.

Advancements in satellite navigation technologies have also paved the way for innovative applications in disaster risk reduction. Real-time data transmission and analysis facilitated by these systems allow for the early detection of potential hazards, enhancing preparedness and mitigating the adverse effects of disasters. Additionally, the integration of satellite navigation with unmanned aerial vehicles (UAVs) and mobile platforms further extends the reach and effectiveness of disaster management efforts, enabling access to otherwise inaccessible areas during critical rescue missions.

In conclusion, the strategic application of satellite navigation systems in disaster management not only elevates the efficiency of immediate response efforts but also contributes significantly to the broader spectrum of disaster risk reduction and resilience building. The continuous evolution of these technologies promises to further enhance the global capacity to manage and mitigate the impacts of natural and man-made disasters, aligning with the objectives of sustainable development and climate change adaptation.