09. Enhancement of National Resilience against Natural Disasters

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Aim

Overview

The government needs to implement plans to prevent the occurrence of disasters due to Nankai megathrust earthquakes. In the event of severe wind/flood damage caused by large-scale earthquakes, volcanic disasters, or climate change, this planning should strengthen the response capabilities of municipalities, allow them to evacuate each and every citizen to prevent loss of life, and implement widespread efforts towards a swift economic recovery. This SIP plans for research and development on new technologies to bolster national resilience using satellites, AI, big data, etc. and also equipping the government and municipalities with these technologies, and will facilitate the achievement of government goals while contributing to the United Nations sustainable development goals (SDGs), with the aim of implementing these technologies in Society 5.0 when a disaster strikes.

Purpose

The purpose of the SIP is to complete research and development for all of the main items needed to implement government plans concerning disaster prevention (i.e. an 80% reduction in the damage such as deaths due to Nankai megathrust earthquakes, estimated at 332,000 people) to a degree where the resulting technologies can be applied practically in society. Specifically, the plan focuses on conducting cutting-edge research and development of technology for the two integrated systems that are the focus of this SIP, to be implemented nationwide and in numerous, different types of municipalities.

Exit Strategy

-The “integrated system for evacuation/emergency response support” will use various systems to plan for complete disaster response for all ministries and agencies involved, and cooperate with related organizations to get the things necessary to government emergency activities.
-Using the renewal of the existing system as an opportunity to facilitate the introduction of the “Integrated system for municipal disaster response” .

Socio-economic Impact

-Striving to completely prevent fatalities due to failure to evacuate by ensuring that citizen has a secure means of evacuation.
-Successfully creating a society that is capable of promptly restoring the economy on a broad scale, allowing those affected by disaster to quickly return to normal daily life.

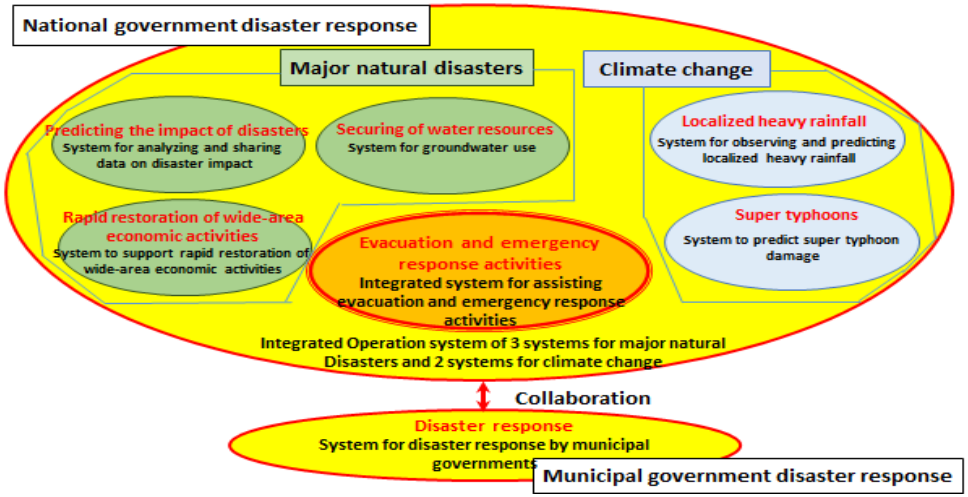
To achieve

Research and development

Research and development is to be conducted on the following two integrated systems in order to strengthen National Resilience against Natural Disasters.

①Integrated system for evacuation/emergency response support
- Technology including big data to understand the social dynamics when a disaster occurs, and satellites to observe/break down/analyze the extent of the damage, which will be conducive to the government acting in response to disaster prevention within two hours of a disaster occurring
- Technology necessary to reliably predict the occurrence of super typhoons and training storms in real time which can be applied to wide-area emergency response and evacuation behavior

②Integrated system for municipal disaster response
- Information processing technology necessary to analyze big data in a short amount of time and determine the timing for evacuation advisories/orders



Ministries concerned : Cabinet Secretariat, Cabinet Office, the National Police Agency, Ministry of Internal Affairs and Communications, Fire and Disaster Management Agency, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Health, Labor and Welfare, The Ministry of Agriculture, Forestry and Fisheries of Japan, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure and Transport, Japan Meteorological Agency, Japan Coast Guard, Ministry of the Environment