

## **Emergency Preparedness and Its Enhancement in Japan** *From perspectives of infrastructure preparation, and exercise enhancement*

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**Abstract.** The organizational structure, procedures and infrastructures for the nuclear emergency response were established in Japan in the aftermath of the JCO accident and have been improved through exercises, drills and training.

This paper overviews the infrastructure for the emergency response prepared by JNES and exercises implemented or supported by JNES for nuclear emergency preparedness. Approaches to feeding back exercise results are also addressed.

### 1. Infrastructures for emergency response prepared by JNES

The nuclear emergency response operations facilities (off-site center) that are located in the areas that host nuclear facilities will be assumed a local emergency response and information center during a nuclear emergency. It means off-site center's roles are main center of informations; incident analysis, planning of emergency plan and direction. So off-site center is connected Nuclear Emergency Response Head Quoter of National Government (Office of Prime minister, NISA Emergency Response Center) , Nuclear Safety commission, Prefectural Nuclear Emergency Head Quoter (Local Government emergency HQ) and Licensee etc..(Fig-1 shows organization of Emergency response)

In Japan, there are 20 off-site centers.(Fig-2 shows the location of 20 off-site centers) JNES constructed a dedicated high-speed network system connecting 20 off-site centers and the Government's emergency response center and other centers. This dedicated high-speed network system is called Emergency Preparedness Response Network (EPRNet). EPRNet include video conference system, e-mail system, phone, fax, and also connected Meteorological Information Comprehensive Online Service (MICOS) ,Emergency Response Support System(ERSS), System for Prediction of Environmental Emergency Dose Information(SPEEDI). JNES operates and improves this EPRNet according to the result of drill and exercise.(Fig-3 shows Overview of EPRnet.)

FIG.-1 Organization of Nuclear Emergency Response

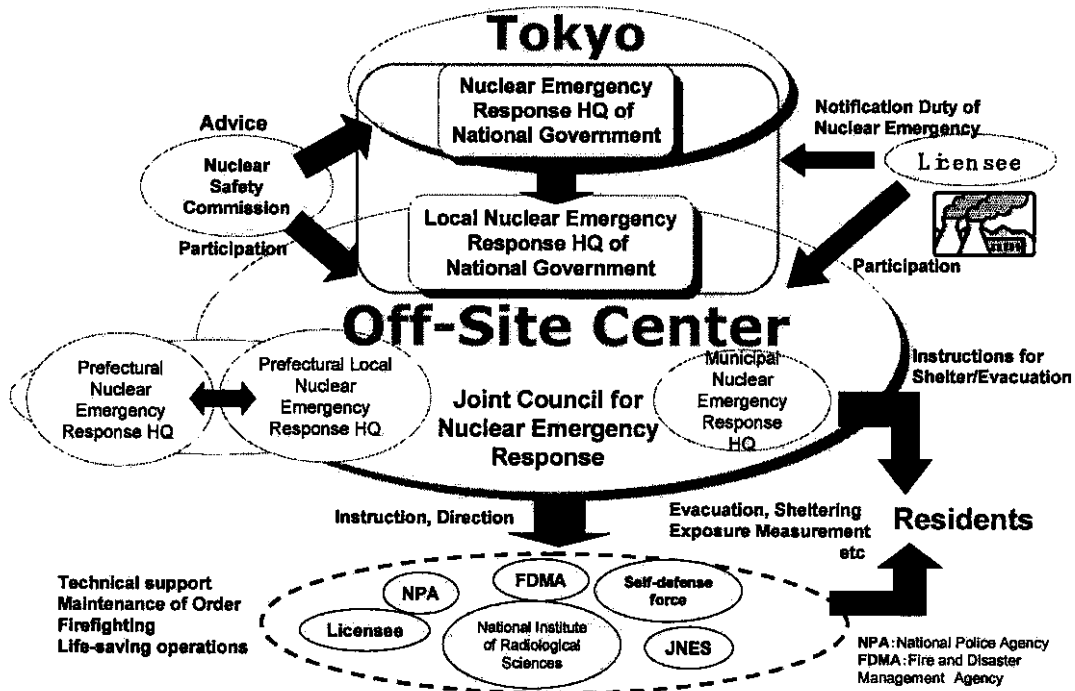


FIG.-2 Nuclear Emergency Response Operation Facility ( Off-site Centers )

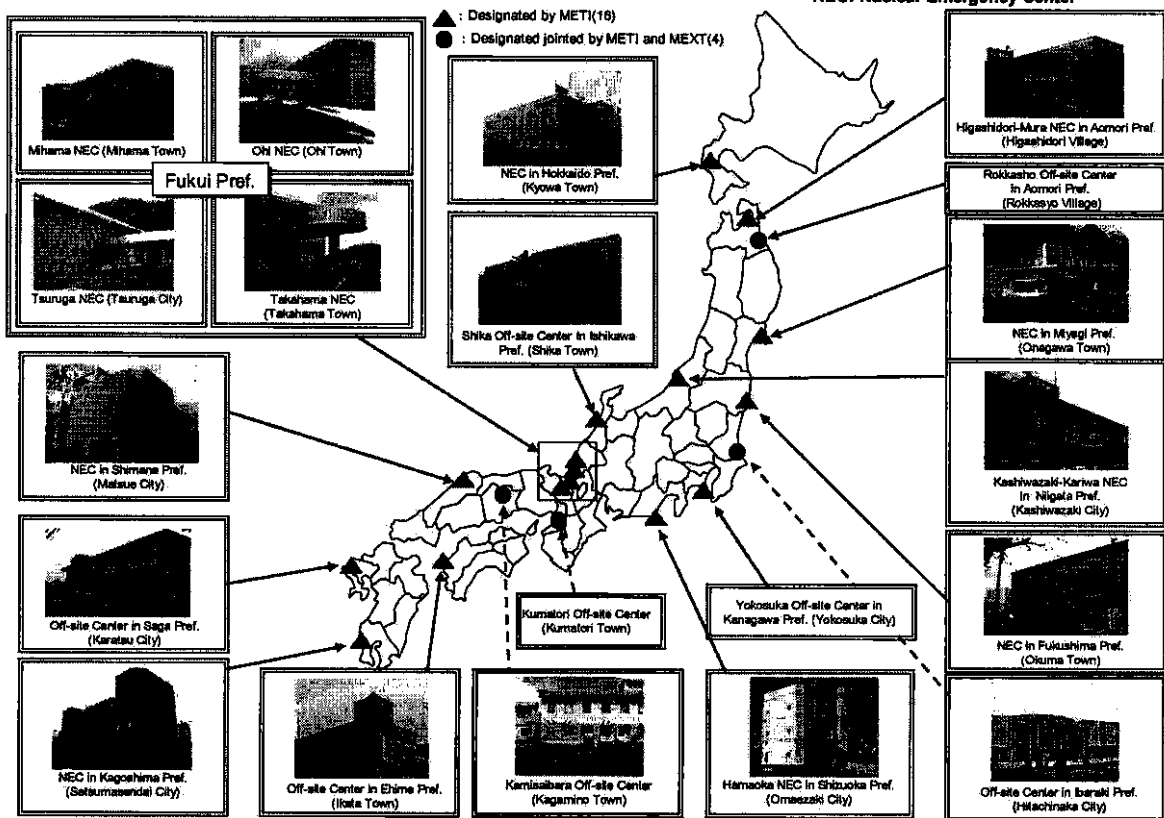
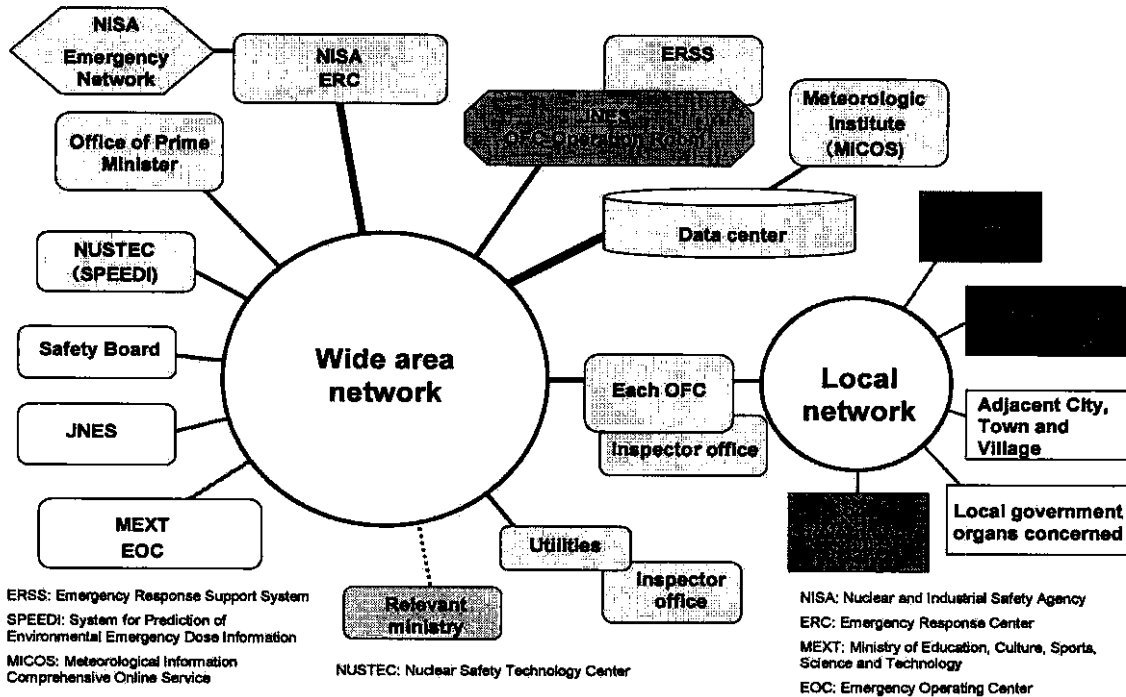


FIG.3 Overview of EPRNet



2 Exercise that JNES supports or implements

The Government implements the Full-Scale Nuclear Emergency Response Exercise once a year. All of the related Government organizations, including the Prime Minister participate in this exercise. (Fig.-4 shows a Declaration of a Nuclear Emergency Situation by Prime Minister.) JNES assists this exercise as the exercise Secretariat at various phases of exercise planning, implementation, evaluation and take care of international visitors. During this exercise, it is confirmed that all agency cooperate with each other and perform their mission. Before this exercise, the scenario less table-top exercise is conducted. The main purpose of this exercise is training for decision-making. This exercise is complement of the Full-Scale Nuclear Emergency Response Exercise and is assisted by JNES.

Also by each local government which host nuclear facilities, the emergency response exercise is implemented once a year. JNES arranges the consistency between the Government exercise and the local government exercises.

JNES conducts table-top exercises at each off-site center for communications and the swift decision making. These activities lead to the continuous enhancement of emergency preparedness and response for all off-site centers.

**FIG.4 Declaration of a Nuclear Emergency Situation by Prime Minister.**



### 3 Improvement through exercises and other activities

JNES collect the lesson learned from these exercises and identifies issues regarding infrastructures, staff behaviors and the implementation of protective actions and feeds back these findings to the exercise and the infrastructure, thereby committing to enhancing the emergency preparedness.

## ACKNOWLEDGEMENTS

## REFERENCES

- [1] Enter first reference here.