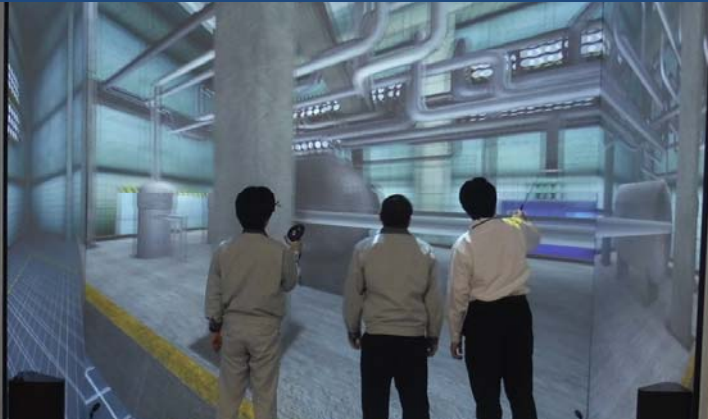


Waste Management 2017

R13.E Session 55

JAEA Commitment to Revitalization of Fukushima

March 7, 2017

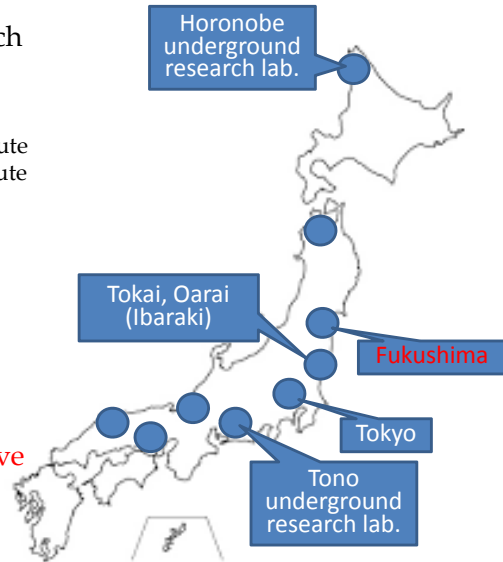


Shinichi NAKAYAMA

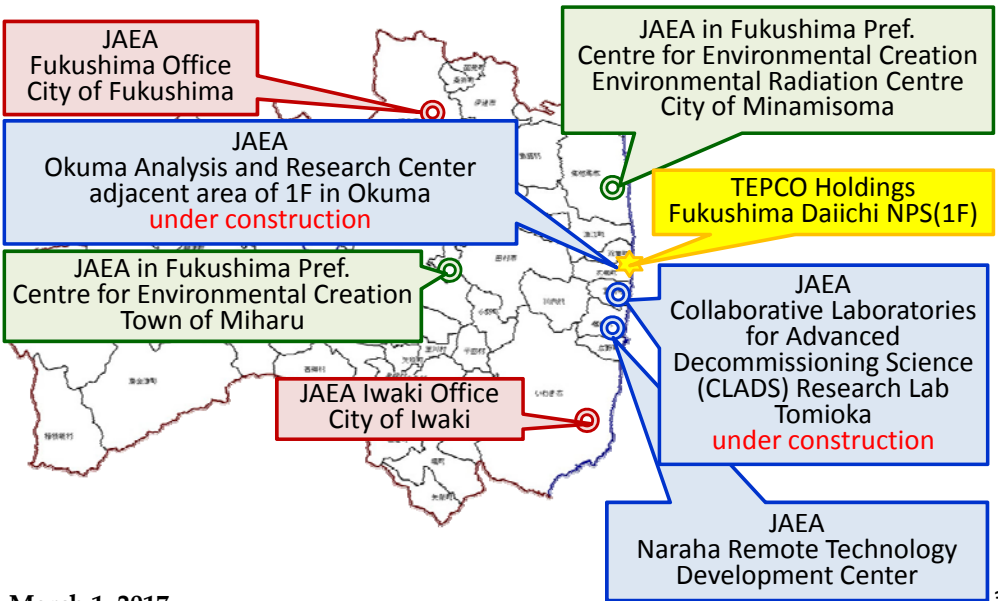
Fukushima Research Infrastructural Creation Center
Sector of Fukushima Research and Development
Japan Atomic Energy Agency (JAEA)



- Government-funded nuclear research and development institute
- Established in 2005
(Japan Nuclear Cycle Development Institute and Japan Atomic Energy Research Institute merged)
- 3,100 personnel
- 5 R&D sectors
 - ✓ Fukushima Research and Development
 - ✓ Nuclear Safety Research and Emergency Preparedness
 - ✓ Decommissioning and Radioactive Waste Management
 - ✓ Nuclear Science Research
 - ✓ Fast Reactor Research and Development



JAEA R&D BASE IN FUKUSHIMA



JAEA Missions

JAEA was required and funded to establish an essential R&D bases to technologically support the decommissioning of TEPCO's Fukushima Daiichi nuclear power station

1. Naraha Remote Technology Development Center (Naraha)

- Development of tele-operated and remote sensing technical tools,
- Development of training tools for decommissioning workers,
- Development of emergency responding robots

2. Okuma Analysis and Research Center (Okuma)

- Characterization of radioactive wastes and fuel debris, for radioactive waste management

3. Collaborative Laboratories for Advanced Decommissioning Sciences Research Lab. (Tomioka)

(See Japan Pavilion posters)

- Launched in autumn 2015
- More than 6,000 visitors



(See Japan Pavilion posters for details)

Full-scale Plug Test



1/8 portion of Suppression Chamber

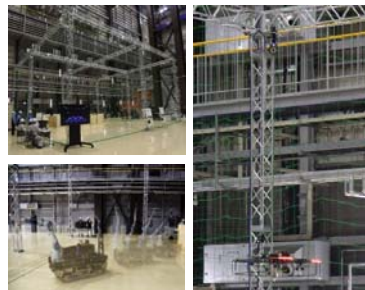


Mock-up stairs

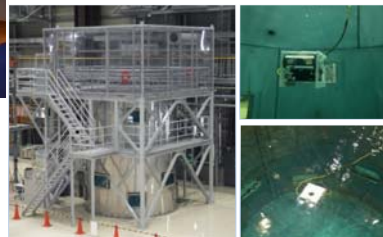


Virtual Reality system

(See Japan Pavilion posters for details)

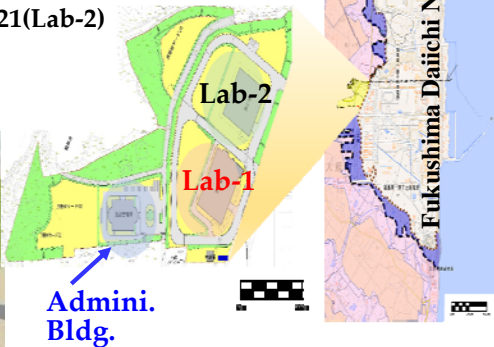


Motion capture field
(w/ 16 tracking cameras)



Robot testing water tank

- **Analysis of radioactive materials from the 1F site**
- **Laboratory-1 : lower dose rate RW (< 1 Sv/h @ surface)**
Laboratory-2 : higher dose rate RW (> 1 Sv/h @ surface)
and fuel debris
- **Planned to launch in 2019 (Lab-1) and 2021(Lab-2)**



(See Japan Pavilion posters for details)



JAEA Commitment for Revitalization of the Local Areas and Economy

Naraha Remote Technology Development Center

- Remote tech. development
- Human resources development

Okuma Analysis and Research Center

- Human resources development

REFERENCE SLIDES

*Translation from a note by Prof. Shimizu, Fukushima Univ.
J. At. Ener. Soc. Japan*

- 1. Contradictory feelings**
- 2. "Return" of evacuees**
- 3. Radioactive wastes from environmental remediation**
- 4. Nuclear; too much political**

EVACUATION ORDER



Difficult to return
ca. 24,100



Not permitted to live
ca. 22,700



Ready to be lifted
ca. 23,600

Order lifted

Tamura April 1, 2014
 Kawauchi October 1, 2014 (G, Y->G),
 June 14 2016
 Naraha September 5, 2015
 Katsurao June 12, 2016 (G & Y)

Fukushima evacuees

In Fukushima Pref. 50,602
 To outside Fukushima 41,532
 (May, 2016)



MISCONCEPTION - MY PLACE IS NOT CONTAMINATED -

People in NE
District believe



People near
Tokyo believe



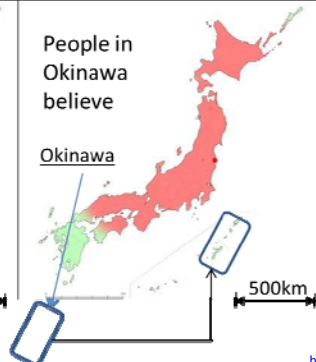
People in
Hokkaido
believe



People
in Osaka
& Kyoto
believe



People in
Okinawa
believe



The World
believe

