

Overview of Japan's Offsite Cleanup Efforts

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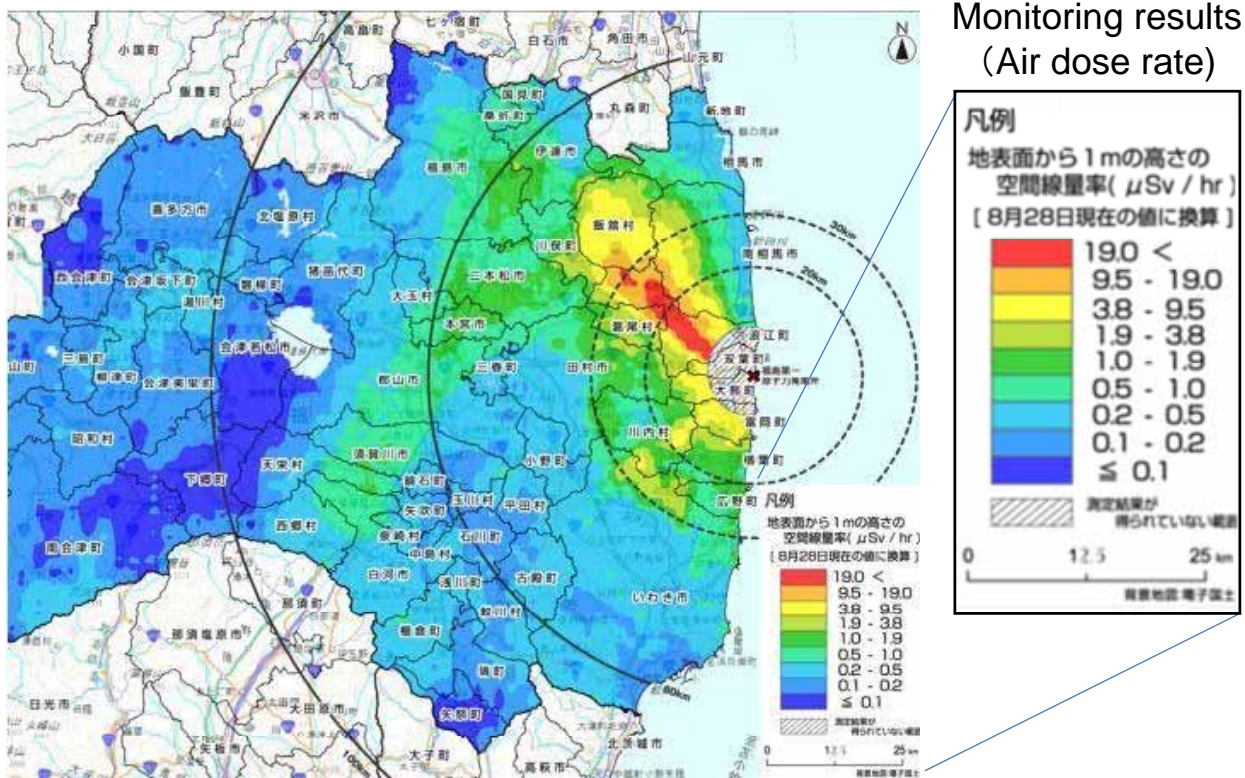
Outline

- ◆ Framework of Policy and Measures for Decontamination
- ◆ Financial Resources and Institutional Arrangements
- ◆ Decontamination Progress
 - Directly managed by the National Government
 - Managed by Municipalities
- ◆ Conclusion

Framework of policy and measures for decontamination

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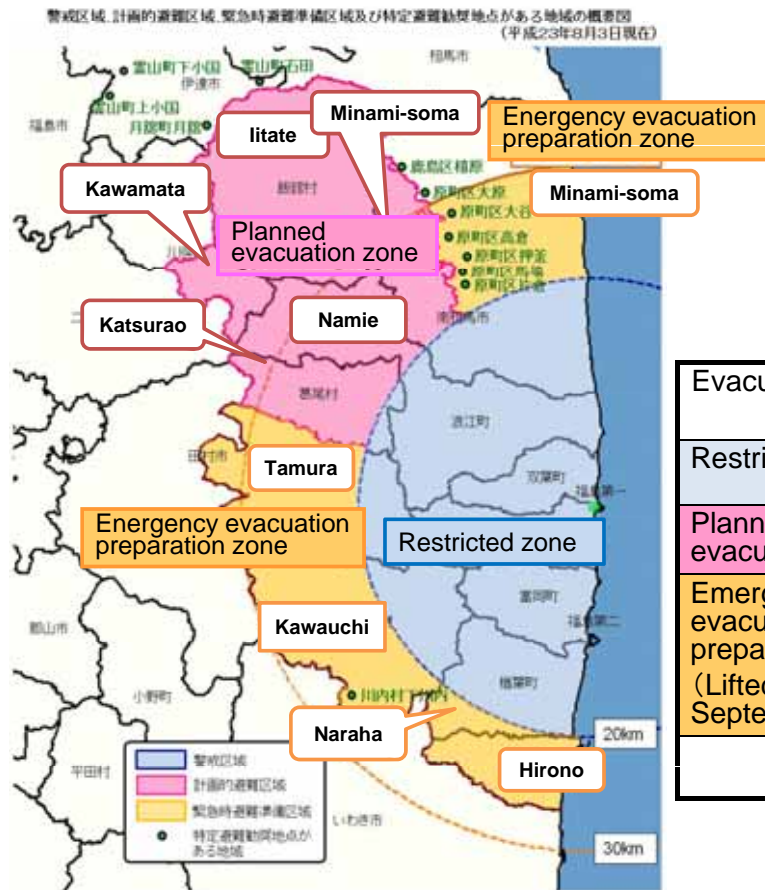
Radioactive materials spread widely including to the area in NW direction where high dose areas are distributed.



* Based on airborne monitoring survey by MEXT (published on Sept. 12,2011)

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Zones of Evacuation Instruction



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Legal Framework

Act on Special Measures concerning the Handling of Radioactive Pollution

Promulgated: at the end of August 2011, Fully came into force: January 1, 2012

Basic Principles of the Act

-Decided by the Cabinet: November 11, 2011

The Order and Ordinance

-Promulgated: December 14, 2011

Decontamination-related regulations:

Standards for decontamination, standards for collection and transfer, storage standards for the removed soil, etc.

Designation of the target areas: December 28, 2011

Special Decontamination Areas: 11 municipalities* (20km radius from NPP + area with 20 mSv of annual cumulative dose)

Intensive Contamination Survey Areas: 104 municipalities (area with 1-20 mSv annual cumulative dose)

Waste-related regulations:

Designation standards for Designated Waste, collection and transfer standards, storage standards and final disposal standards for decontaminated waste, etc.



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Outlines of the Act

Measures for Decontamination of the Soil and Waste

(1) Special Decontamination Area

Area designation

by the Minister of the Environment(MOE)



Decontamination Plan

to be formulated by MOE in consultation with municipalities concerned



Implementation

by the national government

(2) Intensive Contamination Survey Area

Area designation

by the Minister of the Environment(MOE)



Detailed Survey of pollution

conducted by municipalities



Decontamination plan

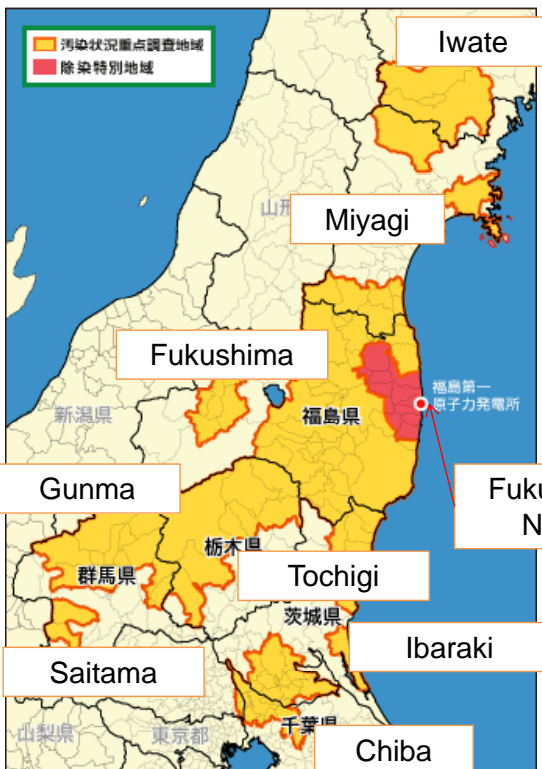
to be formulated by municipalities in consultation with MOE



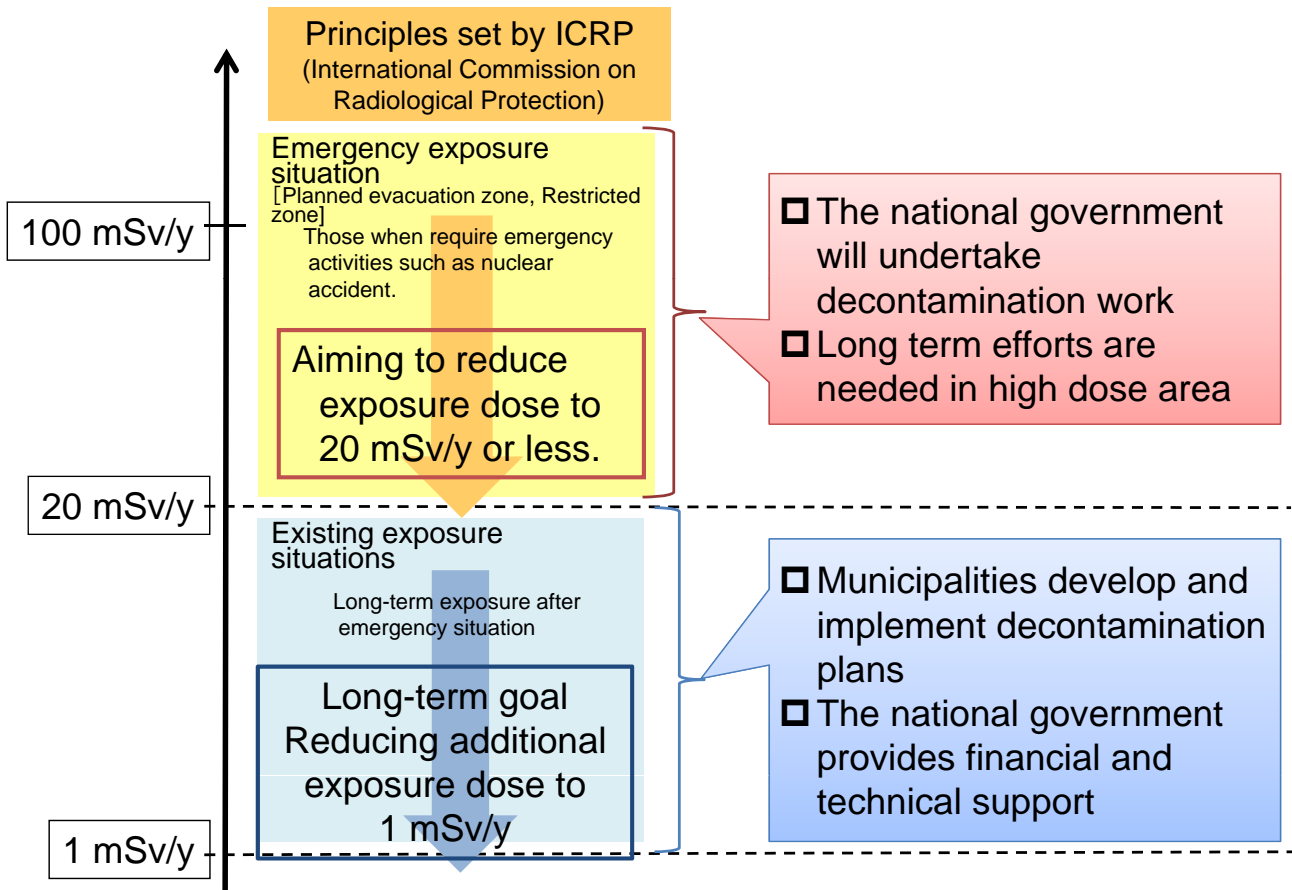
Implementation

by municipality (national and prefectural governments implement work in lands they manage)

Special Decontamination Area and Intensive Contamination Survey Area



Basic Approach of Decontamination Work



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Target values for the Decontamination

Additional * exposures over 20mSv/y

- Aim at stepwise and rapid reduction of those areas based on the ICRP Recommendation (2007).
- * 'additional' means beyond natural background and medical exposure

Additional exposures < 20mSv/y

- As a long term goal, aim at reducing to 1 mSv/y or less
- Reduce estimated annual exposure of the general public **by 50 % in 2 years** (by Aug 2013) by radioactive decay, decay by natural factors and by decontamination
- Reduce estimated annual exposure of children **by 60 % in 2 years** (by Aug 2013) by thorough decontamination of their living environment. by radioactive decay, decay by natural factors and by decontamination

General Public

Children

- The goals will be reviewed periodically

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Financial Resources and Institutional Arrangements

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FINANCIAL RESOURCES

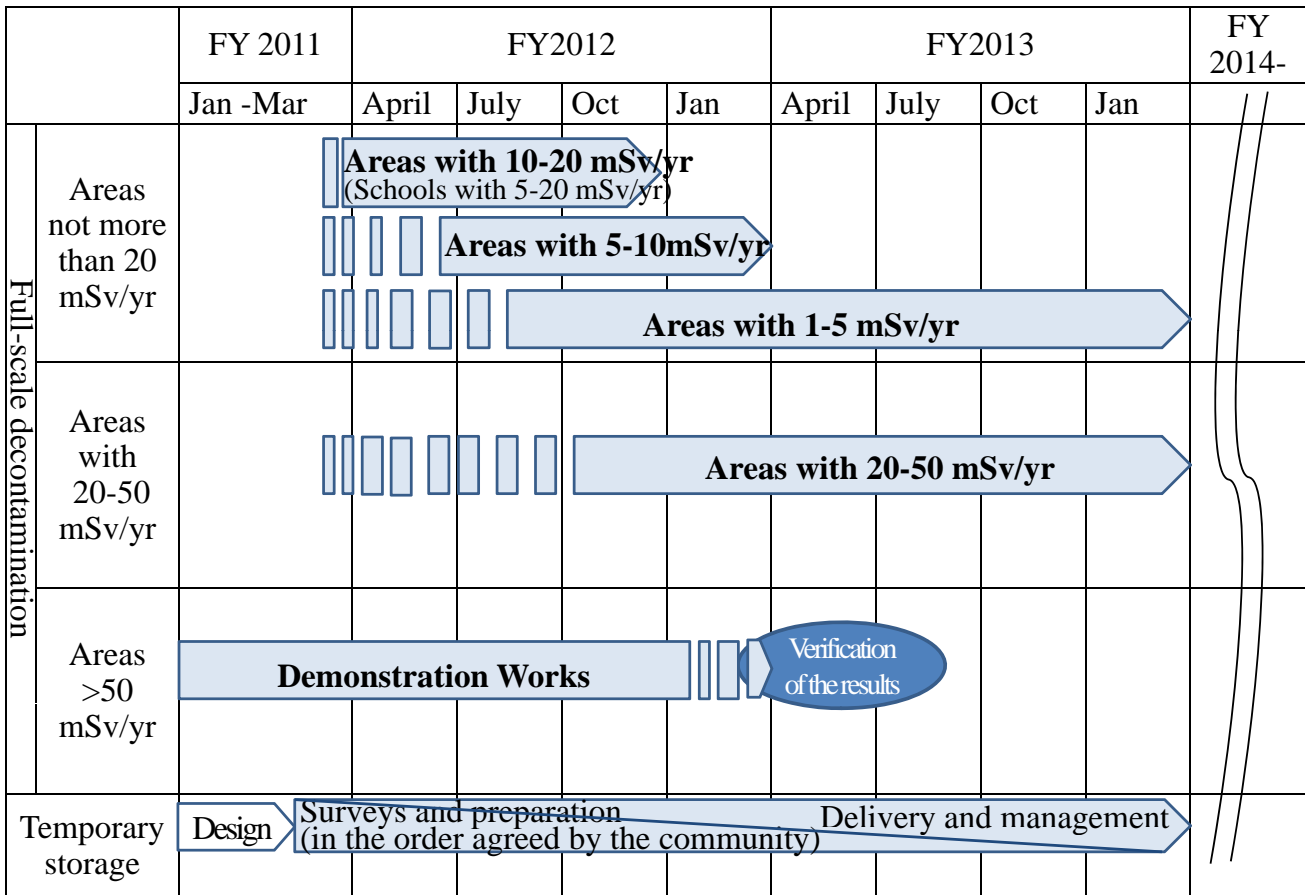
- Principles
 - The national government takes fiscal action
 - Decontamination works are implemented at the expense of the relevant nuclear power producer as a general rule.
- Budget
 - FY 2011 464 billion JPY
 - FY 2012 451 billion JPY

INSTITUTIONAL ARRANGEMENTS

- Office
 - Tokyo Headquarter (ministry of the Environment)
 - Fukushima Office (newly opened in January 2012)
 - 5 branches under Fukushima Office (additionally opened in April 2012)
- Staff
 - 60 in Tokyo Headquarter
 - 300 in Fukushima office and its branches, including experts from relevant entities (JAEA, TEPCO and others)

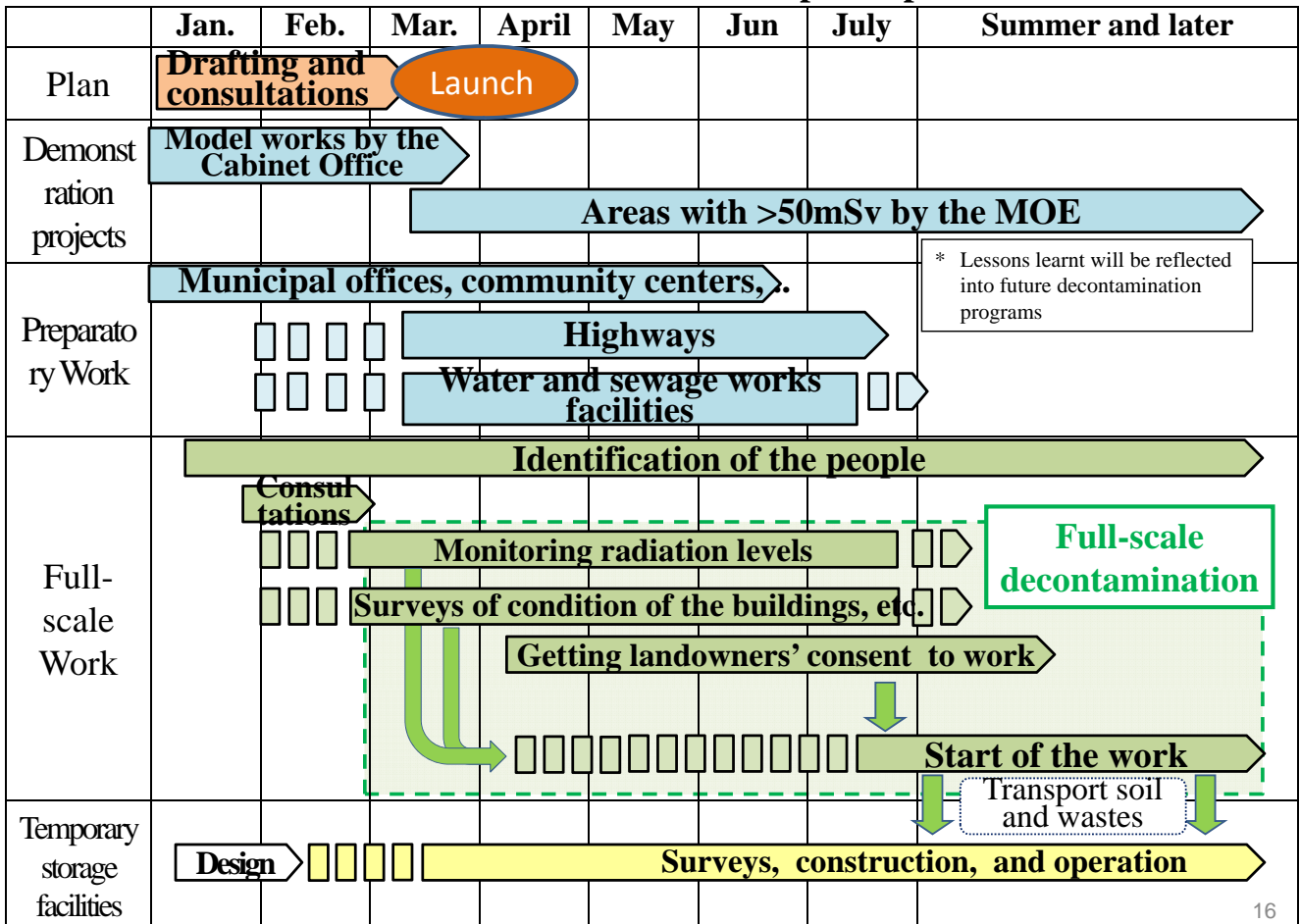
Decontamination Progress **- In areas directly managed** **by the national government –** **(Special Decontamination Area)**

Decontamination Policy for New Evacuation Zones



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Short-term Decontamination Roadmap for Special Area



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Decontamination Activities by Model Projects (Example1)

〈Residential land〉

roof : water cleaning,
cleaning with brush



wall : wiping



Gutter (vertical) : high-pressure
water cleaning



Concrete floor :
High-pressure
water cleaning



Concrete floor :
Shot blast



Concrete floor :
Surface grinding
machine



Garden : removal
of topsoil



Reference: Decontamination model project (JAEA)

Decontamination Activities by Model Projects (Example2)

〈Street Surface〉

High-pressure water cleaning by vehicle for
recovering functions of water drainage pavement



〈Roadside tree〉

Cleaning of trunk
(with water and brush)



Surface grinding by shot blast



Removal of topsoil

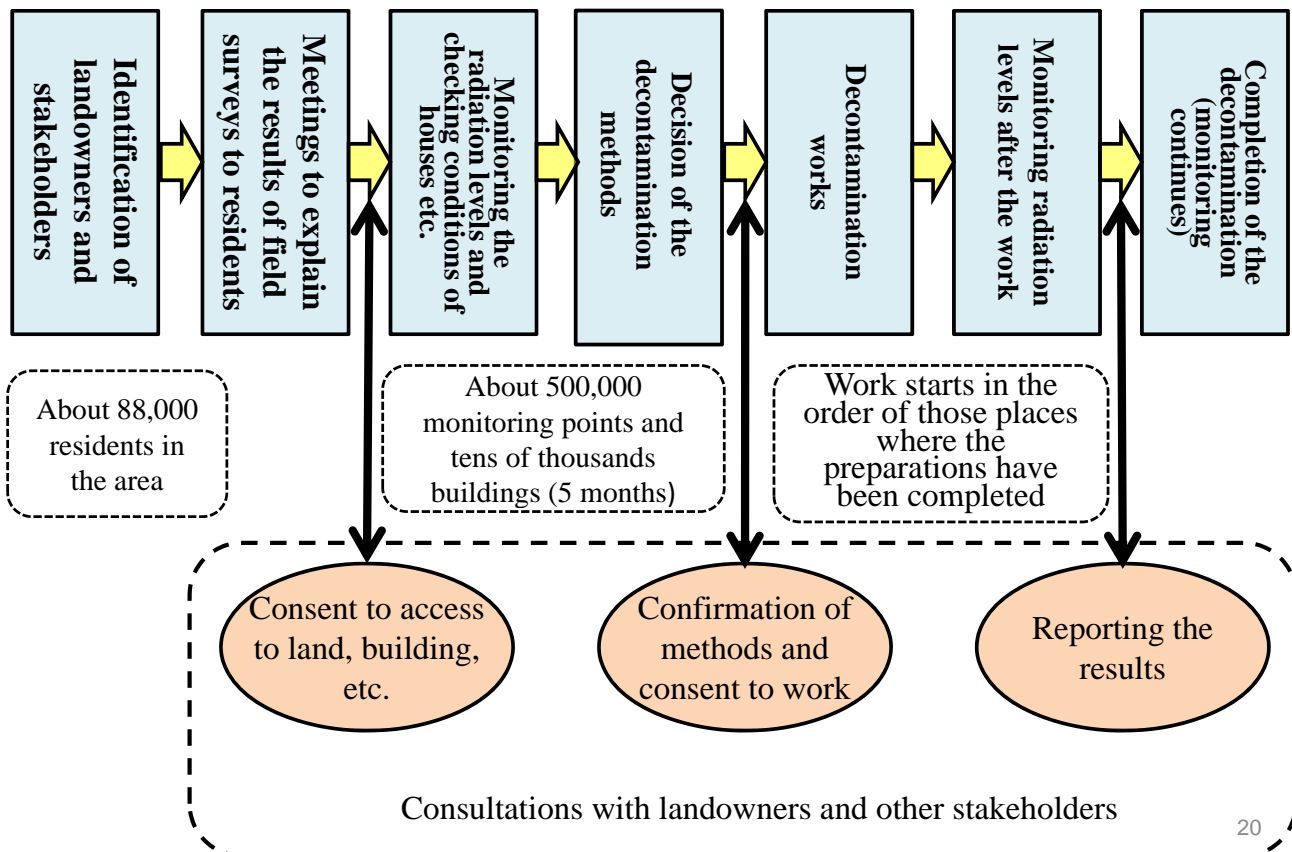


Reference: Decontamination model project (JAEA)

Progress in each municipality within the Special Decontamination Area

	Preparatory Decontamination	Preparation	Plan	Full scale Works	Temporary storage sites
Tamura	✓	✓	✓ (4/13)	✓ (From Aug.)	✓
Naraha	✓	✓	✓ (4/13)	✓ (From Aug.)	✓
Kawauchi	✓	✓	✓ (4/13)	In the public offering	✓
Iitate	✓	✓	✓ (5/24)	in the public offering	✓
Minami-Soma	✓	✓	✓ (4/18)		coordination process
Katsurao	✓	✓	local coordination in process		✓
Kawamata	✓	✓	local coordination in process		coordination process
Namie	✓	✓	local coordination in process		coordination process
Ookuma	✓	✓	local coordination in process		coordination process
Tomioka	✓	✓	local coordination in process		coordination process
Futaba					

Actions to obtain the residents' consent and to implement the decontamination work



Communication efforts with residents and local governments in a week of July 2012

Area for national governments' decontamination

7/17 Member of assembly of Tomioka-town

7/17 Residents of Iidate-village

7/19 Member of assembly of Naraha-town

7/20 Residents of Iidate-village

Area for local governments' decontamination

50 times in July, 200 times in April through June

7/17 Soma-city, Koriyama-city

7/18 9 towns incl. Minamisoma-city, Shinchi-town

7/19 4 towns incl. Tamagawa-village, Hirata-village

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Decontamination Progress

- managed by municipalities –
(Outside Special Decontamination Area)

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Decontamination Progress In municipalities

- 104 municipalities in 8 Prefectures (41 in Fukushima Pref.)
- 33 municipalities in Fukushima Pref. have already developed Decontamination Plans as of today, while other municipalities have been preparing for the formulation of decontamination plans.

Costs for the formulation of the plans, related surveys, and decontamination work are to be covered by the national government, and then to be claimed to TEPCO

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Conclusions

- Decontamination work began last year in parallel with development of legal and technical framework, and full-scale work is to be started soon.
- Planning challenges (priority and target setting etc.)
- Technical challenges (appropriate tech. for various land use, volume reduction of contaminated soil & wastes, etc.)
- Siting challenges (temporary storage, incinerators etc.)
- Communication challenges (trust building, knowledge base, effective approach for Japanese people, etc.)

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