

ISAP16

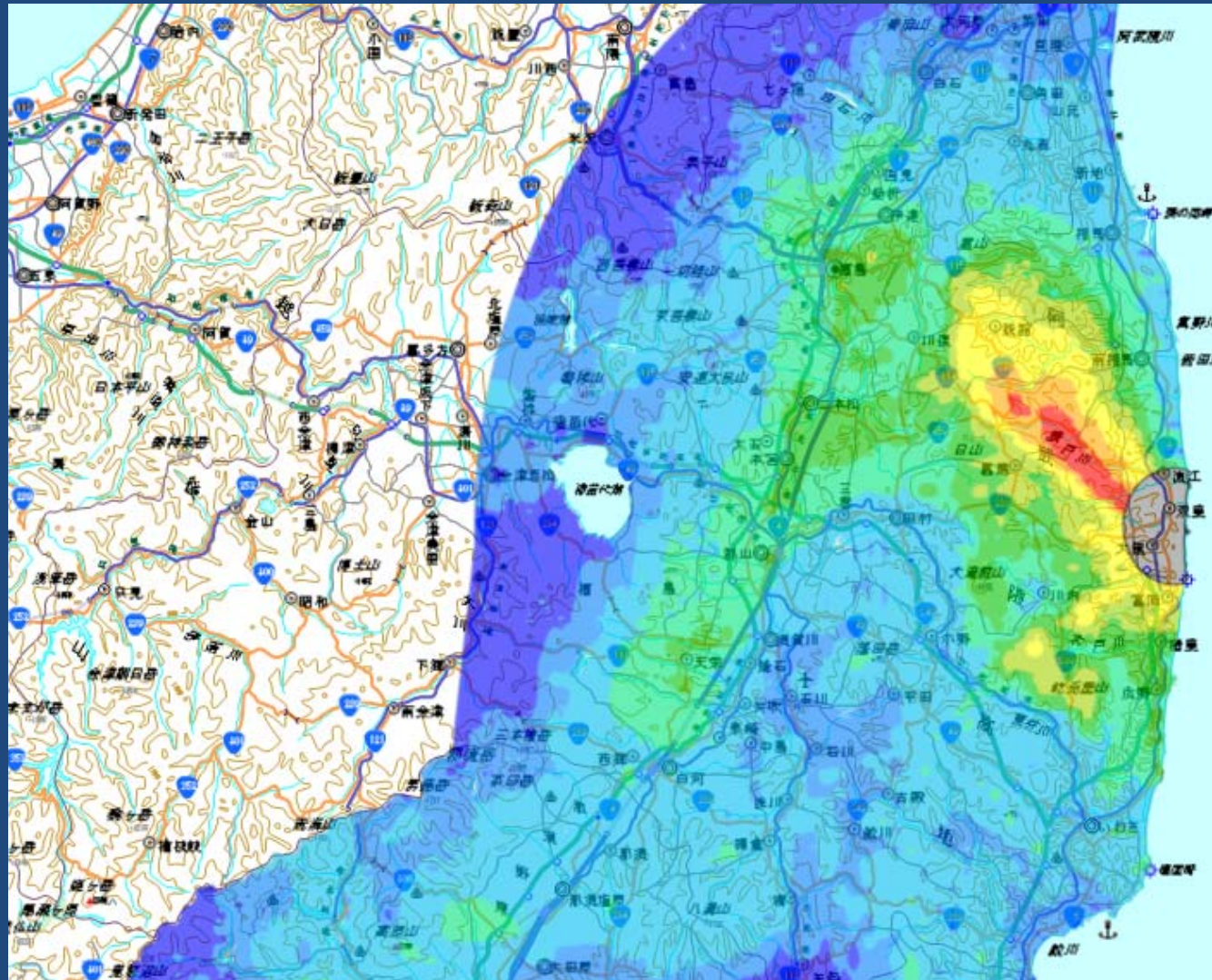
Addressing Climate and Fragility Risks in Asia and Pacific: Challenges and Opportunities for Achieving Sustainable Development

July 12, 2016

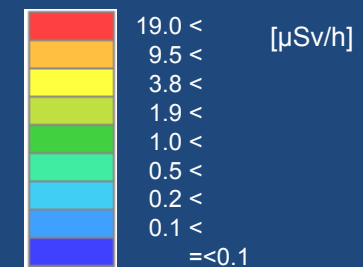
Implications of Fukushima experiences for Climate and Fragility risks

Takehiko Murayama, PhD
Tokyo Institute of Technology

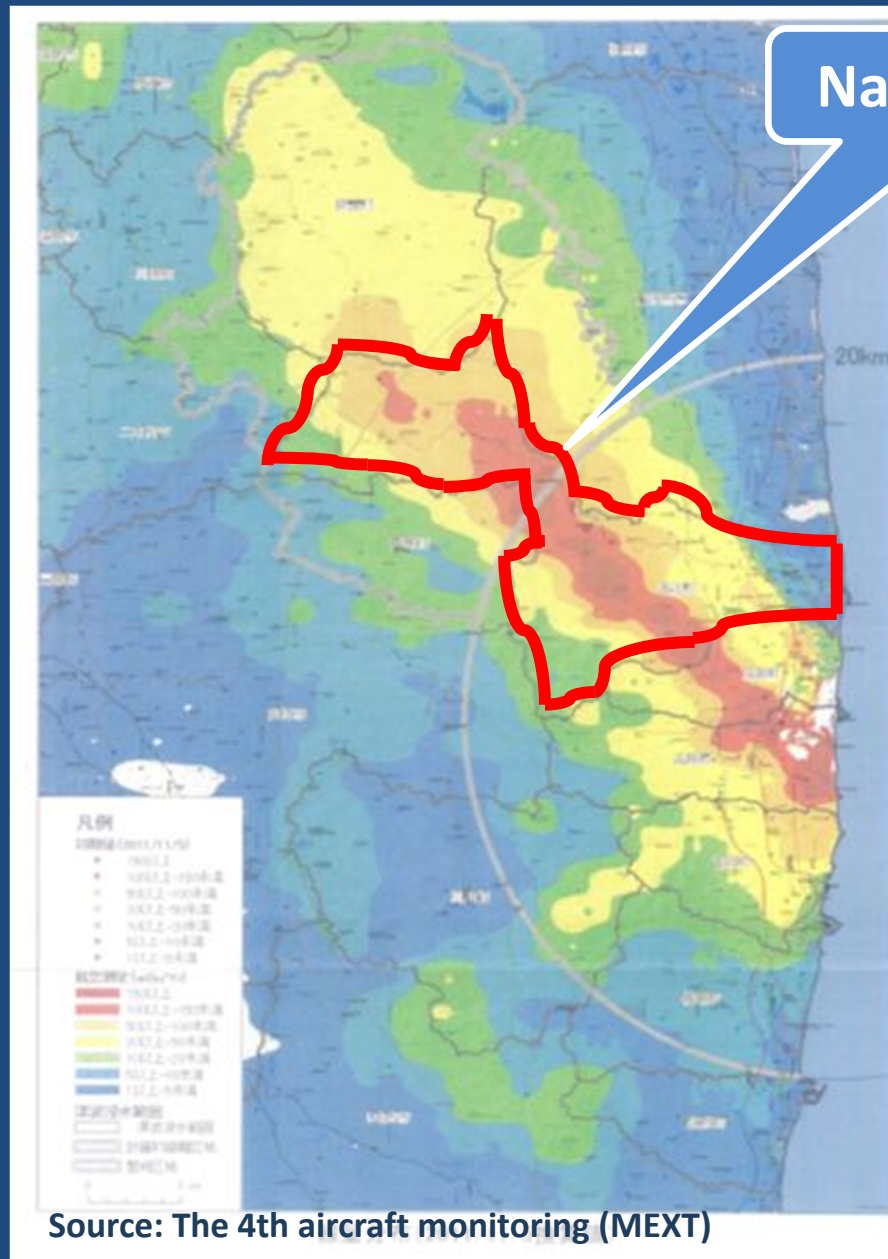
Contaminated area in Fukushima



Ambient dose rate at
1m from ground level
as of July 16, 2011



Distribution of Radiation in Namie town



Namie Town

	150	Difficult-to-return zones
	100~150	
	50~100	
	20~50	Residence restricted zones
	10~20	Preparation zones for the release of evacuation orders

(mSv/year)

(proposed by the National Government in Dec 18, 2011)

Change of attitude of evacuees (Case of Namie town)

(%)

	Willing to return		Willing not to return	Cannot to decide	NA
JUN, 2012	28.3		26.2	43.7	1.7
JAN, 2013	Willing to return 22.3	Dual habitation 16.9	27.6	29.4	3.8
AUG, 2013	18.8		37.5	37.5	6.2
AUG, 2014	17.6		48.4	24.6	9.5
SEP, 2015	17.8		48.0	31.5	2.7

(Source: National Reconstruction Agency)

Structure of organization for reconstruction plan in Namie Town (July 2013 to Mar 2014)

Planning Committee

Councilors (16)

Members of Sub-committees (6 for each)
National Gov., Municipal officials (4)

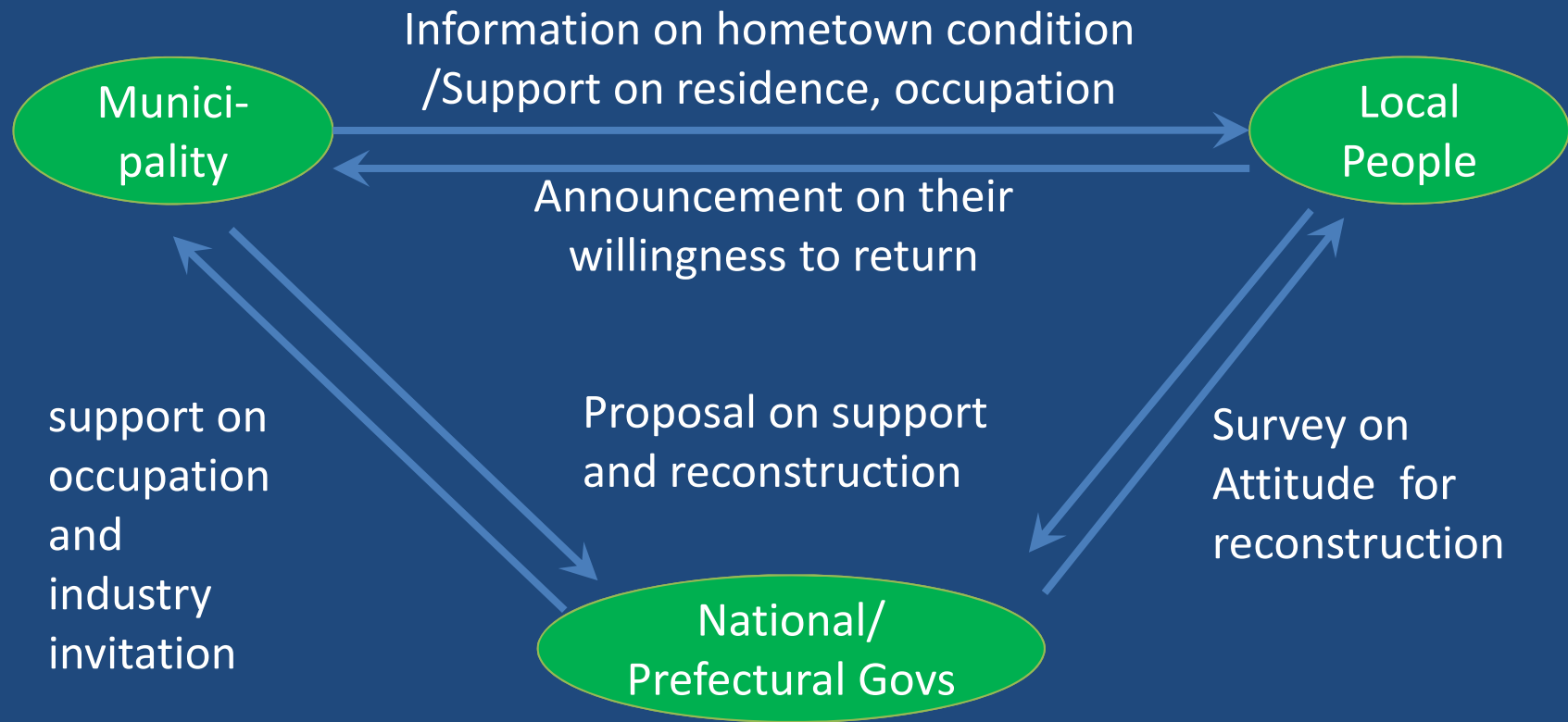
Planning Sub-comm. (45)

Local residents (31)
Municipal official (12)
Expert (2)

Projects Sub-Comm. (49)

Local residents (26)
Municipal official (16)
Expert (3)
National Gov., Prefectural Gov.
official (4)

Issues for people willing to return



- ❑ Information sharing on condition of polluted area and risks
- ❑ Stepwise procedure for residence and occupation

Issues for people willing not to return



- ❑ Coordination among host municipality and home municipality
- ❑ Information sharing on construction of community building outside hometown, and meaningful reflection of evacuees' opinions
- ❑ Improvement of physical and social environment for restarting business

Current Scenarios for Recovery and Reconstruction

- Simple and linear approach

- Decontamination of radioactive substances



- Release of Evacuation Directive Zones



A long period for affected people to start their lives in home towns

- Return to Home Towns

Difficulties to manage their lives as before, such as income, house, occupation, health care, welfare

Necessary Plural Scenarios for all evacuees

- Life support services for affected people not only in home municipalities but also in host municipalities
- Stepwise recovery and reconstruction plans negotiated with all kinds of stakeholders
- Risk communication on various aspects such as radiation, livelihood and life plan

Implications to risk management of climate change (1)

- Difficulties of understanding on uncertainty
 - Monitoring of actual situation
 - Risk on low dose radiation
- Understanding of different judgements on the same situation
 - Stay inside home communities
 - Return to home communities
 - Keep to evacuate outside home communities
- Feasibility of policies which accept different behaviors
 - National government to focus on one approach
 - Local municipality's preference to keep population
 - Unclear position of prefectural government

Implications to risk management of climate change (2)

Difficulties of understanding on uncertainty

→ Pleural Monitoring

→ Information Platform

Understanding of different judgements on the same situation

→ Roundtable Meetings

Feasibility of policies which accept different behaviors

→ Rehabilitation Culture

Two approaches on a trial basis in Fukushima

- Roundtable meetings with stakeholders
 - Various types of Stakeholders
 - Discussion with local residents for municipality's policies and plans
- Information Platform
 - Integration of necessary information for local residents
 - Updated situation in evacuated areas



Meeting with evacuees on housing designs ¹³

Construction of Information Platform

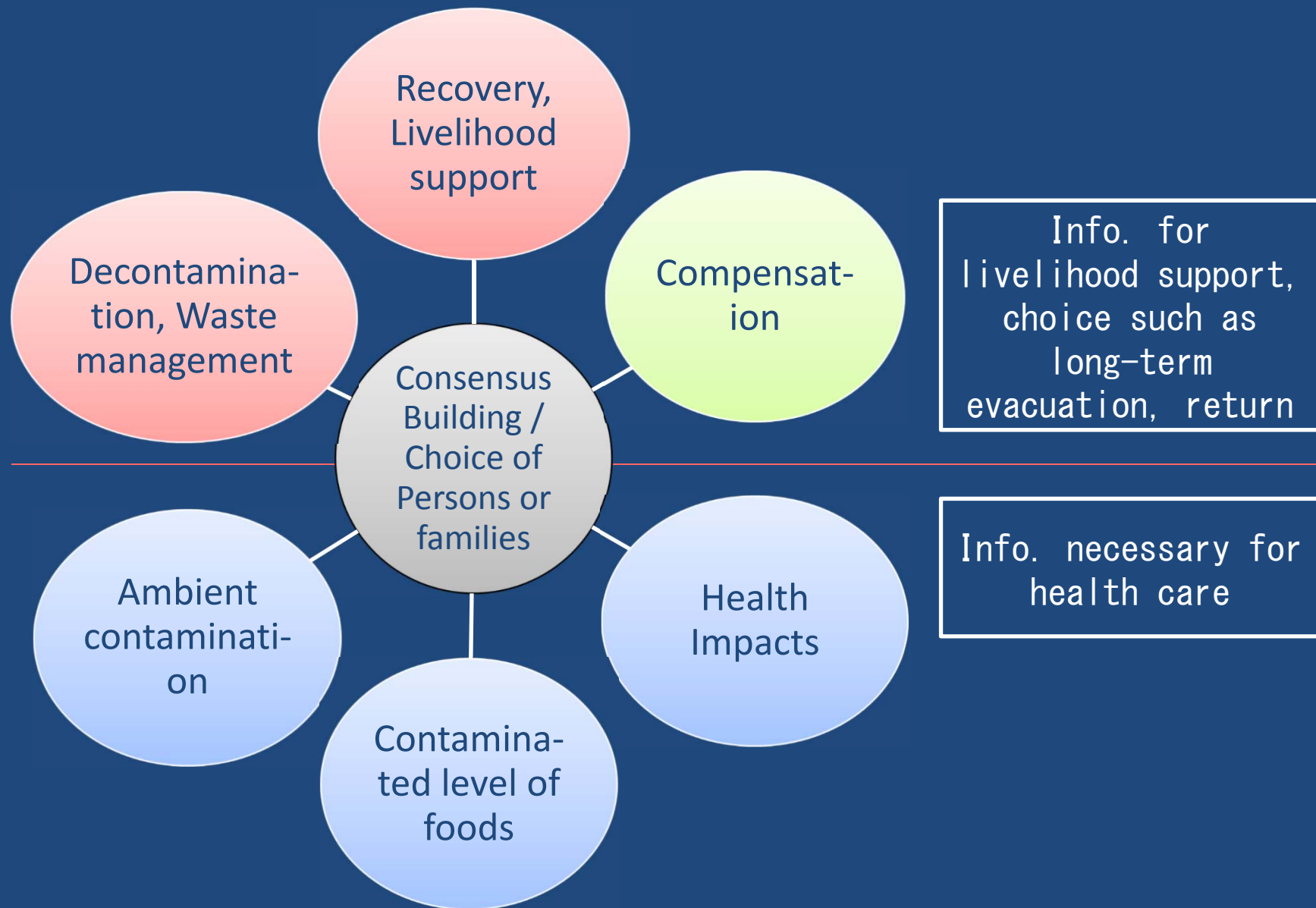



Image of interactive mapping



クリックで別ウィンドウ表示



 マーカーはこの形状を使用。
色は複数パターン使用可能。

Thank you for your attention.



Sunflowers in Fukushima



Reconstruction Plan (East End)

3 帰還開始時におけるまちづくりイメージ図



Issues on current policies for evacuated communities

- Reconstruction plan not suitable for local residents who cannot return or do not want to return (Suzuki, 2013)
- No sufficient reconstruction of houses, living right and legal protection systems for evacuees (Imai, 2014)
- No sufficient system which damaged municipalities can operate reconstruction in their own ways (Asahi, 2013)

Insufficient discussion on reconstruction according as current situation of evacuees