Living after Fukushima: The Fukushima Dialogue Association and the Contribution of French Experience In the Recovery of Daily Life

Ryoko Ando, President Fukushima Dialogue

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Self introduction

Ryoko ANDO

- President of Fukushima Dialogue Association
- Doctoral candidate at the Open University of Japan
- Writer

My background

- Born in Hiroshima and raised there till 18 years old
- Studied comparative culture and graduated from the University of Tsukuba
- Married to a husband from Minami-soma,
 Fukushima, north of FDNPP
- Moved to Iwaki in 2003, south of FDNPP

 No background about nuclear or radioactivity

 before the Fukushima Accident





Self introduction

Two main activities since Fukushima Accident

- 1. Measurement activity as "Ethos in Fukushima" with residents in Suetsugi, a small district within 30 km radius of Fukushima Daiichi, since 2012
- 2. Participation in the ICRP Dialogue since 2012, and then organizing the Fukushima Dialogue since 2019, after taking over from the ICRP

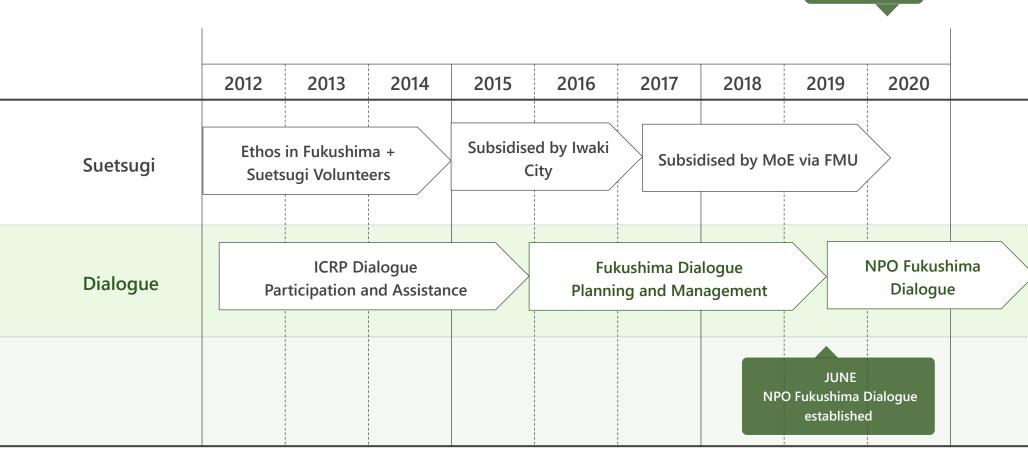
- Both activities are inspired by or originated from the experience of the French expert team after the Chernobyl Accident in Belarus
- Some French experts have been engaging with and supporting the rehabilitation process in the affected areas after the Fukushima accident





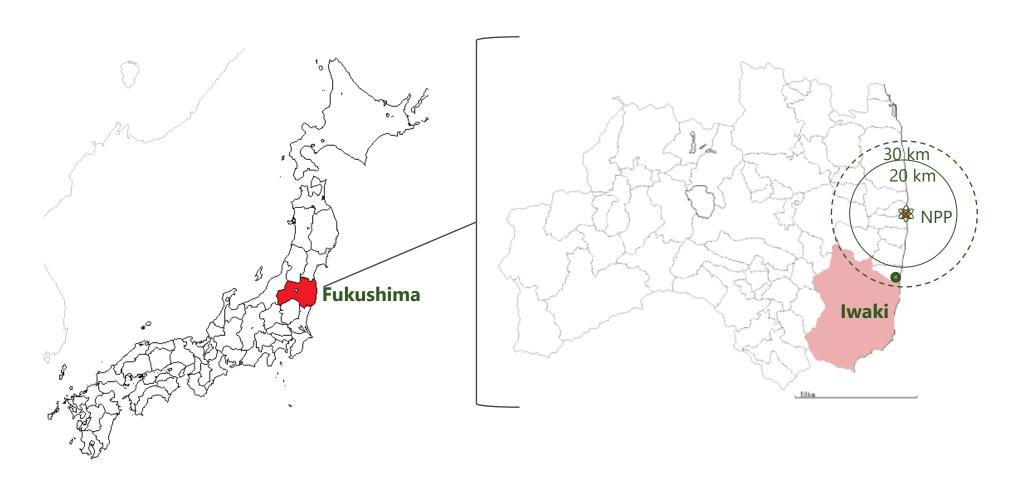
Timeline of what I have done after the Fukushima Accident







Where is Fukushima?







Turmoil in Fukushima just after the Accident

- Widespread and deep mistrust toward authorities and experts, blaming them for failing to prevent the accident
- Chaotic confusion among institutions and professionals
 - Loss of confidence and uncertainty about how to respond to the situation
 - Technical terms related to radioactivity are too difficult for the general public
 - Academic knowledge, in its original form, often proves useless for restoring everyday life.



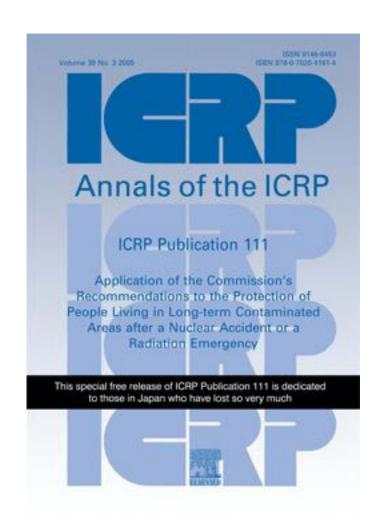


I was seeking a way to become better the situation.....



Encounter the ICRP 111 and Ethos project

- ICRP Publication 111 was released in 2009, just two years before the Fukushima accident, as the first guidance for managing long-term contaminated areas after a nuclear accident.
- I happened to come across it in September 2011, shortly after organizing a small study meeting about the radiation among my neighbours with a physics professor
- That experience taught me that having practical knowledge is crucial for recovery, and I found ICRP 111 extremely valuable in this regard.
- Later, I discovered the summary report of the ETHOS project, which had served as the foundation for ICRP 111.



NPO Fukushima Dialogue 7



Encounter the Ethos Project

- I was impressed by its practical approach and decided to try something similar in a community in Fukushima.
- The most important thing is for residents to measure radiation by themselves and learn how to deal with it in daily life.

The first initiative to have a dialogue and take radioactive measurements with residents in Suesugi in Iwaki, 27km south of Fukushima Daiichi, started in March 2012.





This is the beginning of the measurement activity in Suetsugi from March 2012

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Encounter with ICRP Dialogue



Background: Dialogue launched by the ICRP

- The experience of Chernobyl, led by European teams mainly French demonstrated that:
 - Effective dialogue among experts, authorities, and affected people is essential for enabling the latter to take an active role in recovery and gradually regain control over their situation.
 - Such dialogue requires that some experts and authorities with expertise in radiological risk make a long-term commitment to respond to the questions and concerns of those affected.
 - This continuous dialogue is also the key to developing a practical radiological protection culture, which is essential for people to regain confidence and restore their

dignity.





The first dialogue meeting, Fukushima City: 26-27 November 2011

The rehabilitation of living conditions after the Fukushima accident: lessons from Chernobyl and ICRP Recommendations





The second ICRP-Dialogue – February 2012 Challenges of the Date City



- I was invited to the 2nd ICRP Dialogue as one of the local participants.
- After finding ICRP Publication 111 and the ETHOS Project, I began corresponding with Jacques Lochard (then Director of CEPN and Chair of ICRP Committee 4).
- It was my first time to meet the French experts.
- Our collaboration has continued since then.

Right: Therry Schneider (CEPN) Center: Jacques Lochard (CEPN) Left: Ryoko Ando---- Me!



First visit of French experts (ICRP) to Suetsugi, July 2012





Constant engagement in community activity









Story of Suetsugi



Overview of Suetsugi

Approximately 27.5 km from the TEPCO Fukushima Daiichi Nuclear Power Station



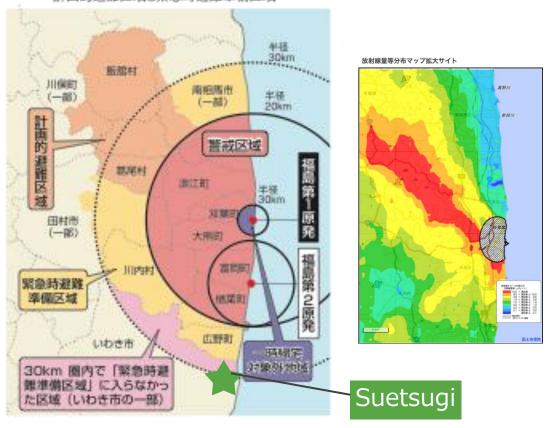
- Area approx. 7.4 km2
- Number of inhabitants as of March 2011: 127 households, 479 people
- Most of the community are dualincome farmers from three generations living together
- Many households grew their own rice and vegetables



What happened in Suetsugi in March and April 2011

Being on the coast, the area was severely affected by the tsunami

計画的避難区域と緊急時避難準備区域



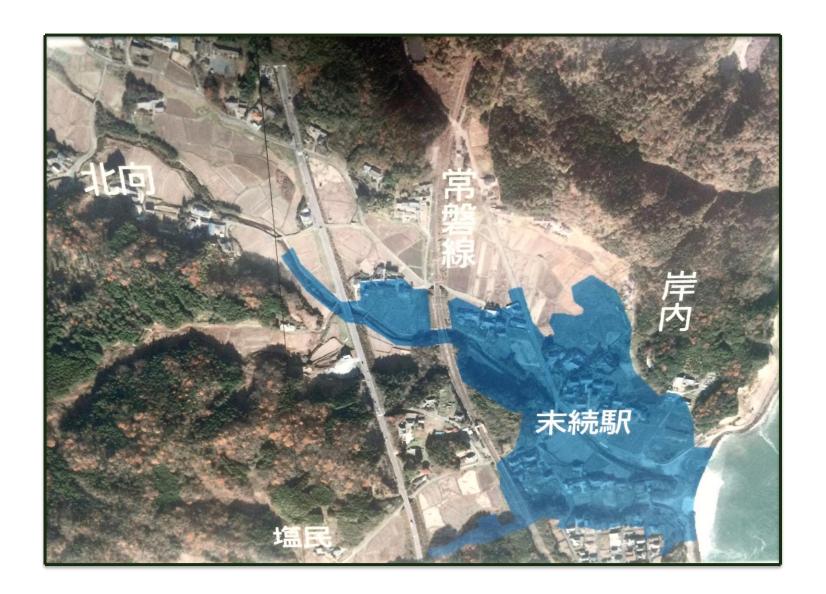
- Dead: 7 people
- 27 households with houses partially or totally damaged
- 13 March, Iwaki City arranges
 buses for voluntary evacuation →
 almost all residents evacuated
- 14 March, Indoor evacuation zone designated by the government
- 21 April, Lifting of zone designation.

Most elderly households returned to their homes

* 震災記録誌「いわき市・東日本大震災の証言と記録」より



The impact of the tsunami in Suetsugi





Views from Suetsugi





Pictures of 'abandoned Suetsugi'











Ce qui s'est passé à Fukushima – Cas du district de Suetsugi

Documentaire: La reconstruction de la confiance après l'accident de Fukushima: l'histoire de Suetsugi (with French subtitles on You Tube)

https://youtu.be/Yi5UDSJffEw?si=L05bMow6ekVg9xM3

Comment le petit quartier situé dans un rayon de 30 km de FDNPP, avec environ 300 habitants, confronté à la complexité après le tsunami et l'accident nucléaire, vit-il le processus de reconstruction avec l'appui d'experts et de l'Association





documentaire:La reconstruction de la confiance après l'accident de Fukushima: l'histoire de Suetsugi





The local leaders of the Suetsugi community experience

Maiko

Momma

Counsellor



Hiroshi Takagi Mayor of Suetsugi



Ryoko Ando "Ethos in Fukushima"



"Suetsugi, our hometown"



Dr Makoto Miyazaki Fukushima Medical University

First Local Leader: Shinya Endo – farmer at Suetsugi



- Born in Iwaki
- Dual-income farmer
- Lived in Suetsugi with his wife and a threeyear-old son (temporally evacuation)
- Take the initiative of the first measurement campaign in 2011

To be honest, at first, I wanted to do nothing. Gradually, however, I grew frustrated with my own helplessness. I wanted to show my son a father who fights against harsh realities.

Enco S. A farmhouse son-in-law and radiation. Annals of the ICRP. 2016;45(2_suppl):71-77. doi:10.1177/0146645316680581



Summer to Autumn 2011 - Measuring Air Dose Rate

Summer to Autmn 2011	Obtaining the consent to start the measurement activity from all 130 households in Suetsugi	Shinya Endo
Nov. and Dec. 2011	Measuring the air dose rate at all 130 house lots (two days) Borrowed measurement equipment from Iwaki City hall	Over 40 volunteering Suetsugi residents







Winter to Spring 2012- Creating the contamination maps

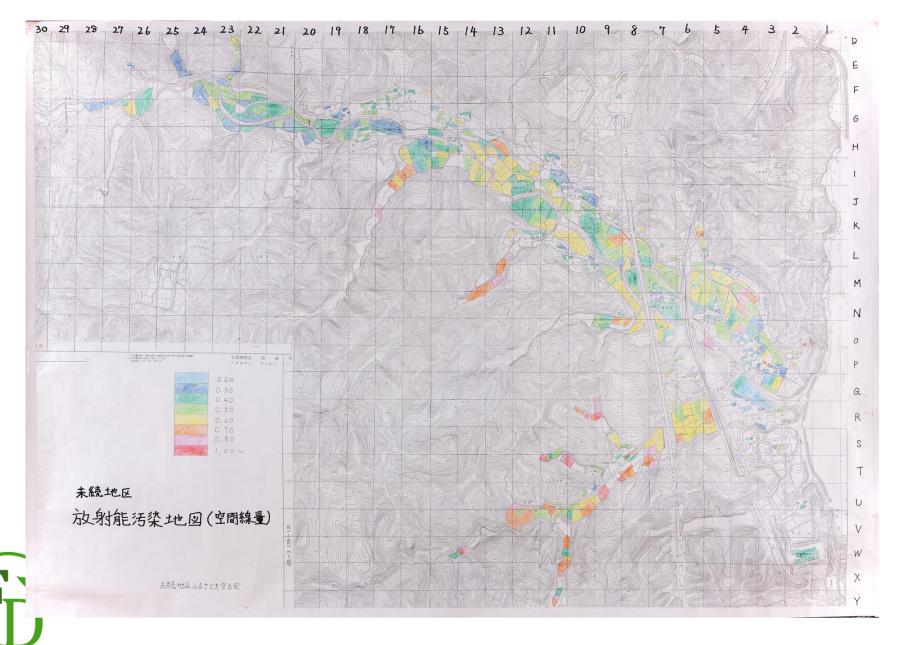
Winter 2011-2012	Measuring the air dose rate and the soil contamination at all 440 paddy fields	Several volunteering Suetsugi residents
Spring 2012	Making the contamination maps of air dose rate and the soil contamination	5 volunteering Suetsugi residents







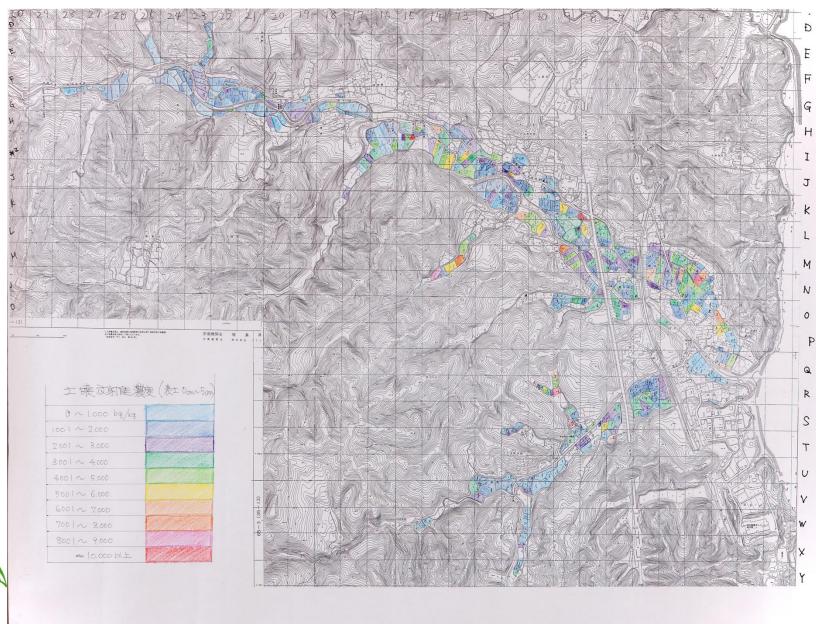
Air dose rate map in the end of 2011



Fukushima Dialogue

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Soil contamination map in the beginning of 2012





Fukushima Dialogue

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Timeline of the first leader activities, Shinya Endo

We did not have any choice but to do it by ourselves in this small district, as neither TEPCO nor authorities would not do anything for us.

Summer to Autumn 2011 Preparation and Planning

Jan. 2012 Launched measurement activity

March 2012 - Completion of radiological mapping

Mar 2012 - Launch of collaboration with Ethos in Fukushima

December 2011

First meeting with Ryoko ANDO, a founder of citizen organization, Ethos in Fukushima, through a mutual friend

We can see the value if only we use the equipment. Using this value, we can create maps. However, we cannot interpret what the value means. We need someone to explain it to us.

Second Local Leader: Ryoko Ando – Founder of Ethos in Fukushima



- Born in Hiroshima
- Lived in Tabito, Iwaki city
- Organised study meetings on radiation after nuclear accident
- Launched the co-expertise approach in Suetsugi, inspired by ICRP111
- > The ICRP (International Commission on Radiological Protection) is an independent, international organization providing guidance and recommendations on all aspects of protection against ionising radiation.
- ➤ ICRP Publication 111 provides guidance on protecting individuals living in long-term contaminated areas following a nuclear accident or radiation emergency, emphasizing stakeholder involvement and self-help protection strategies.

Ando, R. (2016). Ethos in Fukushima and the ICRP dialogue seminars. Annals of the ICRP, 45 (2_suppl), 135–140. https://doi.org/10.1177/0146645316666759



September and December 2011 – First initiative of dialogue meeting in Iwaki

September 2011	Small study meeting for the local residents on radiological situation at Tabito, Iwaki	Lecturer Pr. Y. Mizuno (physics)
December 2011	Holding the event to talk about radiation at Hisanohama, Iwaki : "Radiation: Scary? Not scary? Or doesn't matter?"	Local volunteers





Mizuno, Y., & Ando, R. (2012). 「Fukushima-method」 for Local Dissemination of Information to Recover Living Conditions after Nuclear Accident. Journal of Socio-Informatics, 5(1), 81–89. https://doi.org/10.14836/jsi.5.1_81 [Ando: Chapter 4]



March 2012 – First meeting at Suetsugi

31 March 1st April First meeting with Suetsugi residents by Ethos in Fukushima

Pr. Y. Mizuno (Physician) Dr M. Miyazaki (M.D. of Radiology)



1st day:

Discussion at the meeting house 2nd day:

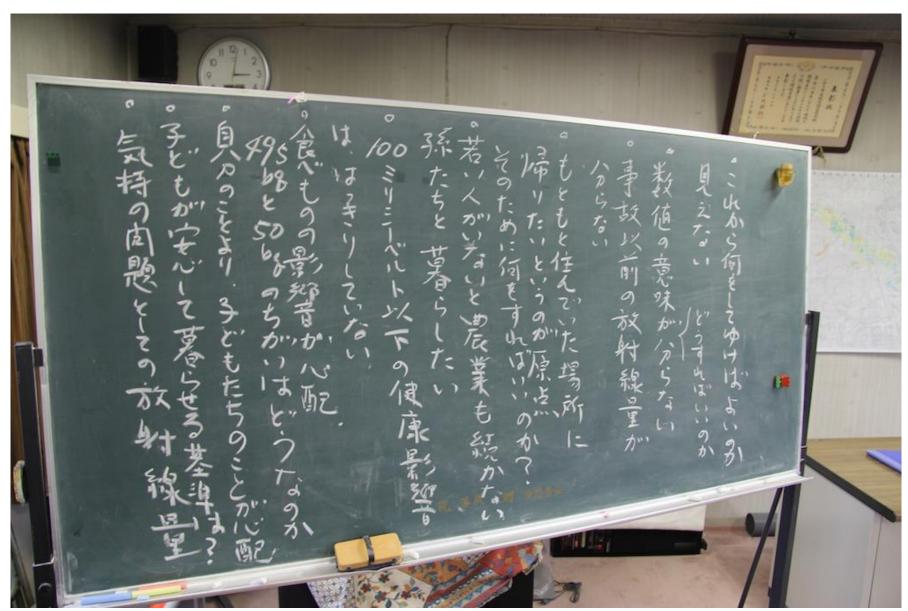
Measurement around a house

What made it clear is...

The concerns and interests of the residents are quite specific and practical



Concerns of the residents in 2012





Concerns of the residents, March 2012

- I do not know what to do.
- I can not understand the meaning of the value. Even if I understand, I
 do know what to do.
- We do not know the natural background before the accident.
- I want to return to my home and know what I should do.
- Is this place safe or dangerous to live?
- Without the next generation, we cannot continue farming.
- I want to live with my grandchildren.
- There is no clear evidence of the health effects of radiation below 100 mSv.
- I am concerned with the food contamination.
- We are worried about our children rather than adults.
- What is the reliable standard that children can live safely? and so on...



Activities in 2012 – Practical measurement activity

May	Launching the measurement of external exposure with personal electronic dosemeters
June	Workshop on food measurement
July	First meeting with the ICRP
September	Meeting on the result of the external exposure measurements
November	Second meeting with the ICRP

- ➤ Ethos in Fukushima organized all activities cooperating with the 'Suetugi, Our Homeland' NGO led by Shinya Endo.
- > Everything was carried out through trial and error.
- Voluntary experts such as Makoto Miyazaki (medical doctor), Yoshiyuki Mizuno (Physician), and Jacques Lochard (ICRP) cooperated.
- > All costs were covered by the donation that the Ethos in Fukushima collected through the Internet







Sep.

Activities in 2012 – Practical measurement activity











First visit of French experts (ICRP) to Suetsugi, July 2012



Third Local Leader: Hiroshi Takagi – Community Leader of Suetsugi



- Native of Suetsugi
- Retired from a private company
- Became the community leader of the Suetsugi administrative district, the local self-governing unit, in April 2013

I had no idea about radiation at all in every sense. Most people were afraid of radiation....No experts nor authority came here to help us we were left behind.... Then Shinya started to work, Ando-san came, and Mr Lochard came... When I became the community leader, I thought it was critical for Suetsugi to know about radioactivity. I wanted to preserve Suetsugi.





Activities in 2013 – Enhancing the cooperation with other organizations

March	First visit to temporary radioactive waste site at Suetsugi with the ICRP	
	Obtaining the equipment to measure the foodstuff contamination	
Spring	Agreement with Hirata Hospital on the whole body counter measurement	
April	1 st whole body counting measurement campaign	
May	Meeting on the result of WBC measurements	
July	Second workshop on the foodstuff measurement	
October	2 nd whole body counter measurement campaign	
November	2 nd meeting on the result of WBC measurements	

- > Gradually establishing connections with other organizations and gaining support for the activity in Suetsugi
- > Almost all support was based on the goodwill of individuals or organizations



Activities in 2013 – Widening network of cooperation and support











Activities in 2014 – Struggle to make the activity sustainable

April	Rental of 30 D-shuttle, portable dosimeters from Chiyoda Technol
May	Second visit to the temporary waste site with the ICRP
July	Third whole body counter measurement campaign
August	Third meeting on the result of WBC measurements
May	Meeting on the result of WBC measurements
July	Second workshop on the foodstuff measurement
September	Third visit to the temporary waste site with the ICRP
December	Fourth visit to the temporary waste site with the ICRP

- Discovery of the D-shuttle, a memorable dosimeter, very useful for understanding the exposure situation
- > Start of negotiations with the city of Iwaki regarding the transport of fly ash with higher radiation level from the incinerator to the temporary landfill of Suetsugi
- > Try to obtain financial support from Iwaki City for the activity and improvement of infrastructure in Suetsugi in return for receiving fly ash



Activities in 2014 – Widening network of cooperation and support











Table 1. Results of the community whole body counter measurement campaigns of caesium.

	Number of individuals measured	Number of individuals with a detectable dose	Bq/body
April 2013	124	8	420–1200
October 2013	39	0	_
July 2014	39	0	_
June 2015	45	1	510
October 2015	31	0	_
June 2016	30	0	_
November 2016	25	1	320

Securing funding through tough negotiations with the Iwaki municipality

- Municipality's reluctance to support Suetsugi activities due to its location:
 - Situated outside the 20km radius from the NPP.
 - Comprising only a small part of Iwaki City.
- > Strategy to utilize fly ash as leverage in negotiations with Iwaki City.
- > Lengthy and challenging negotiations lasting over six months.
- Support from central government officials to persuade the municipality.
- > Final conditions secured for Suetsugi:
 - Financial support for radiation measurement activities, including D-shuttle costs and part-time radiation consultant fees.
 - Coverage of costs for self-monitoring measurements at the temporary fly ash storage site.
 - · Restoration work for roads and other facilities in the district.



Fourth Local Leader: Maiko Momma- Radiation consultant of Suetsugi



- Mother of two children: a newborn (10- monthold) and a 2-year-old at the time of accident.
- Lived in Yotsukura, near Suetsugi.
- Evacuated to Sendai, her hometown, for two years with children
- Responsible for the measurement of foodstuff

At first, I was afraid of radiation and gradually became more influenced by information emphasizing its harmful effects. However, I realized this mindset was negatively affecting my children. So, I decided to study radiation based on data I found on the internet.

Morama, M., & Ando, R. (2021). As a resident and a counsellor. Annals of the ICRP, 50(1_suppl), 130–137. https://doi.org/10.1177/01466453211015399



The Suetsugi 'Project': January 2015 – March 2020

All operations have become routine

- Distribution of D-shuttle dosimeters to the community
- Biannual WBC campaigns
- Weekly foodstuff measurement sessions at the community centre
- Once every four months publication of the newsletter Suetsugi
 Dayori
- Support of a part time counsellor in charge of measurements
- Scientific and technical support from Fukushima Medical University experts
- Financial support by Iwaki-city from January 2015 to March 2017 and by FMU from April 2017 to March 2020



Measurement campaign in Suetsugi

What are the major problems in the living environment after the accident (i) external exposure (ii) internal exposure due to contamination of food



external exposure

- Use of portable personal dosimeters
- Measure external radiation exposure in the living environment
- · Visualisation of where exposure is higher
- Maximum of 120 participants



internal exposure

- Whole body counter (WBC)
- Measurement of the amount of radioactive material ingested into the body and the exposure dose converted from this.
- Maximum of 120 participants in the district.



Food measurement

- Using SI measuring instruments
- Conducted once a week at a meeting house in the district
- Free to bring their own food (mainly home-grown vegetables)
- Radiation counsellors on hand for communication

Outcomes of measurement activities

The overall picture of radiation levels and exposure in the region is now visible.





Sharing measurement results in the community

The results of the measurements are always discussed so that the Suetsugi residents can share them and publish them in the "Suetsugi Dayori".



Food measurements (once a week)



Briefing on measurement results





Experts: Makoto Miyazaki and Jacques Lochard



- Born and raised in Koriyama, Fukushima
- Clinical Radiologist (M.D.) at FMU (at that time)
- Father of the twins born in 2011
- Engaged and support Suetsugi activity from the beginning to the end

Miyazaki, M. (2017). Using and Explaining Individual Dosimetry Data: Case Study of Four Municipalities in Fukushima. Asia-Pacific journal of public health / Asia-Pacific Academic Consortium for Public Health, 29(2_suppl), 110S-119S. https://doi.org/10.1177/1010539517693082



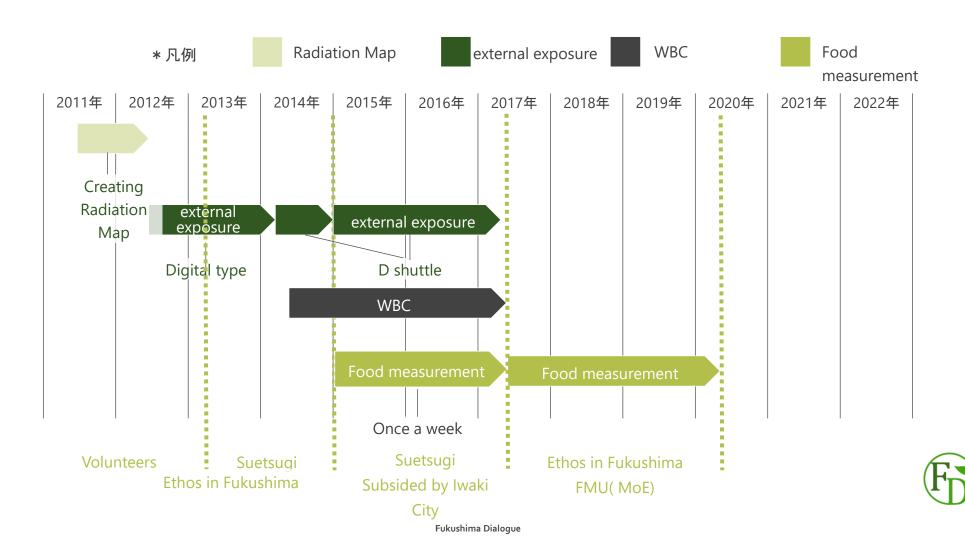
- Economist by training
- Director of the Nuclear Evaluation Protection Centre ,
 France
- Vice-chair of ICRP from 2013 to 2021
- Experience of the rehabilitation of living conditions in the affected area of Belarus after Chernobyl
- Visited Suetsugi during 12 years to follow the co-expertise process and to gave practical advice



Order of measurement carried out in the Suetsugi area

There was no prior process plan.

We proceeded as necessary and in the order in which it became possible.



Why the role of the local leader is vital in the process of rehabilitation after the nuclear accident?



Catastrophic situation after the accident

After the nuclear accident

All social fabrics are thrown into turmoil

- All living environments are contaminated by radiation
- People do not know what to do
- Trust in experts and authorities is completely lost
- There is no common language to talk about radiation, even in the community or family
- Media and experts say different views on the risk
- The many measures taken by authorities also cause upheaval
- There is no future forecast
- People tend to feel abandoned...

Ando, R. (2018). Trust-what Connects Science to Daily Life. Health Physics, 115(5), 581–589. https://doi.org/10.1097/HP.0000000000000945



How to regain the sense of control of one's life

In such a chaotic condition

Top-down decision-making is not functioning

In a practical sense

- The inability of authorities to fully grasp the situation in all affected areas
- The lack of institutional resources to manage the entire scope of affected communities
- The difficulty of implementing policies that can reassure all stakeholders
 In a psychological sense
 - The aspiration of the affected people to restore independence and autonomy in their lives
 - People's refusal of decisions made without their engagement



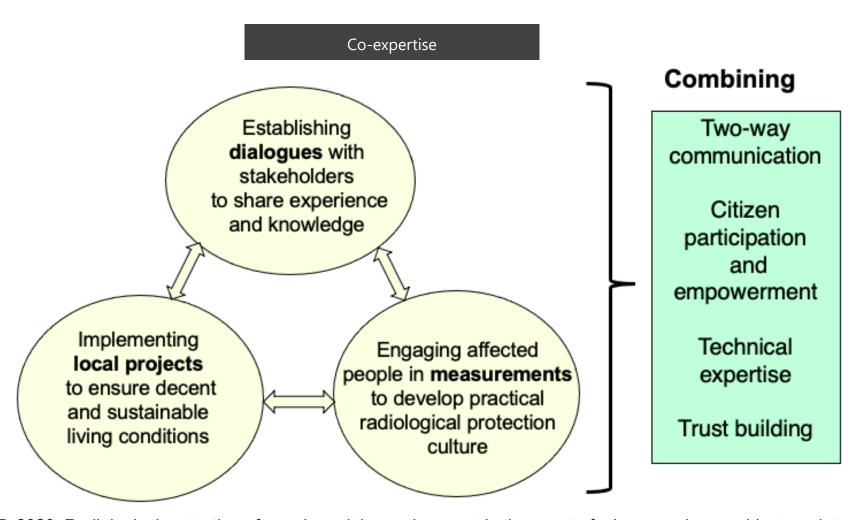
Necessity of local leadership in the recovery process

- A sense of control is something one can only achieve for oneself; it cannot be given by others.
- After a disaster, someone inevitably emerges as a leader, depending on local and social conditions



co-expertise process

ICRP recommends the co-expertise process in the recovery process after a nuclear accident



ICRP, 2020. Radiological protection of people and the environment in the event of a large nuclear accident: update of ICRP Publications 109 and 111. ICRP Publication 146.Ann. ICRP 49(4).



Limitations of the local leadership

- Dependence on each local capability and resource
- Risk of worsening power imbalances in the local community
- Shortage of sustainability



Establishing effective and sustainable connections with external supporters and organizations

Key factor behind Suetsugi's success:

Local leaders in Suetsugi recognize their limitations and the necessity of building relationships with external supporters at the right time, and maintain good relationships in their respective domains

Acknowledgements of ICRP- August 2019



45(1 Suppl), 75–83. https://doi.org/10.1177/0146645315615018
Lochard, J., Ando, R., Takagi, H., Endo, S., Momma, M., Miyazaki, M., Kuroda, Y., Kusumoto, T., Endo, M., Endo, S., & Koyama, Y. (2020). The post-nuclear accident co-expertise experience of the Suetsugi community in Fukushima Prefecture. Radioprotection, 55(3), 225–235. https://doi.org/10.1051/radiopro/2020062



The local leaders of the Suetsugi community



Hiroshi Takagi Mayor of Suetsugi



Ryoko Ando "Ethos in Fukushima"



Maiko Momma Counsellor



Shinya Endo "Suetsugi, our hometown"

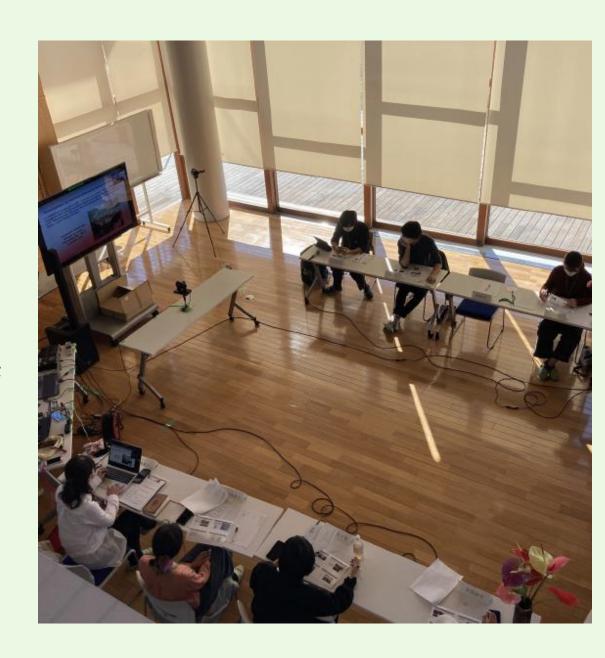


Dr Makoto Miyazaki Fukushima Medical University

About Fukushima Dialogue

About Fukushima Dialogue

- Established in 2019 as a certified nonprofit corporation under Japanese law
- Has continuously organized stakeholder dialogues in Fukushima since the nuclear accident, originally launched by the International Commission on Radiological Protection (ICRP) in 2011.
- Members: 33 (as of 2025)
- Activities: Annual Fukushima Dialogue; consulting on practical radiological protection; and promoting international exchange.





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History of Fukushima Dialogue

- 2011-2015 ICRP Dialogue era:12 times organised by ICRP
- 2016-2018 Fukushima- ICRP Dialogue: 9 times facilitated by ICRP with logistical support from local supporters
- 2019- Fukushima Dialogue: 6 times (ongoing) organised by Fukushima Dialogue
- Public discussion is not familiar in Japanese culture, especially in rural areas like
 Fukushima
- The dialogue series initiated by ICRP had a quiet but profound impact on those who attended
- Some local participants hoped to continue the initiative when the ICRP left
 Japan
- They decided to establish the organisation to keep on holding the Dialogue in
 2019



ICRP Dialogues (2011-2015)



2. Date City, Feb. 2012



3. Date City, July 2012



4. Date City, Nov. 2012



5. Date City, March 2012



6. Fukushima, July 2013



7. Iwaki, Nov. 2013



8. Minamisoma, May 2014



9. Date City, Aug.2014



ICRP Dialogues (2011-2015)







10. Date City, Dec. 2014

11. Fukushima, May 2015

12. Date City, Oct. 2015





International workshop
Date City, Dec.15

The 12 meetings of the ICRP Dialogues (2011–2015)

Ν	Ο.	Title	Date	Location
1	ı	Rehabilitation of living conditions	26–27 Nov. 2011	Fukushima City
2	2	Situation in Date City	25–26 Feb. 2012	Date City
3	3	Improving the quality of food products	7–8 July 2012	Date City
4	1	Education of children and youth	10–11 Nov. 2012	Date City
5	5	To return or not, to stay or leave	2–3 March 2013	Date City
6	5	Facing the situation of litate people together	6–7 July 2013	Fukushima City
7	7	Self-help actions in Iwaki and Hamadori	30 Nov. 1 Dec. 2013	Iwaki City
8	3	Situation and challenges of Minami-soma	10–11 May 2014	Minami-soma City
9)	Raising children in Fukushima	30–31 August 2014	Date City
1	0	Value of tradition and culture in Fukushima	6–7 December 2014	Date City
1	1	Role of measurements in regaining control	30–31 May 2015	Fukushima City
1	2	Experience we have gained together	12–13 Sep. 2015	Date City



The ICRP Dialogue Initiative in Fukushima (2012-2015)

- The first series of dialogue meetings -
- Between 50 to 80 invited participants and observers
- Facilitated by ICRP members with use of the IDPA Grid
- Transmission of the Chernobyl experience through the invitation of Belarusian and Norwegian experts and stakeholders
- Logistic support of the Fukushima Medical University, the Radiation Safety Forum, the Ethos in Fukushima NGOs and Date City
- Financial support from ASN, IRSN, NRPA, NEA-OECD
- All dialogues video recorded by the Ethos in Fukushima NGO and available at: http://ethos-fukushima.blogspot.com
- In total 12 dialogue meetings in various municipalities of the Fukushima Prefecture including the Fukushima meeting in Nov. 2011



ICRP-Fukushima Dialogues (2016-2018)



14. Miyakoji, Feb. 2016



15. litate, July 2016



16. Kawauchi, Oct 2016



17. Futaba-Okuma, March 2017



18. Date city, July 2017



19. Yamakiya, Nov. 2017



20. Minamisoma, Feb. 2018



21.lwaki, Dec. 2018

The 8 meetings of ICRP-Fukushima Dialogue (2016–2018)

No.	Title	Date	Location
1	Situation of Miyakoji today	12–13 March 16	Miyakoji village
2	Sharing experiences in litate village today	9–10 July 16	litate village
3	Rehabilitation of living conditions in Futaba region	1–2 October 16	Kawauchi village
4	Current situations of locals near the intermediate storage facilities and surrounding areas	11–12 March 17	Futaba and Ohkuma towns
5	What do we need for our future?	8–9 July 17	Date City
6	Dialogue with residents of Yamakiya	25–26 Nov. 17	Yamakiya village
7	Current situations and future of Odaka area	10–11 February 18	Minami-soma City
8	After Fukushima Nuclear accident: preserve memory, share experience and go toward the future	15–16 Dec. 18	Iwaki City



The Fukushima Dialogue

- : Continuing the dialogue in cooperation with the ICRP (2016-2018)
- The second series of dialogue meetings -
- Request from the core group of participants of the Dialogue Initiative to cooperate to hold further dialogue meetings
- Entirely supported financially by the Nippon Foundation. The total support since 2015 is 285k US dollars
- Logistic supported by Fukushima Medical University and the Ethos in Fukushima NGO
- Dialogue meetings facilitated by ICRP
- All meetings recorded by the Ethos in Fukushima NGO and available at: http://ethos-fukushima.blogspot.com
- 8 meetings in total: Miyakoji (March 2016), litate (July 2016), Kawauchi, (Oct. 2016) Futaba-Ohkuma (March 2017), Date City (July 2017), Yamakiya (Nov. 2017), Minamisoma (Feb. 2018) and Iwaki (Dec. 2018)



Fukushima Dialogues (2019 onward)



Iwaki, August 2019



Naraha, Nov. 2022



Fukushima city, Dec. 2019



Futaba, Oct. 2023



On-line, Nov. 2021



Namie, Nov. 2024

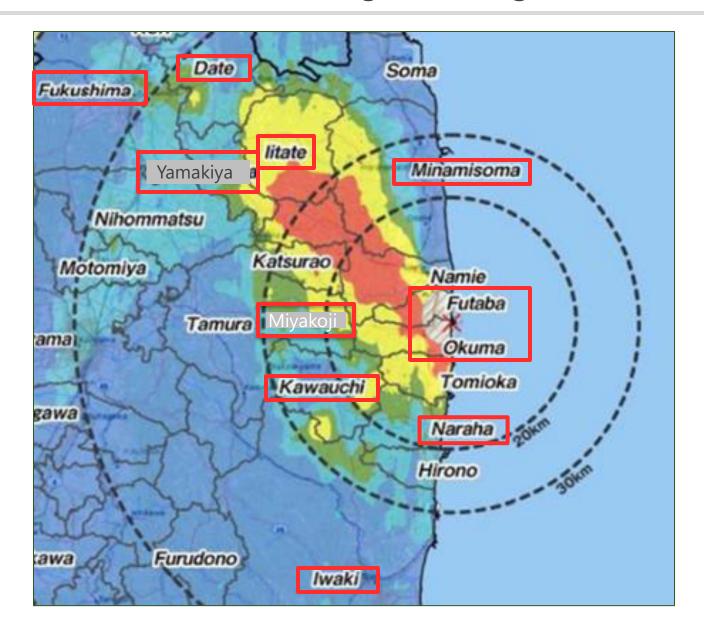
The 6 meetings of the Fukushima Dialogues (2019 onwarding)

No.	Title	Date	Location	Availability
1	How far has the rehabilitation in Fukushima progressed in agriculture and fishery?	August 2019	Iwaki City	
2	Talking about the 9-year trajectory	December 2019	Fukushima City	
3	Sharing about the issues of the ALPS-treated water at Fukushima Daiichi NPP	November 2021	Naraha-Town	Online available
4	The Future of Fukushima created together with the next generation	October 2022	Naraha-Town	Online available
5	Living Together after the Nuclear Accident at the	October 2023	Futaba Town	Online available
6	The Decommissioning Waste Management of Fukushima Daiichi Nuclear Power Plant, and the Future of the Region	November 2024	Namie Town	Online available

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The locations of the dialogue meetings held so far

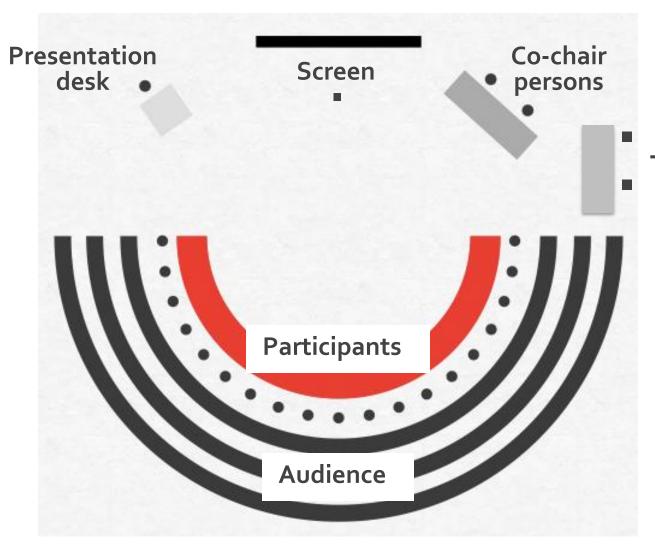




The principles guiding the organization of the Dialogue seminars

- Local and international observers
- Simultaneous Japanese / English translation
- Use of common language
- Use of a dialogue technique (IDPA grid)
 - 1st step: in turn participants give their views for 5 minutes each.
 Interruptions are not allowed
 - 2nd step: after listening his/her counterparts, each participant give his/her view in 3 minutes. The objective is to give the opportunity to everyone to deepen or even change his/her thinking in the light of the others
 - 3rd step: the main lessons are summarized by a rapporteur followed by a general discussion
- All sessions opened to media

The scenography of the dialogue seminars







Features of the Fukushima Dialogue

How to operate

- 6-8 presentations (20 min) in the morning for information sharing
- 10-20 dialogue participants
- Participants are requested by the organiser depending on the theme of the event
- Participants with a wide and diverse range of attributes, including experts, administrators, organisations, companies, the general public, professionals and educators
- A simplified version of the IDPA method is used, with the moderator asking a couple of questions
- All participants answer the same questions in sequence for the same allotted time
- No discussion or questions are asked in the middle of the session
- Participants listen to the answers silently until a round is completed
- No direct discussion between participants
- All meetings are open to the public

Background philosophy

- Equity among participants
 All participants are treated equally, with equal opportunity and time to speak.
- Transparency
 Open to the public and media coverage
- Inclusiveness
 Participants from as many different backgrounds as possible





Why are dialogues so important after nuclear accidents?

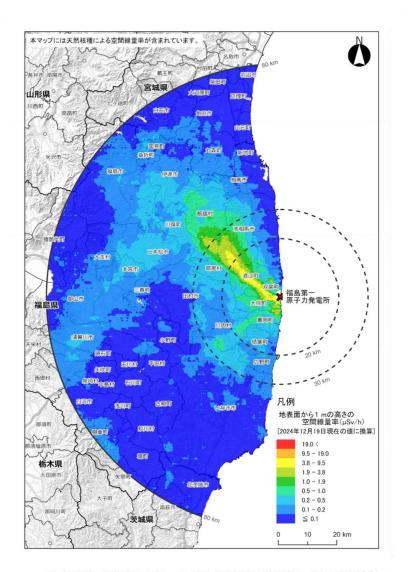
- Radiation has permeated every aspect of daily life, requiring constant consideration of how to manage its presence.
 - Should I let my children play outside?
 - Should I eat food produced in contaminated areas?
 - Should I open the windows?
 - Should I touch the soil?
 - Is this place really safe to live in for years to come?
- No clear or universally acceptable answers.
 - Total loss of trust in experts and authorities after the accident
 - Experts and authorities often perceived as responsible for the accident
 - Their views are rarely seen as reasonable or trustworthy
 - Normal social functions, such as decision-making processes, have broken down

Dialogue is the only way to find solutions and to go forward

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However, you may wonder: Why has the Dialogue continued for such a long time?

2011-2024 Radiation Dose (Aerial Monitoring)



Total Emissions		
Cesium-137	Atmosphere	6~20PBq
Cesium-137	Sea	3∼6PBq
lodine 131	Atmosphere	100∼500PBq
lodine 131	Sea	10∼20PBq

Reference: Estimated at 10-20% of the Chernobyl accident

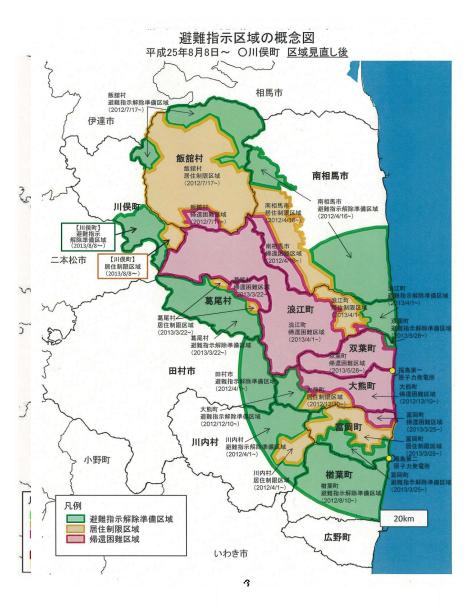
Estimated radiation exposure (adult, 1 year after the accident)

5.7 mSv
9.3mSv
4.3mSv

(UNSCEAR 2013 Report)



August 2011-13 Evacuation orders issued and reorganized areas



2011				
3/11		Radius 3km	Evacuation Order	
12	05:44	Radius: 10km	Evacuation Order	
	06:25	The radius is 20 km	Evacuation Order	
16	11:01	Radius 20-30km	Indoor evacuation	
4/22		Reorganization of evacuation order areas		
		Planned evacuation zones		
9/30		Indoor evacuation zone lifted		
2012				
4/1~		Review of evacuation areas -Evacuation order lifting preparation area -Restricted Areas -Difficult to return area		
2013				
8/8		Completion of the area review		



Criteria for lifting evacuation orders from April 2014

Three requirements for lifting evacuation orders

- It is certain that the annual cumulative dose estimated by the air dose rate will be less than or equal to 20 millisieverts.
- ② Infrastructure essential for daily life, such as electricity, gas, water and sewerage, major transportation networks, and telecommunications, as well as life-related services such as medical care, nursing care, and postal services, must be generally restored, and decontamination work, mainly for children's living environments, must be fully progressed
- 3 Sufficient consultation with the prefecture, municipalities, and residents
- The criteria for lifting the evacuation order did not exist before the accident
- December 26, 23 Nuclear Disaster Response Headquarters "Basic Approach to the Review of Warning Areas and Evacuation Order Areas Following the Completion of Step 2 and Future Consideration Issues"



2013-17 Lifting of evacuation orders for planned evacuation zones and restricted residential areas



2014		
4/1	Miyakoji, Tamura	Evacuation order lifting preparation area
10/1	Part of Kawauchi	EOLPA
2015		
9/5	Naraha	EOLPA
	Reorganization of eva	cuation order areas
2016		
6/12	Katsurao	EOLPA
6/12	Katsurao Part of Kawauchi	EOLPA EOLPA
6/14	Part of Kawauchi	EOLPA EOLPA
6/14 7/12	Part of Kawauchi	EOLPA EOLPA

Establishment of a Specified Reconstruction and Revitalization Base from March 2021

Fukushima Reconstruction and Revitalization Special Measures Act revised, March 2017

- With the revision of the FRRSM Act (2017), it is now possible to establish "Specified Reconstruction and Revitalization Base Areas (SRRBA) " in areas where evacuation orders can be lifted and residence is allowed in areas where residence has been restricted in the future.
- The mayor of the municipality shall prepare a plan for the establishment of a specific reconstruction and revitalization base area and the improvement of the environment (decontamination and infrastructure development) in the area. The Prime Minister approved the plan and promoted the plan for reconstruction and revitalization.
- Reconstruction Agency website



What has changed due to the revision of the FRRSM Act in 2017?

- It has become possible for the government to invest public funds in decontamination, which had previously been considered the sole responsibility of TEPCO.
- The government can now implement road construction and other public works in conjunction with decontamination activities.
- This shift occurred because it became increasingly difficult for TEPCO's compensation payments to fully cover the cost of decontamination.
- (Reference: Decontamination-related expenses up to March 2017 totaled 4.24 trillion yen.)



Decontamination related expenses up to March 2017 (TEPCO)

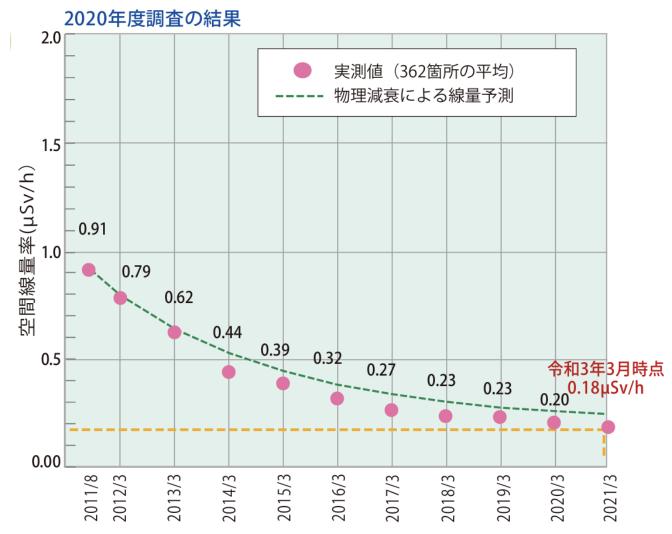
Item	Amount (JPY)
Decontamination-related	3.2 trillion yen
Decontamination work (including follow-up decontamination)	2.18 trillion yen
Establishment and operation of temporary storage and volume-reduction facilities	0.97 trillion yen
Technical development	
Mass media publicity	
Model projects	0.06 trillian van
Environmental restoration projects for children	0.06 trillion yen (600 billion yen)
Post-decontamination monitoring	
Survey costs	
Administrative and management expenses	
Contaminated waste management-related	0.81 trillion yen
Designated waste processing	
Agricultural and forestry waste (≤ 8,000 Bq/kg)	
Monitoring assistance for waste-treatment facilities	
Waste treatment within countermeasure areas	
Subtotal (Cabinet Office share – decontamination and waste treatment)	0.22 trillion yen
Total	4.24 trillion yen

Fukushima Dialogue

環境省除染事業誌



Actual attenuation of air dose rate in Fukushima Prefecture.



Comparison Between the Physical Decay Curve of Radiocaesium and the Measured Monitoring Data (Average of 236 Sites)

2019/2021 - Lifting of Specified Reconstruction Bases



2019		
4/10	Okuma: partly	EOLPA, RRA
2020	(Reconstruction a Olympics)	appeal in line with the Tokyo
3/10	Futaba:partly Okuma: partly Tomioka: partly	In the Specified Reconstruction and Revitalization Base
2022		
6/12	Katsurao (partly)	SRRB
6/30	Okuma:partly	SRRB
8/30	Futaba: partly	SRRB
2023		
4/1	Namie: partly Futaba: partly	SRRB
5/1	litate: partly	SRRB
11/30	Tomioka: partly	SRRB



In June 2023, it was decided to establish a Specified Return Residential Area

- Establishment of a "Specified Return Residential Area" system that lifts evacuation orders and allows residents to return and live outside the base area within the difficult-to-return area
- Lift evacuation orders for all residents who wish to return through the 2020s

Three requirements for lifting evacuation orders

- (1) It is certain that the annual cumulative dose estimated by the air dose rate will be less than or equal to 20 millisieverts.
- ② The necessary environmental improvement is being carried out by the person who uses the land.
- Sufficient consultation with the local community

「特定復興再生拠点区域外の土地活用に向けた避難指示解除について」 (令和2年12月25日原子力災害対策本部決定)

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Current situation of Specified Reconstruction and Revitalization Base areas

(6) 特定復興再生拠点区域の整備

- ○2017年に福島復興再生特別措置法を改正し、帰還困難区域内に、避難指示を解除し、居住を可能とする「特定復興再生拠点区域」(拠点区域)を設定できる制度を創設。
- ○当該制度に基づき、双葉町、大熊町、浪江町、富岡町、飯舘村、葛尾村の計画を認定。

2023年11月までに、6町村の拠点区域の避難指示が全て解除された。

Futaba_{2022年8月30日解除)}



- ・区域面積:約555ha ・居住人口目標:約2,000人
- · 計画認定: 2017年9月15日

Okuma**2022年6月30日解除)**



- ・区域面積:約860ha・居住人口目標:約2,600人
- ·計画認定:2017年11月10日

Namie_{2023年3月31日解除)}



- ・区域面積:約661ha・居住人口目標:約1,500人
- ·計画認定:2017年12月22日

Tomioka23年4月1日解除)



- ・区域面積:約390ha ・居住人口目標:約1,600人
- · 計画認定: 2018年3月9日

避難指示を解除

※2023年4月1日に夜の森・大菅地区、11月30日に 小良ヶ浜・深谷地区内の特定復興再生拠点区域の

litate (2023年5月1日解除)



- ・区域面積:約186ha ・居住人口目標:約180人
- 計画認定:2018年4月20日

¡Katsurao 年6月12日解除)



- 区域面積:約95ha居住人口目標:約80人
- ·計画認定:2018年5月11日

令和7年2月 復興庁福島復興局 「福島復興加速への取組」

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Specified Return Residential Area (SRRA) Plan

(7) 特定帰還居住区域の整備

- 令和6年4月までに、大熊町、双葉町、浪江町及び富岡町において「特定帰還居住区域復興再生計画」を作成し、国が認定。当該計画に基づき、4町において順次、除染等を開始。引き続き、インフラ整備等の避難指示解除に向けた取組を実施。
- <u>葛尾村においては</u>、令和5年度に実施した帰還意向調査の結果を踏まえ、<u>今後、計画を作成予定</u>。
- <u>帰還意向調査は</u>自治体の意向を踏まえて複数回実施する方針であり、令和6年8月以降、4町において順次、2 回目を開始。

認定済みの特定帰還居住区域復興再生計画の概要

〇KUMA ¥9月29日認定、令和6年2月2日変更)】



Futabal5年9月29日認定、令和6年4月23日変更)】



Namie(令和6年1月16日認定)]



Tomioka_{16年2月16日認定)1}



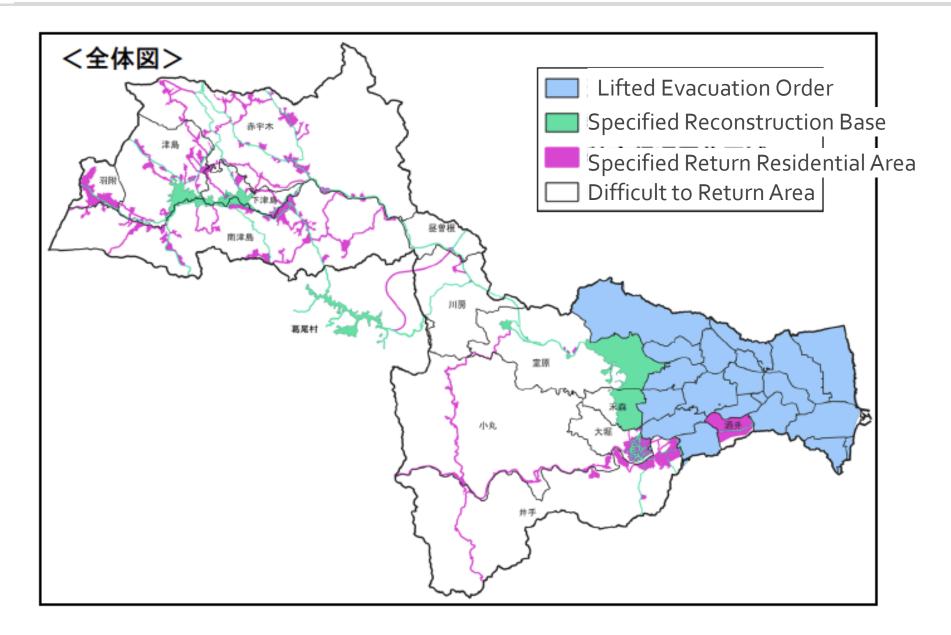
令和7年2月復興庁福島復興局「福島復興加速への取組」

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Example: Namie Town Specified Return Residential Area



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Residential Status in Municipalities with Remaining Difficult-to-Return Zones

Municipality	Registered Population	Resident Population	Residency Rate
Minamisoma City	55,849	52,985	94.9%
(Former Evacuation Order Area – e.g., Odaka District)	6,756	4,346	64.3%
Tomioka Town	11,338	2,565	22.6%
Ōkuma Town	9,947	874	8.8%
Futaba Town	5,303	174	3.3%
Namie Town	14,666	2,251	15.3%
Katsurao Village	1,228	463	37.7%
litate Village	4,529	1,521	33.6%

Notes:

- Data compiled by the Fukushima Reconstruction Agency based on municipal public data.
- As of Nov. 30, 2024: Minamisoma City, Ōkuma Town, Futaba Town, Namie Town.
- As of Dec. 1, 2024: Tomioka Town, Katsurao Village, litate Village.

Source: <u>Efforts to Accelerate the Reconstruction of Fukushima (Fukushima Reconstruction Bureau, Reconstruction Agency, February 2025)</u>



Population and Female Ratio in the Seven Fukushima Municipalities Once Fully Evacuated

Municipality	Resident Population	% of Women	Date of Evacuation Order Lifted
Naraha Town	4,480	46.0%	September 2015
Katsurao Village	471	44.4%	June 2016
litate Village	1,510	47.6%	March 2017
Namie Town	2,343	41.5%	March 2017
Tomioka Town	2,619	37.6%	April 2017
Ōkuma Town	1,005	35.3%	April 2019
Futaba Town	185	41.1%	August 2022

Notes:

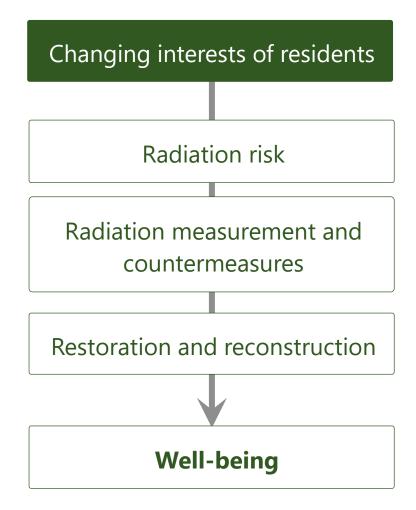
- Data as of April 30 or May 1 (year unspecified).
- The number of residents in Namie Town includes municipal employees living in the town who are not officially registered as residents.

Source: Kahoku Shinpo Newspaper, 14 October, 2025



Over Time: Increasing Complexity and Fragmentation

- In the early phase, radiation risk is the primary concern
- Radiation levels gradually decrease, but contamination remains for decades
- As people move, shared knowledge and understanding fade away
- As generations change, it becomes difficult to pass down lived experiences
- Government policies evacuation orders, lifting of restrictions, relocation, and industrial promotion — have major impacts on affected communities
- Each new change brings divergent views and growing divisions



Dialogue is the only way to find solutions and to go forward

If nothing is done, fragmentation deepens. Dialogue is the only path to rebuild and sustain a community.





Crowdfunding for the 27th Dialogue in December

Discussion on how to reconstruct the local community among the diverse stakeholders in the fragmented situation due to the nuclear accident and post-accident measures by the authorities

- Date: Saturday
 6th and 7th
 Sunday
- At Okuma Town, where the NPP is located and still issued partly the evacuation order
- Zoom
 distribution with
 English-Japanese
 simultaneous
 interpreter
 available



NPO Fukushima Dialogue

Contact information

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https://fukushima-dialogue.jp/en/

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 https://fukushima-dialogue.jp/en/archives/1717
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- Donation
 https://syncable.biz/en/associate/FukushimaDialogue/donate
- Membership
 https://syncable.biz/associate/FukushimaDialogue/donate/membership



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Ce qui s'est passé à Fukushima – Cas du district de Suetsugi

Documentaire: La reconstruction de la confiance après l'accident de Fukushima: l'histoire de Suetsugi (with French subtitles on You Tube)

https://youtu.be/Yi5UDSJffEw?si=L05bMow6ekVg9xM3

Comment le petit quartier situé dans un rayon de 30 km de FDNPP, avec environ 300 habitants, confronté à la complexité après le tsunami et l'accident nucléaire, vit-il le processus de reconstruction avec l'appui d'experts et de l'Association



