

Human security, Gender and Fukushima Nuclear Disaster

Dr. Nanako Shimizu
School of International Studies,
Utsunomiya University

Date and time

21 January 2022 16:00-17:30 pm

Outline of the lecture

- Introduction: SDGs and Fukushima Nuclear Accident
- Invisible Damages: The Case of Tochigi
- Updates on the Damages of TEPCO's Nuclear Disaster
- Final Analysis: Sustainable development for all

Main issues

- It was the most severe nuclear accident since the Chernobyl disaster in 1986. It was classified as Level 7 on the International Nuclear Event Scale (INES). More than 162,000 people in Fukushima had to evacuate from their hometowns. In December 2021, more than 34,000 people are still displaced.
- Specializes in Studies of International Relations, UN Security System. A member of the Project Supporting Preschoolers and Pregnant Women of Fukushima(2011-2015), which was reorganized as the Research Forum on Fukushima Nuclear Disaster (2015-present) in the School of International Studies, Utsunomiya University
- Assignment: How do the SDG goals relate to the damage caused by the nuclear accident? Please explain what you consider to be the most important points.

Human security, Gender and Fukushima Nuclear Disaster

21 January 2022

Dr. Nanako SHIMIZU

(School of International Studies, Utsunomiya University)

Outline of the Lecture

- 1 Introduction: SDGs and Fukushima Nuclear Accident
- 2 Invisible Damages: The Case of Tochigi
- 3 Updates on the Damages of TEPCO's Nuclear Disaster
- 4 Final Analysis: Sustainable development for all

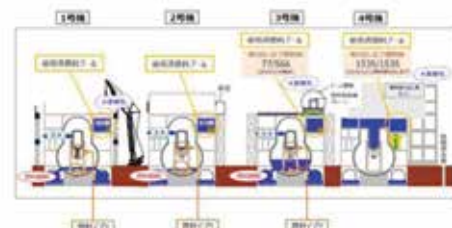
1 Introduction SDGs and Fukushima Nuclear Accident

March 11, 2011 :Great East Japan Earthquake→ Triple Disaster



出典：福島県 (2015) 「東日本大震災の記録と復興への歩み (平成25年3月) 」 27頁
<https://www.pref.fukushima.lg.jp/sec/fukushimae-book/HTML/5/0c.html#page/26>

Nuclear meltdowns occurred in three of the four reactors that could no longer be cooled. A hydrogen explosion destroyed the reactor building, releasing a large amount of radioactive material.



出典：資源エネルギー庁ウェブサイト https://www.enecho.meti.go.jp/about/special/nobutei/kyo/dabris_2.html

Serious and prolonged damages

- It was the most severe nuclear accident since the Chernobyl disaster in 1986. It was classified as Level 7 on the International Nuclear Event Scale (INES).
- More than 162,000 people in Fukushima had to evacuate from their hometowns.
- In December 2021, more than 34,000 people are still displaced.

SDGs in the UN Resolution



UN General Assembly Resolution 70/1(2015)
<https://www.un.org/en/development/desa/population/publications/2015/resolution701.shtml>



Source: UN Photo

Preamble of UNGA resolution 70/1

This Agenda is a plan of action for people, planet and prosperity...

We are resolved to free the human race from the tyranny of poverty and want and to heal and secure our planet. We are determined to take the bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind...

They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

Endangered Human Security after the Fukushima Accident in 2011

- Nuclear accident and its damage as socio-political issues
- Flow of massive internally displaced persons (IDPs) and inadequate governmental protection policies from radiation

○ Concept of Human Security

Proposed in the 1994 UNDP Report

People-centered security ⇔ Nuclear security
Economy/Food/Health/Environment/Person
/Community/Politics

<https://www.un.org/humansecurity/what-is-human-security/#>

Definition by Ministry of Foreign Affairs

"One of the important pillars of Japan's foreign policy (MOFA)

"Human Security aims to protect people from critical and pervasive threats to human lives, livelihoods and dignity, and to enhance human fulfilment."

(MOFA 2009)

Source: https://www.mofa.go.jp/policy/human_secu/index.html

Lecturer's Main Activities on the topic

Specializes in Studies of International Relations, UN Security System. A member of the Project Supporting Preschoolers and Pregnant Women of Fukushima (2011-2015), which was reorganized as the Research Forum on Fukushima Nuclear Disaster (2015-present) in the School of International Studies, Utsunomiya University (Tochigi, Japan).

< Main Activities >

- ① Supporting the evacuees from Fukushima, especially the families with preschoolers and pregnant women.
- ② Conducting interviews with the evacuees from Fukushima to Tochigi.
- ③ Conducting interviews and questionnaire surveys on the parents of the preschoolers living in Tochigi's radiation "hot spots."
- ④ Publicizing the results of the surveys and submitting the petitions on the needs of the victims to the Municipalities, Ministers of Reconstruction and the Environment.

Collecting the Voices of the Evacuees

Textbooks ver.2014 and 2018

Letters from the Evacuees



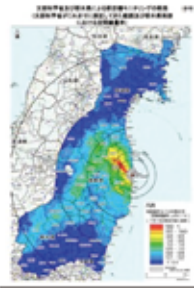
Photo Credit : N.Shimizu (2018)

2 Invisible Damages: The Case of Tochigi



Wide-spread Contamination beyond Fukushima Prefecture

- The radioactive materials released from the Fukushima Power Plants have spread well beyond the Fukushima Prefecture.
- There are a number of neighboring prefectures suffering from the contamination as Fukushima.

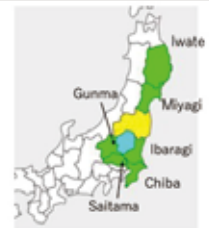


Air Radiation Dose of 1 m from the ground, 2011 .
https://radioactivity.nsr.go.jp/ia/contents/5000/4930/24/1305819_0727.pdf

Areas for Focused Research on the Level of Contamination Designated by Ministry of Environment

Number of cities, towns and villages

Iwate	3
Miyagi	9
Fukushima	41
Ibaragi	20
Tochigi	8
Gunma	12
Saitama	2
Chiba	9
Total	104 cities, towns and villages in 2012



Disparities of National Support

Map of Total of Cs134, 137 Fallouts on the ground July 27, 2011. Ministry of Education, Culture, Sports, Science and Technology)

There is no designated evacuation zones, effective decontamination nor health survey paid by the national budget beyond Fukushima Prefecture.

Source:
https://radioactivity.nsr.go.jp/ia/contents/5000/4899/23/71930_111112.pdf



Contamination in Tochigi Prefecture (as of July 2011)

Air Radiation Dose of 1m from the ground (left) / Total of Cs134, 137 Fallouts on the ground (right)



https://radioactivity.nsr.go.jp/ia/contents/5000/11112/24/1305819_0727.pdf

Invisible Victims in Tochigi Prefecture

Invisible Victims

The contamination and its damages of Northern Tochigi are not recognized nationally as well as in other parts of Tochigi (center or south).

"We cannot talk freely about our anxiety over radiation."

It is difficult for the residents to talk freely about their fear of radiation as they concern to be criticized as inciting "harmful rumors" damaging local agriculture and industries or to call forth other people's anxiety.

Hasty Protection of the agriculture and tourism industries by the Local Government

"Declaration of Safety of Tourism in Tochigi" by the Governor in April 5, 2011.

"There are almost no direct damages caused by the Great East Japan Earthquake and by the Accident of the Fukushima Power Plant in Tochigi's famous sightseeing spots. We are providing "safe and secured" air, water and food... The Prefectural Government makes this declaration in order to eradicate completely the false rumors on the Tochigi's sightseeing spots."

Food Contamination

○New Regulations from April 2012 – present

- General: 100 Bq/kg
- Drinking water: 10Bq/kg
- Milk/ Food for infants: 50Bq/kg

○Wild mushrooms, wild plants, and the meat of wild animals

Data in Nasushiobara-shi, Tochigi in 2020-2021

- Lactifluus volemus(チチタケ) 1041.8 Bq/kg
- Wild Venison (野生シカ肉) 203.1Bq/kg

Source: <http://www.city.nasushiobara.lg.jp/12/005010.html>

18

Delayed Decontamination

①Decontamination around the Monitoring Posts

Only the radiation levels around the monitoring posts are low. There still remains high level radiation "hot spots" near the posts.

→As the radiation levels of the monitoring posts are low and they are publicized as the official records, it may make people believe that the radiation levels of all the area have become lower. As a consequence, the necessary measures were not be provided.

②Limited measures of decontamination financed by the Government.

The most effective decontamination measure, the removal of topsoil, which was widely utilized in Fukushima, is not financially supported by the national Government in Tochigi. The Governor and mayors of Tochigi submitted petitions to the Ministers of Reconstruction and the Environment in July 2013, asking for the financial support equal to Fukushima, but it was not realized.



Photo: N. Shimizu(2014)

The Lack of Public Health Surveys

- Government-funded health surveys of the affected residents in contaminated areas surrounding Fukushima have not been implemented.
- The Final Recommendation by the Meeting of the Specialists on the Health Effect of the Radiation organized by the Tochigi Prefectural Government.

"This report makes an evaluation based on the scientific data that the situation in Tochigi is free from the fear of future health risk. The report also makes it clear that **any health monitoring including laboratory testing is not necessary.**" (July 2012)

Voluntary Protection Activities by the local residents

In the face of the lack of official protection measures, some of the residents started voluntary activities to protect themselves from radiation right after the accident.

- Forming study groups.
- Regular measuring of radiation level and its public release.
- Making original radiation maps.
<https://en.minnanods.net/>
- Measuring of foods and providing consultation.
- Thyroid screening by citizens' groups
- Submitting petitions to the local and national authorities.

Anxieties of the Parents of preschoolers

- Receiving the requests from several residents in Northern Tochigi, the presenter conducted anonymous questionnaire surveys targeting the parents of the preschoolers in 2012 and 2013.
- Preparatory survey (August 2012) with 1 kindergarten and 1 nursery school in Northern Tochigi, 245 answers were collected (response rate : 53%)

94% of the parents answered "I have anxiety about child rearing after the earthquake."

A survey in 2013 with 38 kindergartens and nursery schools

<Period of Survey>

August 22, 2013- October 9, 2013

<Targets> 3,241 Parents of the children in 38 kindergartens and nursery schools in Northern Tochigi

Nasushiobara City

- 14(all the) public kindergartens and nursery schools
- 15 private kindergartens

Nasu Town

- 8 (all the) public nursery schools
- 1 private kindergarten

<Response Rate>

2,202 responses (rate: 68%)

Figure 1
Do you feel anxious about the health risk of external radiation?

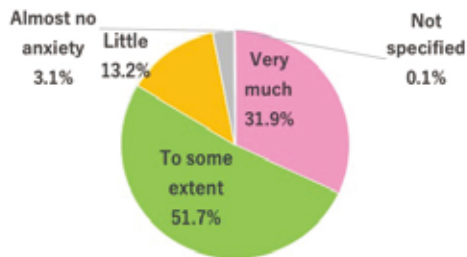


Figure 2
Do you feel anxious about the health risk of internal radiation to your children?

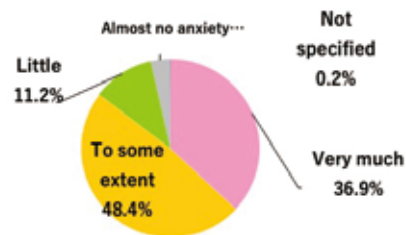


Figure 3
Did you behave differently at the time of the accident only if you had the knowledge and information now you have?

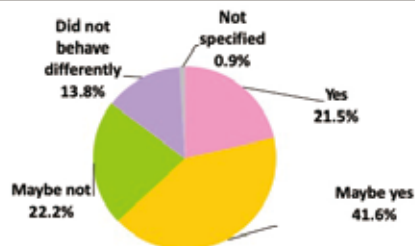
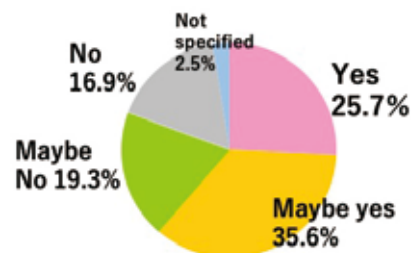


Figure 4 Voices of the women and mothers are not much reflected in the policies responding the accident
※ More than 90% of the survey respondents were female.



Serious Gender Gap in Japan

Percentage of women among 59 municipal mayors in Fukushima : 0%
Of the 58 members of the Fukushima Prefectural Assembly, five are women, which is only 8.6 per cent, while national average is 11.4 %.

Table Japan's Gender Gap Report Ranking

Year No. of countries	Total	Politics	Economy	Education	Health
2020 (156)	121	144	115	99	40
2018 (149)	110	125	117	65	41
2017 (145)	114	123	114	74	1

Source: <https://jp.weforum.org/reports/gender-gap-2020-report-100-years-pay-equality>

Table2 Gender of respondents to the resident opinion survey in nuclear-affected municipalities

<https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-4/ikoucyousa/>

Municipalities	2012 survey (All residents)			2020 survey (head of the family)		
	Male	Female	No answer	Male	Female	No answer
Tomoka	45.0%	48.0%	7.0%	66.8%	31.7%	1.5%
Namis	46.1%	49.4%	4.5%	70.9%	27.1%	2.0%
Okuma	—	—	—	65.6%	30.8%	3.6%
Kawamata	—	—	—	74.9%	23.7%	1.4%
Average	45.6%	48.7%	5.8%	69.6%	28.3%	2.1%

Strong needs for the official health survey in Tochigi

Questionnaire Survey on the parents of examinees of thyroid ultrasound tests in Tochigi (December 2019 and January 2020)

Collecting 151 answers (100% response rate)

95.5% needs official health check-up

60.9% needs official health check-up at schools

70.0% needs a check-up once a year

63.7% wants tests other than thyroid tests

Thyroid screening by citizen volunteers



Photo Credit: N. SHIMIZU 2014, 2021



3 Updates on the Damages of TEPCO Nuclear Disaster

Delayed Decommissioning Schedule

Tokyo Electric Power Company (TEPCO)'s roadmap to complete the decommissioning project in 30 to 40 years was in doubt even in December 2011, is now facing multiple difficulties including the delay of removing melted nuclear fuel from the three destroyed reactors which was supposed to start from 2021.

Current status at the Fukushima Daiichi



Source: Ministry of Energy, Trade and Industry (2021) Important Stories of Decommissioning: Fukushima Daiichi Nuclear Power Station, now and the future.

Ever-Increasing Contaminated Soil and Water

For years Japan has debated over what to do with the more than a million tonnes of water used to cool the power station and the removed soil for decontamination. The Japanese government is planning to reuse the soil containing less than 8,000 becquerels per kilogram for the construction of new roads and in building levees not only in Fukushima but all over Japan. It is also reported that the government has decided to start releasing the water into the sea from 2023.



Source: Ministry of Energy, Trade and Industry (2021) Important Stories of Decommissioning: Fukushima Daiichi Nuclear Power Station, now and the future.

Lifting of Evacuation Orders

April 22, 2011

Evacuation order zone (warning zone)
Planned evacuation zone
Emergency evacuation preparation zone
(Evacuation instruction cancelled on September 30)



Source: Fukushima Prefecture homepage
https://www.pref.fukushima.lg.jp/sec/tokai/eng/fukushima03_04.htm

March 10th, 2020 (until present)



Source: Fukushima Prefecture homepage
https://www.pref.fukushima.lg.jp/sec/tokai/eng/fukushima03_04.htm

Evacuees from Fukushima

National policy to return to the "20 mSv/year areas" causes anxiety among the evacuees, especially among the younger generation. However, many evacuees find it difficult to continue their evacuation while the official support has gradually been cut off.

Table 1 Numbers of Evacuees from Fukushima

	May 2012	December 2021
Within Fukushima	102,180	6,744
Outside of Fukushima	62,038	27,297
Unknown	0	5
Total	164,218	34,046

Source: https://www.cref.fukushima.go.jp/uploaded/life/569212_1553267_misc.pdf

National Opinion Polls on Nuclear Energy

Conducted from November to December 2020, 3,140 responses (65.4% response rate) with 320 from Fukushima residents. Source: <https://www3.nhk.or.jp/news/html/20210302/k10012893841000.html>

Question	Responses (National)	Responses (Fukushima)
1. Future of nuclear power plants	Increase 3% Keep the existing plants 29% Reduce 50% Abolish 17%	Increase 1% Keep the existing plants 24% Reduce 48% Abolish 24%
2 Decommissioning process	Going well & Relatively Well 16% Not going well & Relatively not 82%	Going well & Relatively Well 16% Not going well & Relatively not 82%
3 Releasing water to the sea	Approve & somewhat approve 18% Disapprove & somewhat disapprove 51% Cannot say either 30%	Approve & somewhat approve 24% Disapprove & somewhat disapprove 46% Cannot say either 28%
4 Fear of Future Accidents	Yes very & Yes to some extent 85% Not much & Not at all 14%	Yes very & Yes to some extent 89% Not much & Not at all 10%

Status of Japan's Nuclear Reactors as of August 2021

Restarted: 10 reactors
Passed Nuclear Regulation Authority (NRA) review for permission: 6 reactors
Under NRA review: 11 reactors
Application not filed: 9 reactors
Decided to decommissioned: 24 reactors



Source: Agency for Natural Resources and Energy homepage
http://www.anre.go.jp/en/energy/nucl/nucl_and_nuc.html

World's Nuclear Power Status

Number of Operational Reactors (by region) Number of Reactors (by country)



Source: <https://nrls.bas.org/2015/home.aspx>

4 Final Analysis: Sustainable Development for All

In spite of the serious environmental contamination and insecurity felt by the residents in Tochigi, neither decontamination nor health survey are realized as they are in Fukushima Prefecture. It will be shown that major obstacles are not only the lack of official recognition and support to these areas, but also gender-based discrimination and peer group pressure, which could be observed in Japanese society even before the 3.11 triple disaster.

Through the research, it is also found that it is necessary to challenge the difficulties of talking freely about the anxiety of radiation. The long-term policies for addressing the anxieties of the affected population must be; effective decontamination, regular measuring of the radiation of the air, soil and foods, health monitoring.

For your reference:

Nanako Shimizu (2015) "Human Insecurity Caused by the Dysfunction of the State: New Security Issues in Post-Fukushima Japan," in *Asian Journal of Peacebuilding* Volume 3, No.2, (November 2015) pp. 165-187

http://tongil.snu.ac.kr/ajp_pdf/201512/02_Nanako%20Shimizu.pdf

Report assignment (Deadline: January 27th)

How do the SDG goals relate to the damage caused by the nuclear accident? Please explain what you consider to be the most important points.
原発事故被害とSDGsの目標はどのように関係していますか。あなたが最も重要だと考える点について、説明してください。(1月27日提出願切)
100 words in English, or 200 letters in Japanese