

Description in the plan

- The following points were raised as “Direction of the Immediate Measures by the Ministry of the Environment” in February 2015 based on the “Interim report of experts’ meeting for the health management of the public following TEPCO Fukushima Dai-ichi nuclear power plant accident” (December 2014): (1) Promotion of understanding and assessment of exposure doses in the early stage of the accident, (2) Monitoring of disease morbidity trends in Fukushima Prefecture and neighboring prefectures, (3) Improvement of the Fukushima Health Management Survey “Thyroid Ultrasound Examination,” (4) Continuation and improvement of risk communication activities. Moving forward, support measures will be carried out including radiation exposure dose assessment, research on radiation health effects, support for Fukushima Health Management Surveys, and consultations by Support Center for Radiation Risk Communication Consultants.

Progress and assessment of measures

i) Progress since 2018

○ Promotion of understanding and assessment of exposure doses in the early stage of the accident

A temporal and spatial radioactivity density distribution database of radionuclide concentrations (WSPEEDI_2019DB) was constructed.

Furthermore, we evaluated inhalation doses using WSPEEDI_2019DB based on behavioral questionnaires for residents aged 19 years and younger in seven municipalities in the designated areas for evacuation, and thyroid doses from tap water in each area and during periods without measurement data (Fig. 1). As a result, it was concluded that it is extremely unlikely that thyroid cancer will increase due to the effects of radioactive substances dispersed into the environment as a result of the Fukushima nuclear accident.

○ Monitoring of disease morbidity trends in Fukushima Prefecture and neighboring prefectures

From FY 2018 to FY 2021, health effects including psychological and social effects caused by the Fukushima nuclear accident, such as adult, maternal and perinatal morbidity, were surveyed. In parallel, the project structure was strengthened to enable more appropriate evaluations with an eye to improvement in the quality of surveys and social implementation of the results. Moreover, organizations engaged in risk communication activities in Fukushima Prefecture were linked together to build a foundation for social implementation of the obtained data on disease morbidity trends.

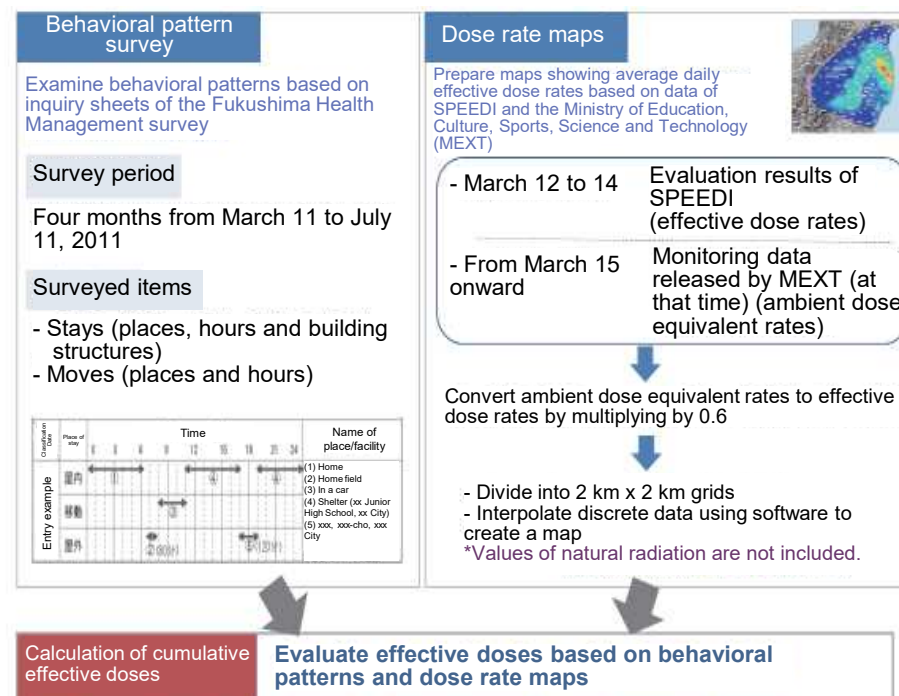


Fig. 1 Dose evaluation based on behavioral questionnaires

Progress and assessment of measures

i) Progress since 2018

○ Improvement of the Fukushima Health Management Survey “Thyroid Ultrasound Examination”

Financial, technical and human resource development support has been provided for the Fukushima Health Management Survey conducted by Fukushima Prefecture.

The following measures were taken for the Thyroid Ultrasound Examination.

- In order to secure examiners with advanced knowledge and skills in the Thyroid Ultrasound Examination over a long period of time, lecture classes and practical skills training sessions were held for doctors and technicians in Fukushima Prefecture.
- Seminars were held for those in medical institutions that are conducting or considering conducting the Thyroid Ultrasound Examination outside of Fukushima Prefecture to share the current situation in Fukushima and the latest medical knowledge and to exchange opinions among examination organizations so that residents outside of Fukushima Prefecture can access appropriate examination over a long period of time.
- In order to proceed with the Confirmatory Examination which is considered to impose a greater mental burden on the subjects and families, while paying close attention to them, workshops on how to deal with examinees were held for nurses and others at institutions conducting the Confirmatory Examination in Fukushima and other prefectures.

○ Continuation and improvement of risk communication activities

- At the “Support Center for Radiation Risk Communication Consultants” established in Iwaki City by the MOE, training was provided for radiation consultants, local government officials, etc. in Fukushima Prefecture, and risk communication activities were conducted for residents who were concerned about health effects of radiation through group meetings, etc. Furthermore, a “Guidance for Living” and a website were prepared as supporting tools for radiation consultants.
- Workshops, group meetings, etc. were also held outside of Fukushima Prefecture.
- In FY 2019, in order to ensure effective implementation of these risk communication activities, interviews with residents were conducted and the results were analyzed.
- For residents with concerns about radiation exposure, we strived to eliminate and reduce their health concerns by having them check their radiation exposure dose using a personal dosimeter or a whole-body counter and by having experts explain radiation exposure and health effects.
- In July 2021, “GuGuRu Project,” an initiative to eliminate discrimination and prejudice related to the health effects of radiation exposure by building knowledge (Tsumu“Gu”), connecting with people, towns and organizations (Tsuna“Gu”) and transmitting knowledge (Tsutawa“Ru”), was launched.

6. Reconstruction after the Great East Japan Earthquake and responses to future large-scale disasters (1) Reconstruction after the Great East Japan Earthquake
 [3] Health management and response to health concerns of residents regarding radiation exposure through risk communication

Progress and assessment of measures

ii) Quantitative assessment of progress

○ Promotion of understanding and assessment of exposure doses in the early stage of the accident

A research group commissioned by the MOE made an analysis based on the behavioral questionnaires of 896 residents. It was published in an English paper in January 2020 as a result of the research. This paper was cited in the 2020/2021 report of the “United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)” and will be used to dispel rumors.

○ Monitoring of disease morbidity trends in Fukushima Prefecture and neighboring prefectures

The findings obtained were published through academic conferences and papers (Table 1), publicity booklets for projects (Fig. 1), and symposiums (Table 1). However, their targets were only academic experts and local government officials. The challenge is to disseminate the findings widely to the public through risk communication activities at the bases and collaborating with GuGuRu Project, etc.

○ Improvement of the Fukushima Health Management Survey “Thyroid Ultrasound Examination”

Fukushima Prefecture has been conducting the Fukushima Health Management Survey “Thyroid Ultrasound Examination” for approx. 380,000 residents of Fukushima Prefecture who were generally 18 years old or younger at the time of the nuclear power plant accident.

The first-round survey(Preliminary Baseline Survey) began in October 2011, and the fifth-round survey began in FY 2020. (Table 2).

○ Continuation and improvement of risk communication activities

- FY 2018: A total of 165 workshops, residents’ seminars and group meetings were held. The number of those examined by personal dosimeters and whole-body counters was 2,539.
- FY 2019: A total of 159 workshops, etc., and 1,571 examinees
- FY 2020: A total of 93 workshops, etc., and 1,198 examinees
- FY 2021: A total of 186 workshops, etc., and 1,447 examinees
- Seminars were held at universities and other institutions nationwide (**1,345 participants from 49 schools**). In addition to these opportunity of learning, recording sessions and other events were held as a place to make presentations (a total of **50** students participated in the presentation and dialogue writing sections).

	FY 2018	FY 2019	FY 2020	FY 2021
Number of presentations at conferences	3	7	10	4
Number of presentations at lectures	2	0	5	14

Table 1: Dissemination of information on disease trends in and outside of Fukushima Prefecture



Fig. 1: Information dissemination using public relations magazine

Examination status	Preliminary Baseline Survey (1 st round) (FY 2011-FY 2013)	Full-Scale Survey (2 nd round) (FY 2014-FY 2015)	Full-Scale Survey (3 rd round) (FY 2016-FY 2017)	Full-Scale Survey (4 th round) (FY 2018-FY 2019)	Full-Scale Survey (5 th round) (FY 2020-)	Full-Scale Survey (Survey for Age 25) (FY 2017-)
Persons eligible for primary exam	367,637	381,237	336,667	294,231	252,855	87,693
Participants	300,472	270,552	217,922	183,383	45,860	8,163
Malignant or suspected for malignancy (cancer/potentially malignant/benignant)	116 (101 / 14 / 1)	71 (55 / 16 / 0)	31 (29 / 2 / 0)	37 (32 / 5 / 0)	6 (3 / 3 / 0)	13 (6 / 7 / 0)

Malignant or potentially malignancy: 274 persons
 Cancer confirmed as a result of surgery: 226 persons
※ 参照:第44回「県民健康調査」検討委員会(令和4年5月13日) 参考資料3:甲状腺検査結果の状況

Table 2: Implementation status of Fukushima Health Management Surveys “Thyroid Ultrasound Examination”

Progress and assessment of measures

iii) Overall assessment of progress

○ Promotion of understanding and assessment of exposure doses in the early stage of the accident

- Thyroid equivalent doses for each evacuation behavioral pattern, which is closer to the actual situation compared with previous reports, were evaluated.
- On the other hand, it was difficult to say that the information obtained through this measure has been sufficiently disseminated to the residents, so it will be necessary to focus on information dissemination in the future.

○ Monitoring of disease morbidity trends in Fukushima Prefecture and neighboring prefectures

Efforts are being made to understand the trends of diseases of the residents of Fukushima Prefecture over time compared to other prefectures, and secondary health effects after the Fukushima nuclear power plant accident. Continued longitudinal surveys are needed. On the other hand, it is considered to be a challenge to increase opportunities to disseminate the obtained information and make use of it for health management and measures against health concerns of the residents by, for example, utilizing the collaborative base system developed for social implementation of the results.

○ Improvement of the Fukushima Health Management Survey “Thyroid Ultrasound Examination”

- Thyroid cancer that has been found in the Thyroid Ultrasound Examination has been evaluated to the effect that it is unlikely to be caused by radiation at this point.
- We have mainly focused on enhancing the access of the Thyroid Ultrasound Examination, and the Primary Examination is available in all 47 prefectures.
- In the “Thyroid Ultrasound Examination,” the decision to undergo or not to undergo the examination is important. Similarly, the medical care provided to the examination subjects after the Confirmatory Examination, especially the processes for decision-making such as informed consent, should be properly implemented.

○ Continuation and improvement of risk communication activities

- In Fukushima Prefecture, we have continued to address radiation-related health concerns in cooperation with the local governments by creating opportunities for risk communication with the residents. Moreover, it has been confirmed that concerns about radiation by personal dosimeter and whole-body counter examinees have been alleviated as a result of measurement and explanation of results by experts.
- Outside of Fukushima Prefecture, we have taken measures to update information provided to the residents and to dispel rumors, including dealing with residents who have concerns about visiting Fukushima Prefecture.
- In addition to the “Steering Committee,” which has been advising the “Support Center for Radiation Risk Communication Consultants” on its activities, the “Evaluation Committee” was established in FY 2021 to systematically evaluate its activities. Furthermore, the organizational structure of the Center has been strengthened since FY 2022 to promote the projects more effectively and efficiently.
- In addition, since the number of people who wish to take the examination using personal dosimeters and whole-body counters is expected to increase in areas where residents are beginning to return to their homes in earnest, especially in Specified Reconstruction and Revitalization Base Areas, it is necessary to continue to conduct the examination.