ANNEX B. FUKUSHIMA

福島原発事故については誤った記載や重要な事柄で記載されていない事項が目立つ。この事故を教訓にして防護策を改定するのであれば、正確な理解が必要とされるので書き直しが必要である。国会事故調報告には住民の視点に立った緊急避難時及びその後の問題点が検証されている。しかし、それは引用文献に掲載されているのみである。

In regards to the Fukushima nuclear power plant accident, there are many incorrect evaluations, as well as other important matters that were not mentioned. If the accident is to be used as a basis for the revision of protective measures, an accurate understanding of the accident is required. In the official report of the Fukushima Nuclear Accident Independent Investigation Commission、National Diet of Japan (NAIIC), the problems of during and after the emergency evacuation from the viewpoint of residents were examined. However, they were only listed in the references.

B.1. はじめに

「1、3、4号機の原子炉建屋の爆発により大量の放射性物質が大気中に放出された」としているが、最も多くの放射性物質が放出されたのは2号機の損傷による。

In the draft they stated that “a large quantity of radioactive materials was released into the atmosphere due to explosions in the reactor buildings of Units 1, 3 and 4”, but the largest amount of radioactive material was released as a result of damage to the No. 2 Unit.

B.2.初期段階

B.2.1 緊急防護措置

緊急時の避難で SPEEDI のデータが生かされなかったことは大きな問題である。SPEEDI ではプルームの流れはほとんど正確に予測されていたのであるから、この情報が住民に知らされていれば、その方向に避難はしなかったであろうし、無駄な被ばくを避けることができた。SPEEDI について触れられていないのはな

ぜか？

The fact that SPEEDI data was not utilized during the emergency evacuation is a serious problem. Since the flow of the plume was quite accurately predicted by SPEEDI, if residents had been informed of this information, they would not have evacuated to locations within the path of the plume, and they could have avoided unnecessary radiation exposure. Why is SPEEDI not mentioned in the draft?

オフサイトセンターは複数カ所につくることが決められていたが、1カ所しかなかった。オフサイトセンターが避難区域に入ってしまい、機能しなかったのは致命的であった。事故後においても各地のオフサイトセンターは複数設置されておらず、状況は変わっていない。再び事故が起きれば同様な問題が起きることは目に見えている。

初期被ばく医療機関もまた半数以上が避難区域に入ってしまい機能しなかった。また現状でも事故が起きた場合に避難を必要とする病院や老人ホームは存在し、福島と同様な悲劇が起きる可能性は高い。

日本において医療施設には余裕がなく、病院は常に混んでおり病床は満杯である。従って事故によって緊急入院が必要となる汚染された被ばく者が多数生じた場合には、治療を受けられない可能性が高い。基幹高度被ばく医療センターは量子科学技術開発機構（旧放医研）に置かれているが、ここでも汚染重傷者の処置可能人数は1日10人以下と言われている。チェルノブイリのように多数の重症被ばく者が出た場合には対処できるのだろうか。

The set up multiple Off-site Centers was recommended but at the time of the accident there was only one in Fukushima Prefecture. This single Off-site Center did not function because it was located in the evacuation area. This was a serious error! Even now there is no more than one Off-site Center in each of the areas surrounding the power plants in Japan, so the situation has not improved. It is obvious that similar problems will occur if another accident occurs.

Also, at the time of the accident, more than half of the primary radiation emergency medical institutions were also located in the evacuation area, and they did not function after the accident. Even now, there are hospitals and nursing homes that will need to be evacuated in the event of an accident, so it is highly likely that similar tragedies will occur.

In Japan, there are not enough medical facilities, and hospitals are always crowded and beds are always occupied. If an accident caused a large number of people to be contaminated and their hospitalization was required, it would be highly likely that they would not be able to receive treatment. Within the Quantum Science and Technology Development Organization (the former National Institute of Radiological Sciences) they have the Core Advanced Radiation Medical Center, however, less than 10 people per day can be treated for serious contamination injuries in the facility. If many people were severely exposed, as in Chernobyl, it is questionable that the facility would be able to cope with the situation.

B.3.4. 個人の除染と被ばくレベル

（B.16）被ばくレベルが13,000cpmを超えた場合には除染とヨウ素剤摂取がきめられていたはずである。しかし、除染基準は以下の事情で100,000cpmに引き上げられた。多数の人がこの基準を超えていたこと、気温が低かったこと、お湯や着替えがなかったこと等である。しかも13,000cpmを超えた人に対してヨウ素剤は配布されなかった。
1080人の甲状腺測定値は信頼性に欠けるということは周知の事実である（環境省専門家会議　https://www.env.go.jp/chemi/rhm/conf/conf01-06b.html）。

(B.16) If the body surface contamination level of residents exceeded 13,000 cpm, they should be decontaminated and iodine tablets should have been taken. Since many people exceeded this level, the temperature was very low, and there was no hot water or change of clothes.
etc., it was impossible to decontaminate those people. Therefore, the decontamination level was raised to 100,000 cpm. In addition, iodine tablets were not given to those who exceeded 13,000 cpm .
It is well known that the thyroid measurements of 1,080 children are not reliable (Ministry of Environment https://www.env.go.jp/chemi/rhm/conf/conf01-06b.html).

（B5）原子力安全委員会から災害対策本部に送られた安定ヨウ素剤服用指示のFaxは現地対策本部には伝わらなかった。福島県庁にFaxで送られた指示は2日間誰も気がつかず、気づいたときには避難が終わっていた。服用指示がない場

合、福島県知事が独自に指示を出すことになっていたが、知事にはその認識がなかった。自治体も独自に判断できたが、ヨウ素剤の副作用が事前に強調されていたため、指示を出した自治体は3町にすぎず、服用した人は1万人程度であった。

地震国日本に於いては再び福島原発事故のような事故が起きることは十分に想定される。TEPCOから40㎞以上離れた地域も放射性ヨウ素の汚染は広がったにもかかわらず事故後に安定ヨウ素剤の家庭配布が決まったのは5㎞以内である。福島原発事故の経験が生かされていない。

(B5) The fax sent by the Nuclear Safety Commission (NSC) to the Nuclear Emergency Response Headquarters with instructions on the taking of iodine tablets was not forwarded on to the Local Nuclear Emergency Response Headquarters. The instructions were also faxed to the Fukushima prefectural government, but for two days no one noticed them. By the time the instructions were found, the evacuation had been completed. The governor of Fukushima Prefecture was supposed to issue instructions without waiting for instructions from the NSC, but the prefectural government did not deliberate on the problem. Although local governments were capable of making their own decisions, only three municipalities ended up giving recommendations to take iodine tablets. This is because the negative side effects of iodine tablets were emphasized in advance. As a result only around 10,000 people took the tablets.

In an earthquake-prone country like Japan, an accident similar to the Fukushima nuclear power plant accident is highly likely to occur again. Although radioactive iodine contamination spread to areas more than 40 km from the plant, the authorities decided to distribute iodine tablets to households located within only 5 km of the nuclear power plant. The experiences and knowledge gained from the Fukushima nuclear accident have yet to be utilized.

B.4.4. 除染・廃棄物管理

除染は不可能であり、福島で実際に行われているのは移染と再拡散である。被ばくを伴う除染作業を行ってフレコンバックに詰め込んだ汚染物質の最終処分場はなく、福島県には 1000 万袋に及ぶフレコンバックが至る所に積み上げられた。政府は減容化のためにこれらを再び袋から取り出し、8,000Bq/kg 以下の可燃汚染物質を焼却したり、汚染土は路盤、堤防、田畑に再利用している。こ

れは汚染物質の再拡散であり、住民の反対は強い。この有害な“除染”にこれまで 3 兆円以上が投入されている。これが消すことのできない放射性物質の根本的な問題である。

B.4.4. Decontamination and waste management

In reality decontamination is not possible, and what is actually being done in Fukushima is the relocation and diffusion of radioactive materials.

Even now, there is no final disposal site for the radioactive material that has been packed in flexible plastic bags after it is collected from decontamination work. More than 10 million bags of radioactive materials are being stored at locations in Fukushima prefecture. To reduce the volume, if the bags contain less than 8,000 Bq/kg of combustible materials they are incinerated and the contaminated soil is used for roadbeds, embankments, and fields. There is strong opposition from residents regarding this redistribution of radioactive materials. So far, more than 3 trillion yen has been spent on this harmful "decontamination" policy. This is a fundamental problem with radioactive material that cannot be eliminated.

（B.3.5.)「帰還困難区域を除く全域の除染が完了した」とは環境放射線が1mSv/y以下になったことを意味しない。　除染作業によって1mSv/y以下にはできないので、政府は外部被ばく線量が20mSv/yを超えなければ健康に問題なしとして避難指示を解除し、避難した住民への住宅支援を打ち切った。

　避難を余儀なくされた住民による損害賠償訴訟が各避難先で東電と政府に対して起こされており、全国で30件に及ぶ。避難住民はまさにステイクホルダーであるが、政府は彼らの声に耳を傾けようとはせず、裁判で争っている。日本のICRP委員も政府の側に立ってステイクホルダーに敵対的である。これはICRPの勧告にも反するものではないか。

(B.3.5) It is stated that, "Decontamination was completed in all areas except the difficult-to-return zone", however this does not mean that environmental radiation levels have fallen below 1 mSv/y. Decontamination work could not bring the level down to 1 mSv/y or lower so the government lifted the evacuation order, saying that there would be no health problems if the external measured dose was not more than 20 mSv/y. At the same time they stopped providing housing support to evacuees.

A total of 30 lawsuits have been filed against TEPCO and the Japanese government in the

evacuation districts. The evacuees are actually stakeholders, but the government does not listen to them and in fact, is fighting against them in court. Members of the ICRP in Japan are on the government's side and are also hostile to stakeholders. Isn't this against the ICRP's recommendation?

B.4.7 健康調査

（B42）「福島県で発見された小児甲状腺がん症例は、事故後の放射線被ばくの影響である可能性は低い」とする確実な根拠は存在しない。ここにその理由をのべる。

1，福島県立医大が県民健康調査における甲状腺検査のプランニングから実施までをイニシアチブをとっている(http://fmu-global.jp/fukushima-health-management-survey/.)。県立医大が計画した甲状腺検査システムでは正確ながん患者数が把握できない欠点がある。すなわち、二次検査の後に通常診療のコースに入ると悪性ないしその疑いと診断されても検討委員会に報告されないためである。

2，民間のNGO 3.11甲状腺がん子ども基金が把握した検討委員会に報告されていないがん確定症例が17例あることも明らかになった（https://www.311kikin.org）。県立医大は批判を受けて県立医大で手術を受けた集計外のがん確定者は11人いると発表した。2019年7月の時点で因果関係の解析に含まれていないがん確定患者は少なくとも28人になる。

3，県民健康調査検討委員会はそれぞれの中間取りまとめで、一巡目も二巡目も甲状腺がんの多発自体は認めている。特に二巡目では一巡目で認められなかった地域差が明らかに認められた。しかし、一巡目では区域を変えることはしなかったにもかかわらず、地域差が認められた後になって、信頼性に問題のあるUNSCEAR 2013による線量推定に基づいて区域区分を変えてしまった（第35回検討委員会　資料）。

　線量も患者数も信頼できないままで、因果関係の解析を行っても意味はない。

B.4.7. Health surveillance

(B 42) It is stated that, "childhood thyroid cancer cases found in Fukushima Prefecture are unlikely to be a consequence of radiation exposure after the accident", however, there is no firm evidence for this conclusion. Here is evidence that doesn't support the conclusion.

1, Fukushima Medical University (FMU) took the lead in planning and implementing the survey of thyroid cancer for the Fukushima Prefectural Health Management Survey (FHMS) (http://fmu-global.jp/fukushima-health-management-survey/.). However, the survey has a critical problem. It is not possible to determine the real thyroid cancer incidence rate in Fukushima. Cases diagnosed as malignant/suspected during what the FHMS calls the "follow-up observation course" are not reported to the Prefectural Oversight Committee (POC).

2, Private NGO, 3.11 Fund for Children with Thyroid Cancer has found that 17 thyroid cancer cases were not reported to the POC (https://www.311kikin.org).

FMU, in response to criticism of their insufficient disclosure of information, reported that 11 thyroid cancer cases were found of patients of "follow-up observation course". Therefore, as of July 2019, the number of patients who were not included in the cause-and-effect analysis was at least 28.

3, In its interim report, the POC acknowledged that the incidence of thyroid cancer was several tens of times higher than the sporadic incidence rate in both their first and second round surveys. Moreover, a clear regional difference was observed in the second round survey that was not observed in the first survey. Though the area classification was not changed in the first round, once the regional difference was observed in the second round, FMU changed the classification based on the dose estimation by UNSCEAR 2013, which is not reliable. (Documents of the 35 meeting of the POC).

There is no point in doing a cause-and-effect analysis when dose data is unreliable and numbers of patients is inaccurate.