Nagasaki University

Policy Proposal

for Support to Radiation Victims in accordance with the Treaty on the Prohibition of Nuclear Weapons



April, 2022

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Research Center for Nuclear Weapons Abolition, Nagasaki University

Research Center for Nuclear Weapons Abolition, Nagasaki University (RECNA) was established in 2012.

RECNA has been issuing policy recommendations based on its research. RECNA edits the "Journal for Peace and Nuclear Disarmament".

Atomic Bomb Disease Institute

Atomic Bomb Disease Institute (ABDI) was established in 1962 to develop treatment and research of long-term effects of radiation on human, including A-Bomb survivors. With our much experiences, we are also supporting victims of radiation-related disasters worldwide including Fukushima.

Introduction

Nagasaki University and humanitarian disarmament

The Treaty on the Prohibition of Nuclear Weapons (TPNW) legally entered into force in January 2021. In contrast to traditional arms control treaties that merely reduce or prohibit the use of weapons to address national security concerns, the TPNW views these issues from a humanitarian perspective. As such, its ultimate goals are to achieve a total ban of nuclear weapons as inhumane weapons, and to provide support to people who have been exposed to radiation through the use and/or development of those weapons. With these aims, the TPNW is rooted in the concept known as humanitarian disarmament.

However, we are still far from attaining a world in which all nuclear weapons are outlawed, as countries possessing these weapons, as well as their allies, seem to have turned their backs on the TPNW. Meanwhile, health hazards and anxieties persist due to radiation exposure, including that which occurs from nuclear testing and radioactive fallout. These unabated problems require urgent support from the humanitarian perspective. To demonstrate concrete effectiveness in the early stages of a humanitarian disarmament treaty such as the TPNW, it is essential to devise a system that can provide both physical and psychological support to individuals with radiation exposure, regardless of whether any harmful effects are currently apparent.

Our institution, under the new educational system introduced through the National School Establishment Law in 1949, employs its educational philosophies and research abilities to actively work toward the creation of a world in which there is unity and peace. This was precipitated by the enormous damage wrought by the atomic bombing of Nagasaki in August 1945. A survey conducted by the A-bomb Material Preservation Committee of Nagasaki showed a devastating human toll, with 73,884 casualties and 74,909 wounded (as of December 1945)¹. Among these victims were nearly 1,000 students and faculty members from the Nagasaki Medical College (the predecessor to Nagasaki University, which included both the Specialized School of Medicine and the Specialized School of Pharmaceutics), Nagasaki Normal School, and Nagasaki Higher Commercial School². In view of this historical background of our institution and the central purpose of humanitarian disarmament framed by the TPNW, the Atomic Bomb Disease Institute at Nagasaki University and the Research Center for Nuclear Weapons Abolition, Nagasaki University jointly drafted a proposal to support radiation victims, especially those who have potentially incurred damage from radiation exposure following nuclear testing.

It would be greatly appreciated if this proposal provided practical reference and was developed to make a significant contribution to advancing the cause of supporting radiation victims at the first Meeting of States Parties to the TPNW, scheduled to take place in Vienna in 2022.



Shigeru Kohno, President

h. Nagasaki University, National University Corporation

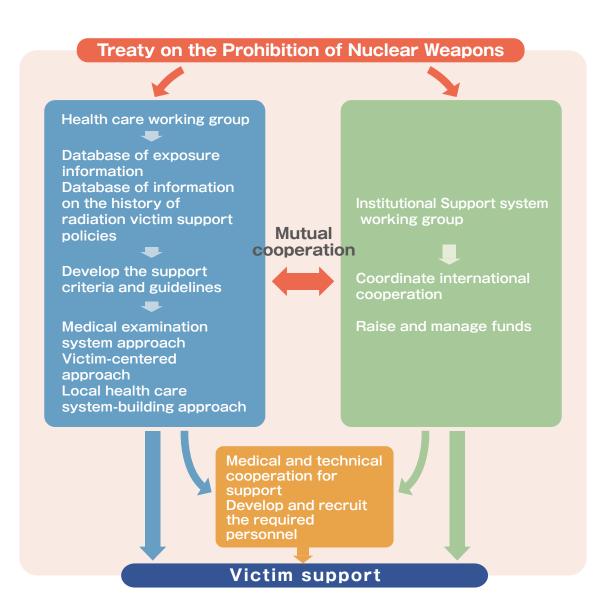
Policy Proposal Summary

The following agenda concerning the support for radiation victims should be discussed at the first Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons (TPNW):

- 1. To devise a support system in time for the next meeting, two working groups will be established, including those tasked with (1) examining medical issues (health care working group) and (2) solving institutional design and legal issues (institutional support system working group).
- 2. The health care working group will specifically be tasked with the following:
 - List areas that are potentially damaged by nuclear testing and create and share a database providing an accurate picture of the current situation based on the results of field surveys
 - Collect and share information related to support systems for radiation victims in various countries, including Japan
 - · Formulate international support criteria and guidelines for support policies
- 3. The institutional support system working group will specifically be tasked with the following:
 - Establish a permanent coordination system that will facilitate participation between States Parties, States not party, international organizations, and civil society
 - Devise diverse fundraising strategies to secure the financial resources needed for victim support

4. Both working groups will also be jointly tasked with the following:

- Develop and adopt avenues for technical cooperation to implement national policies for victim support
- · Develop and run human resources training programs for victim support



Policy Proposal

1. Provisions regulating support for radiation victims and their significance

Article 6, Paragraph 1 of the TPNW asserts: "Each State Party shall, with respect to individuals under its jurisdiction who are affected by the use or testing of nuclear weapons, in accordance with applicable international humanitarian and human rights law, adequately provide age- and gender-sensitive assistance, without discrimination, including medical care, rehabilitation, and psychological support, as well as provide for their social and economic inclusion." Such passages are often found in the international legal frameworks for humanitarian and human rights issues. This provision follows the standard set by earlier humanitarian disarmament treaties, such as the Convention on Cluster Munitions (CCM), which unambiguously puts the primary responsibility on each State Party to support victims under their jurisdiction.

However, the TPNW is distinct from other humanitarian treaties due to the provisions contained in Article 7, Paragraph 4, which expects States Parties to also support victims of nuclear explosions in areas that are not under their jurisdiction, given that they are capable of doing so³. By contrast, the CCM states that humanitarian assistance is achieved solely through the promotion of international cooperation between States Parties; while it does expressly instruct each able State Party to assist other States Parties in victim support⁴, the TPNW clearly specifies that the target of assistance provision should be the "victims." This acknowledgment may pave the way for interpretations suggesting more direct roles for States Parties (depending on the circumstances) in providing support to victims living in areas under the jurisdiction of other countries. In this respect, the provisions contained in the TPNW more strongly emphasize the importance of providing relief to victims when compared to traditional disarmament treaties and international humanitarian laws.

Moreover, Article 7, Paragraph 5 of the TPNW also mentions the roles of international agencies (including the UN), regional organizations, non-governmental agencies, and Red Cross organizations. Since it is not realistically feasible to recruit the direct involvement of private citizens in dismantling and disposing of nuclear weapons, civil society traditionally

plays a more limited role. Its contribution could include the promotion of nuclear disarmament measures through awareness campaigns and other efforts to stimulate public opinion. By contrast, a large number of disciplines may directly contribute to the support of A-bomb survivors, thus providing civil society with an increasingly active role in the abolition of nuclear weapons.

As stated in the preamble to the TPNW, there is a need to recognize the status of people who have suffered injuries from nuclear explosions. It is only by promoting their relief that we will be able to gain full awareness of the intolerable pain that is caused by nuclear weapon usage and testing, as well as recognize both the unlawfulness and inhumanity of those weapons. Moreover, the acknowledgment of these experiences may be a critical factor in persuading the international community to recognize the importance of abolishing nuclear weapons. In sum, the combined activism of civil society, nation states, and international organizations is expected to raise international awareness about the importance of the humanitarian aspect of the use or threat of use of nuclear weapons.

2. Policy Proposal Content

(1) The first meeting of states parties and future challenges

While the TPNW outlines the main goals and directions for policies aimed at victim support, it does not provide detailed or concrete advice on the contents of those policies, nor does it discuss their implementation. In this respect, the TPNW provisions on victim support follow a pattern highly similar to those found in the CCM and the Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personnel Mines and on their Destruction (also known as the Anti-Personnel Mine Ban Treaty, or simply the MBT). Looking at the status of obligation fulfillments under the CCM and the MBT, the basic frameworks and strategies for developing victim support policies have historically been discussed and formulated during Meetings of States Parties. Similarly, for the TPNW, it is extremely important to determine whether and how the first Meeting of States Parties can concretely contribute to the establishment of a support system. Based on this understanding, it is crucial to aim for a consensus on the following points:

① Establish the framework for an international support system

From the perspective of realizing a support program that is congruent with the basic goals and directions provided in the treaty, the mission entrusted to the first Meeting of States Parties is crucial. However, some problems have recently arisen. Not only has the meeting been postponed due to the spread of COVID-19, the sessions have also been shortened; meanwhile, the active participation of States Parties is under question due to such constraints. Given these circumstances, it is unlikely that the discussions will result in substantial progress or a comprehensive policy for victim support. Upon convening, the first Meeting of States Parties should therefore begin with the aim of creating a framework for an international support system that will be tasked with selecting priority issues that emerge during the session and formulating work plans. Thereafter, the official Meeting of States Parties, in which States not party to the TPNW may participate as observers, will be held only every two years, as provided in Article 8, Paragraph 2. In sum, the first Meeting of States Parties should immediately work to create the framework for an international support system, thus facilitating actual discussions and future strategic implementation.

2 Promote actual discussions by establishing international cooperation working groups

Even within the limited timeframe dictated by the meeting conditions, this initiative would be a major step toward the concrete development of victim support policies. However, many other issues should also be addressed at the meeting. If we reflect on the actual state of affairs, the first Meeting of States Parties to the TPNW is only an entry point to the discussion. The support system framework suggested above highlights the need to establish working groups that can draft concrete proposals for subsequent discussion. As reflected by current needs, two working groups should be established, including a health care working group, which will examine medical issues (e.g., how to provide adequate medical support based on the status of damage by collecting and analyzing necessary scientific data), and an institutional support system working group, which will tackle institutional design and legal issues related to the implementation of international victim support policies. These working groups should comprise members from a variety of countries and organizations, including States Parties, States not party (participating as observers), experts in relevant fields, and NGOs.

(2) Tasks that should be entrusted to the health care working group

(1) List areas that are considered to be affected by nuclear testing, provide a clear picture of the current situation, and share the collected information

Field studies on nuclear victims after the atomic bombings of Hiroshima and Nagasaki and nuclear reactor accidents at Chernobyl and Fukushima taught us that it is critically important to evaluate exposure doses in survivors. In this respect, the result of an epidemiological survey conducted on A-bomb survivors in Hiroshima and Nagasaki can still be regarded as the scientific gold standard for modern investigations into radiation exposure and its health effects; in particular, this is because researchers estimated radiation dose amounts in survivors with considerable accuracy based on both the distance from the hypocenter of the explosion and shielding conditions at that time. The fact that can be inferred from these findings is that most A-bomb radiation exposure was externally incurred at the time of the explosion⁵. By contrast, it is more difficult to assess internally incurred exposure from radioactive fallout caused by nuclear accidents, such as those at Chernobyl and Fukushima⁶. Because of this, estimated doses based on location and age at the time of the accident (exposure) were used as indexes in place of individual exposure doses.

In addition to nuclear test sites in the surrounding areas of states with such weapons, other areas that are considered to have incurred radiation exposure from nuclear testing include the Semipalatinsk test site (and surrounding areas) in the Republic of Kazakhstan (former Soviet Union), the Marshall Islands (and surrounding areas), where the United States conducted tests, certain locations in Australia, where the United Kingdom conducted tests, and both Polynesia (and surrounding areas) and Algeria, where France conducted tests. Since the majority of the radiation exposure observed around nuclear test sites has been through radioactive fallout entering the body, there is a higher risk of internal exposure (as in the case of nuclear reactor accidents) than external exposure; this is a major concern, especially for residents of the surrounding areas.

In all nuclear testing areas, it is difficult to measure radioactive nuclides and exposure doses once a certain amount of time has elapsed since the exposure episode. Regardless, major efforts should be concentrated on developing an estimation system that is linked to individual exposure doses. Despite the difficulties confronted therein, the establishment of such a system may also be necessary for designing the aforementioned support system. The following preliminary arrangements must be made first: (a) list areas with individuals who have incurred radiation exposure and provide a clear picture of the current situation (this should include dose surveys, pollution status, and a health survey of residents); (b) continuously collect and store relevant data and biological materials, which are needed to objectively assess the health effects of nuclear radiation exposure; and (c) enter all information gathered through the above procedures into a database that is shared (under certain conditions) with the concerned countries, international organizations, support groups, and experts.

② Conduct case studies on relief policies for A-bomb survivors in Japan, support policies for individuals exposed to radiation in countries with nuclear test sites, and share the collected information In a country such as Japan, which has experienced the effects of nuclear radiation through the atomic bombings of Hiroshima and Nagasaki, there are three main pathways for supporting survivors: developing and implementing a medical examination system, enhancing social welfare, and providing medical assistance. Table 1 below outlines some specific measures. In accordance with and to the extent provided by the applicable law, survivors of the atomic bombings at Hiroshima and Nagasaki may receive medical examinations regardless of their nationality and residency status; in other words, this applies both to Japanese nationals and individuals who live abroad, given that they visit Japan for services⁷. It should be noted that the Japanese support system for A-bomb survivors is not compensatory, as it is designed to provide relief through medical care.

Table 1. Main support measures provided by the Atomic Bomb Survivors Support Law (1994)

Medical Examinations	Medical examinations are provided twice yearly at no cost to the recipient. Additional examinations can be arranged upon request (up to twice each year); transportation expenses are reimbursed on such occasions.
Medical Benefits	If a survivor suffers an injury that is certified as caused by exposure to A-bomb radiation (a certified disease), then their medical expenses are covered by public funds. As a general rule, medical expenses incurred at designated medical institutions for the treatment of common diseases and injuries are also covered by public funds.
Special Medical Allowance	This is granted to individuals who require treatment for A-bomb certified diseases.
Special Allowance	This is granted to individuals with A-bomb certified diseases who do not require continual treatment.
Health Care Allowance	This is granted to A-bomb survivors who are suffering from disabilities associated with at least one of the 11 types of disease listed by the government as potentially related to A-bomb radiation exposure.
Health Allowance	This is granted to A-bomb survivors (including those exposed in utero) located within a radius of 2 km from the hypocenter of the explosion.
Nursing Care Allowance	This is granted to A-bomb survivors who require nursing care due to injuries caused by A-bomb radiation exposure.
Atomic Bomb Microcephaly Allowance	This is granted to patients who have been diagnosed with microcephaly caused by A-bomb radiation exposure.
Funeral Expenses	This is granted in cases of death among A-bomb survivors, provided that the cause is clearly related to injuries caused by A-bomb radiation exposure.

* A-bomb survivors can only apply for one of the following allowances: Special Medical Allowance, Special Allowance, or Health Care Allowance and Health Allowance.

Compensatory and medical support systems have also been established for radiation victims living in areas around nuclear test sites. In Kazakhstan, compensation is paid based on both the distance from the test site and the number of years of residence, with supplemental pensions or wages and annual paid and maternity leave provided to radiation victims through the Semipalatinsk Nuclear Victim Civil Protection Act. As for health care, medical examinations are mandatorily provided to individuals who have been affected by nuclear testing. However, Kazakhstan operates a free healthcare system, in which case it does not grant medical benefits for treatment services⁸. In the Marshall Islands, health care is provided to individuals with injuries from nuclear tests under Section 177 of the Compact of Free Association Act, as signed by both the republic island state and the United States government⁹. Moreover, the Nuclear Claims Tribunal has assessed relevant damages and calculated compensation amounts for victims. However, this is accomplished through a trust fund established by the United States government, which has denied additional compensation; under this arrangement, affected individuals may have problems receiving appropriate amounts¹⁰.

As discussed above, each system is constructed against a specific background, reflecting the local environment, relevant modes of exposure, and practical conditions. Thus, it is not feasible to simply apply any of these systems to another area. However, these cases can often be used as reference points by considering their various similarities and differences. For this reason, it is highly important to promote information sharing based on data from case studies aimed at supporting policies in countries, including Japan, where individuals have incurred radiation exposure from nuclear testing. While the tasks listed in Section ① are essential for gaining a clear picture of the actual medical conditions required to develop a support system, those listed in Section ② (i.e., case studies and information sharing) are essential for understanding the respective institutional conditions.

3 Develop international criteria and guidelines for victim support

There is a need to establish goals and criteria for victim support policies as well as to create implementation guidelines and schedules that can be used in international settings. These elements should be developed based on data from case studies conducted in various countries (including Japan) and the results of basic surveys in designated areas. In doing so, (a) due care should be taken (depending on the actual conditions in designated countries and areas) not to impose excessive burdens on States Parties that have committed to providing victim support; meanwhile, (b) vigilant efforts should be made to ensure that effective, efficient, fair, and balanced guidelines allow victims to receive adequate support as quickly as possible.

④ Select a support approach

There are three main ways for the development of victim support policies, namely, the medical examination system approach, the victim-centered approach, and the local healthcare system-building approach.

The medical examination system approach would be designed based on Japan's experience of supporting A-bomb survivors¹¹. Since it is well-known that malignancies are long-term side effects of radiation exposure, it is necessary to establish and implement a system of regular medical examinations aimed at the early diagnosis of cancer in individuals whose exposure is thought to have exceeded a certain dose.

The victim-centered approach entails providing support based on both the actual conditions that occur due to certain doses of radiation exposure, and the presence of any radiation-induced diseases. In its consideration of the relationship between various exposure doses and diseases, this approach aims to establish exposure dose standards for specific diseases in order to determine the appropriate amount of support for each radiation victim.

The local healthcare system-building approach promotes specific interventions in designated areas where past exposure conditions have not adequately been ascertained. For example, this approach has been employed to support A-bomb survivors of Nagasaki in designated areas who suffer from mental illness. In such cases, it is necessary to determine appropriate support levels and content based on the designated area and local conditions.

Victim support policies that are based on international criteria and guidelines must employ approaches that are suitable for the characteristics of each country and area in which interventions are required. Depending on the case, this may entail either a single or multiple approach(es). These factors are of crucial importance when developing support criteria and implementation guidelines.

(3) Tasks that should be entrusted to the institutional support system working group

1 Quickly develop an international cooperation system

The World Health Organization (WHO) recently established the Radiation Emergency Medical Preparedness and Assistance Network (REMPAN), which is designed to help international health experts share information and advice on diagnosing and treating patients who have been exposed to radiation from nuclear disasters and workplace radiation incidents. Similarly, the International Commission on Radiological Protection (ICRP) has established guidelines for the protection of individuals living in long-term contamination areas (due to nuclear accidents or after radiation emergency situations), as well as guidelines aimed at protecting people and the environment from radiation following large-scale nuclear accidents. However, there is currently no international cooperation system for supporting the victims of radiation exposure due to nuclear testing or the use of nuclear weapons. In this regard, the implementation of a support system for nuclear explosion victims should take advantage of the vast experience accumulated by the WHO and ICRP, which must be leveraged through widespread international cooperation. This is critical, as many States Parties would be burdened by the requirement to provide victim support in the absence of effective international cooperation. In fact, this may also undermine the benefits gained from the ratification of the TPNW altogether. As such, it is extremely important to undertake the development of an international cooperation system for victim support at the earliest possible stage. This will not only facilitate the fulfillment of obligations assumed under the TPNW; it will also contribute to the smooth implementation of support policies for radiation victims around the world, including those who may be exposed to future nuclear disasters.

② Establish a permanent coordination mechanism (possibly a secretariat) for the participation of States Parties, States not party, international organizations, and private sectors

The TPNW does not mention a specific system for supporting radiation victims. However, the establishment of an effective and efficient international cooperation system for victim support requires a clear understanding of what each country that implements relevant policies will need. Moreover, this will ensure appropriate coordination between those countries and donors that can supply the necessary resources. Considering that Meetings of States Parties are only held once every two years, it is not realistic or efficient to expect that such coordination will be achieved solely through those events. Along with the problem of inefficiency, there are also concerns that individual negotiations between potential donors and States Parties may lead to biased aid provisions, thus preventing victims with higher assistance needs from receiving prioritized support.

To recruit a wide range of donors and appropriately allocate assistance measures, it is therefore advisable to establish a permanent coordination mechanism to ensure that States Parties, States not party, international organizations, and private sectors can actively participate in victim support policies. While it is certainly difficult to establish a new international organization from scratch, the MBT set a relevant precedent by having the Switzerland-based NGO Geneva International Center for Humanitarian Demining (GICHD) play a significant role in the implementation of its provisions, even though it was not formally established as a secretariat under the treaty. The first step toward fulfilling the obligations of the TPNW is to promote the coordination of international cooperation activities between various countries, international organizations, and private sectors. This highlights the urgent need to establish an organization such as the GICHD, which can, thus, enforce appropriate and adequate support provisions.

③ Raise funds from a wide range of investors and pool the economic resources needed to implement victim support policies

Under the terms of the treaty, any costs related to the implementation of victim support policies should be borne, in the first place, by the countries that provide assistance. However, a large number of States Parties to the TPNW are developing countries, thus making it impractical (and inadvisable) to impose heavy burdens on their public finances. We should also avoid situations in which potential States Parties hold back from ratifying the treaty for financial reasons. In other words, while the implementation of victim support policies requires both technical and financial cooperation, there are currently no specific fundraising plans for this purpose. To cope with this state of affairs, 1) contributions should be sought from a wide range of donors, including not only States Parties, but also relevant international organizations, States not party, and private sources; and 2) any collected funds should be temporarily pooled while the design and establishment of a system for promoting the efficient management and utilization of financial resources is urgently undertaken. As an example, the WHO broadly funded the supply of COVID-19 vaccines to developing countries, and the ensuing vaccination campaigns, using donations collected not only from governments, but also from international organizations, private foundations, and business enterprises. Similar approaches should also be applied to the TPNW. In doing so, important issues such as how to manage collected funds and who will be responsible for managing them should be quickly addressed through follow-up discussions within the framework of the newly established international cooperation system.

(4) Ensure medical technology support and develop health care personnel

(1) Medical technology cooperation for the domestic implementation of victim support policies

It is important to establish an international cooperation system among relevant parties that can provide support at the requisite medical, technological and institutional levels, thus delivering prompt assistance to victims residing in all affected States Parties. In concrete terms, it is necessary to forge close cooperation among highly skilled professionals who can provide the medical support needed to gain a firm grasp of the realities of radiation exposure and to better understand the types of medical examinations that will be required. The same type of support is needed to establish a system for improving the administration of medical insurance. In this respect, it is advisable to cooperate with international organizations that hold high credentials in relevant fields (e.g., the WHO and the United Nations Development Programme [UNDP]) while ensuring bilateral cooperation, consultancy provisions, and on-site guidance from higher learning institutions that feature technical and specialized backgrounds (e.g., universities and research institutes). To effectively promote this type of cooperation, it is preferable to utilize the coordination mechanism described in Section (2) of (3)¹². It is also advisable to establish a worldwide roster from which qualified personnel can be secured to provide consulting services for medical technology support.

2 Develop the health care personnel needed for victim support

While prompt and direct provisions are essential for sustainably supporting radiation victims, it is even more critical to improve radiation-related education and develop qualified personnel in the affected areas. Whatever type of support approach is adopted, the personnel who carry out interventions must be recruited from the countries in which the victims reside. Training programs should be launched as soon as possible, as it takes considerable time to develop qualified personnel. To accomplish this goal, some key issues must be addressed quickly, including the development of curricula, institutions, and organizations that can provide qualified training, as well as the establishment of an ideal fellowship system. In this regard, Nagasaki University has already collaborated with Fukushima Medical University to establish the Disaster and Radiation Medical Sciences Joint Master's Program, which aims to develop qualified specialists in Japan and abroad. Moreover, both institutions have collaborated with North-Western State Medical University in the Russian Federation (which experienced the Chernobyl accident) to establish a double degree program aimed at developing global human resources in relevant fields. In the future, similar programs should be created to enable the development of required human resources not only in countries that are affected by nuclear testing, but also in States Parties at large. This will ensure that any specialized knowledge gained from these programs can be applied to manage exposure cases resulting from weapons usage and nuclear disasters alike.

This policy proposal was primarily authored by Satoshi Hirose, who is affiliated with the Research Center for Nuclear Weapons Abolition (RECNA), Nagasaki University. Assistance was provided by Fumihiko Yoshida, who is also affiliated with RECNA, as well as Yasushi Miyazaki and Noboru Takamura, both of whom are affiliated with the Atomic Bomb Disease Institute, Nagasaki University.

- 1 http://city.nagasaki.ajisai-call.jp/faq/show/3705?site_domain=default Accessed December 16, 2021
- 2 The casualties were specifically distributed as follows: 302 faculty members and 596 students from the Nagasaki Medical College, 54 students from the Nagasaki Normal School, and one faculty member and 26 students from the Nagasaki Higher Commercial School.
- 3 The exact wording is: "Each State Party in a position to do so shall provide assistance for the victims of the use or testing of nuclear weapons or other nuclear explosive devices."
- 4 CCM, Article 6, International cooperation and assistance:

"1. In fulfilling its obligations under this Convention, each State Party has the right to seek and receive assistance.

2. Each State Party in a position to do so shall provide technical, material and financial assistance to State Parties affected by cluster munitions, aimed at the implementation of the obligations of this Convention. Such assistance may be provided, inter alia, through the United Nations system, international, regional or national organizations or institutions, non-governmental organizations or institutions, or on a bilateral basis" (Emphasis added by the author). There is no mention about individual victims as recipients of international support.

- 5 External exposure occurs when all or parts of the body are exposed to radiation from external sources.
- 6 Internal exposure occurs when the source of radiation is inside the body (e.g., through intake of radioactive material). This is, typically, the result of ingesting or inhaling radioactive materials from the air, food, or drink. Radiation exposure derived from diagnostic or therapeutic procedures can also be detected in the blood cells.
- 7 Moreover, the governments of both Nagasaki Prefecture and Nagasaki City have cooperated with the Republic of Korea National Red Cross to continually provide medical examinations and health counseling to A-bomb survivors residing in South Korea since the experimental project was undertaken in 2004, though which is not a part of implementation of the Atomic Bomb Survivors Support Law.
- 8 Seiichiro Takemine, Noriyuki Kawano, Talgat Muldagaliyev, Kazbek Apsalikov, "Outline of the Law on Social Protection of Citizens who Suffered from Nuclear Tests in Semipalatinsk Conducted by the Former Soviet Union," Hiroshima Peace Science No. 37, Institute for Peace Science Hiroshima University, pp. 76-81.
- 9 Compact of Free Association Act of 1985, Section 177 "(a) The Government of the United States accepts the responsibility for compensation owing to citizens of the Marshall Islands or the Federated States of Micronesia for loss or damage to property and person of the citizens of the Marshall Islands, the Federated States of Micronesia or resulting from the nuclear testing program which the Government of the United States conducted in the Northern Marshall Islands between June 30, 1946, and August 18, 1958."
- 10 https://mh.usembassy.gov/the-legacy-of-u-s-nuclear-testing-and-radiation-exposure-in-the-marshall-islands/ Accessed December 16, 2021
- 11 There is not yet a final verdict on the role and significance of medical examinations or interventions for a large number of residents who were exposed to low radiation doses in the aftermath of the Fukushima Daiichi Nuclear Power Plant accident in Japan. However, some experts believe that such doses may not necessarily warrant regular checkups, especially cancer screenings. Moreover, there is no international consensus on the definition of "low radiation dose," although international organizations, including the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and International Commission on Radiological Protection (ICRP), often define low exposure doses as those less than 100 mSv. In one instance, a 2010 report from UNSCEAR defined low radiation doses as those less than 200 mSv.
- 12 Please see p. 11

References

Treaty on the Prohibition of Nuclear Weapons (excerpts) Preamble

(omitted) *Mindful* of the unacceptable suffering of and harm caused to the victims of the use of nuclear weapons (hibakusha), as well as of those affected by the testing of nuclear weapons, (omitted)

Article 6

Victim assistance and environmental remediation

- 1. Each State Party shall, with respect to individuals under its jurisdiction who are affected by the use or testing of nuclear weapons, in accordance with applicable international humanitarian and human rights law, adequately provide age- and gender-sensitive assistance, without discrimination, including medical care, rehabilitation and psychological support, as well as provide for their social and economic inclusion.
- 2. Each State Party, with respect to areas under its jurisdiction or control contaminated as a result of activities related to the testing or use of nuclear weapons or other nuclear explosive devices, shall take necessary and appropriate measures toward the environmental remediation of areas so contaminated.
- 3. The obligations under paragraphs 1 and 2 above shall be without prejudice to the duties and obligations of any other States under international law or bilateral agreements.

Article 7

International cooperation and assistance

- 1. Each State Party shall cooperate with other States Parties to facilitate the implementation of this Treaty.
- 2. In fulfilling its obligations under this Treaty, each State Party shall have the right to seek and receive assistance, where feasible, from other States Parties.
- 3. Each State Party in a position to do so shall provide technical, material and financial assistance to States Parties affected by nuclear weapons use or testing, to further the implementation of this Treaty.
- 4. Each State Party in a position to do so shall provide assistance for the victims of the use or testing of nuclear weapons or other nuclear explosive devices.
- 5. Assistance under this Article may be provided, inter alia, through the United Nations system, international, regional or national organizations or institutions, non-governmental organizations or institutions, the International Committee of the Red Cross, the International Federation of Red Cross and Red Crescent Societies, or national Red Cross and Red Crescent Societies, or national Red Cross and Red Crescent Societies, or on a bilateral basis.
- 6. Without prejudice to any other duty or obligation that it may have under international law, a State Party that has used or tested nuclear weapons or any other nuclear explosive devices shall have a responsibility to provide adequate assistance to affected States Parties, for the purpose of victim assistance and environmental remediation.