

## To do something from Nagasaki, Japan

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### 1. Introduction

The future of the Korean Peninsula is a difficult theme to discuss in terms of potential solutions. There are important but challenging questions regarding the potential scenarios and necessary conditions for transforming the Korean Peninsula into a peaceful region with no nuclear threat, and how these challenges can be overcome. The peacebuilding agenda in the Korean Peninsula has a long history. Although 66 years have passed since the 1953 Korean Armistice Agreement, the outcomes are not yet confirmed. Nevertheless, we cannot stop our commitment to the challenge of peacebuilding in the region, and we must do something to reduce the nuclear threat in the Korean Peninsula. We, the people of Nagasaki, must take action to further the goal of nuclear abolition.

### 2. Doing something from Nagasaki

According to Dr. John Galtung<sup>1</sup>, a sociologist of peace education, “Peace Education is learning to hate war, and love peace, and to do something about it.” The last part of this definition, “to do something about it”, is the focus of the current research. Through taking action, or learning by doing, peace-related concepts can become closer to people’s everyday lives. Dr. Jun, the author of this paper, lived in Japan for around 30 years as a foreigner and felt that Japan could play an international role in peace building. Thus, taking action for international peacebuilding could be an important role for Japan and Nagasaki. The citizens of Nagasaki underwent a deep learning experience as a result of World War II, and have a unique understanding of the importance of “learning to hate war and love peace and to do something about it”. The people of Nagasaki have worked tirelessly for peacebuilding. Some of the first academic organizing of peacebuilding activity took place at the Research Center for Nuclear Abolition (RECNA) at Nagasaki University, giving the citizens of Nagasaki an opportunity to take part in peacebuilding initiatives. RECNA functioned to propose ways of addressing serious concerns in the process of peacebuilding.

Nagasaki University, located in a geographic region that faces North East Asia across the East China Sea, possesses the history and memory of Dejima, and has been invested with a unique mission by the atomic bombing<sup>2</sup>. Nagasaki University was established around the School of Medicine, which was impacted by the bombing. As a result, Nagasaki University possesses unique knowledge about the atomic bomb, and many peaceful actions and approaches were proposed in response. The North East Asia-Nuclear Weapon Free Zone (NEA-NWFZ) was proposed by RECNA in 2015<sup>3</sup>. The NEA-NWFZ was based on the wisdom of previous generations, who had many experiences through acting consciously together with the support of many citizens.

It is important to consider whether the legal provision for denuclearization is an appropriate first step. Some critics may argue that Japan’s nuclear material should be removed before proposing a nuclear free agenda. Another serious criticism is that the NEA-NWFZ does not consider the balance of power between the ROK-US alliance and the US-Japan alliance. It could also be argued that the NEA-NWFZ has a theoretical focus, and does not deal with real problems. However, all change begins with the development of an approach to action.

### 3. Suggestions for the “NEA-NWFZ” approach

First, the experience of Nagasaki could be used effectively to inform the NEA-NWFZ.

The NEA-NWFZ has been proposed by RECNA at Nagasaki University, which has produced a number of important medical findings, extending our understanding of the effects of radiation after the 1945 nuclear bombing in Nagasaki. Including these medical findings, a substantial amount of accumulated knowledge was gained during the Chernobyl accident. In the Great East Japan Earthquake and the TEPCO Nuclear Disaster, many members of the Disaster Medical Assistance Team (DMAT) were dispatched to Fukushima Prefecture through the Research and Support Center for the Future of Fukushima of Nagasaki University. The medical expertise of staff at Nagasaki University, gained from deep experience, should be used to inform the approach taken by the NEA-NWFZ.

North Korea has conducted six underground nuclear tests. The impact of these tests is likely to manifest in various ways. Underground pollution from nuclear tests are expected to affect the local area, and environmental pollution of the earth’s surface is likely to occur. On the basis of the experiences of Chernobyl and Fukushima, the health impacts on the population are expected to be severe. In the process of the NEA-NWFZ, the experiences of Nagasaki could be an effective source of learning.

Second, remote sensing and geographic information systems (GIS) technology could be helpful for the NEA-NWFZ.

Displacement of the earth’s surface caused by underground nuclear explosions can be detected using satellite remote sensing technologies with advanced methods<sup>4</sup>). Interferometric synthetic aperture radar (InSAR) technology is an advanced technology for surveillance that can be used in research, utilizing radar technology with satellite images. InSAR can be used to generate surface deformation maps using two or more SAR images. Using this method, variations of an observed location are captured in three dimensions and visualized using recently developed computer technology. Increasing attention is now being paid to this technology. GIS technology has been developed as a useful tool for data storage and manipulation<sup>5</sup>). An often-overlooked aspect of many long-term monitoring efforts is the effective storage and manipulation of data accumulated over a number of years. GIS can provide a useful tool for long-term monitoring combined with remote sensing technology.

I hope that the wisdom gained in the Nagasaki experience and developments in remote sensing and GIS technology can contribute effectively to the NEA-NWFZ.

### REFERENCES

- 1) Johan Galtung, Peace education: learning to hate war, love peace, and to do something about it, *International Review of Education*, 29(3):281-287, 1983.
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- 3) [http://www.recna.nagasaki-u.ac.jp/recna/bd/files/Proposal\\_E.pdf](http://www.recna.nagasaki-u.ac.jp/recna/bd/files/Proposal_E.pdf)
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