

Exiting to a 'Post-Nuclear Weapon World' and a Sustainable Future:
Visions and Challenges for Transformation
and a Just Transition towards the Post-SDGs World

Hiroshima Prefecture
Hiroshima Organization for Global Peace (HOPE)

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This paper is developed based on the discussions of the Working Group for Nuclear Disarmament and a Sustainable Future under the responsibility of the group's co-chairs. Not all the descriptions in this paper are based on the unanimity of the working group members or the adjustment of wording. This Working Group has sought comments and opinions not only from an advisory group that comprises experts in security, the environment, the Sustainable Development Goals (SDGs) and other fields, but also from the interested youth participants. This paper is intended to present "Visions and Challenges," and specific proposals will be formulated from now on.

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Executive Summary

I. Purpose

The issue of nuclear weapons has been discussed mainly along the axes of *peace and security* and *humanitarianism and ethics*. Here we propose a new axis of *sustainability* and advocate the need for a three-dimensional view of the nuclear weapons issue and a transformation towards a better future.

II. Our appeal

The group identifies “Sustainable Peace and Prosperity for All” as a common global goal beyond development. We propose to start discussion to adapt it after the current Sustainable Development Goals (SDGs) that expires in 2030. In doing so, we suggest that the abolition of nuclear weapons should also be discussed, as there is no truly sustainable world without the realization of a nuclear weapons-free world, leaving all the nuclear weapons completely behind.

III. Our Views

A. Transformation to a world without nuclear weapon with a just transition

The Ukrainian crisis has heightened interest in nuclear weapons, and now is the time to discuss the transition to a nuclear-weapon-free world. If we are to take action only resulting to be a short-term response or postponement within the scope of the current situation, it is merely a shifting of the problems. A concrete transformation based on a broader perspective with a fair transition are required.

B. Three crises

Our world is currently faced with three crises which amplify each other. These crises are linked to the nuclear weapons issue and only to increase the severity of the crises. If we do not turn the corner now, we fear that we will cross the tipping point towards an unsustainable catastrophe for the planet and humanity.

1. Crisis concerning the limits of the Earth

Impact of human activity to push the planetary boundary (Anthropocene)

2. Crisis due to great division of the world and society

Fragmentation of the world and societies has worsened; geopolitical conflicts between major powers intensify, widening inequalities, inequalities and intolerance.

3. Crises due to the abuse of scientific and technological innovation

Abuse of scientific and technological innovation is a risk factor that may cause disasters for the planet and humanity.

IV. Our Ideas for Change *

A. Policy-making based on objective data and evidence

We are highly aware that the existence of nuclear weapons cast burden on social costs and environmental impact and the AI and digital technology influence on military and nuclear weapons. Like the IPCC/SBSTA (Subsidiary Body for Scientific and Technological Advice), which has scientifically proven that climate change is caused by human activities and incorporated it into the policy-making process, we are committed to policy making based on objective data and evidence.

B. Discussions in three-dimensional networks

We aim to connect diverse civil society actors, including local authorities, and build a vibrant three-dimensional network across sectors. Communicating horizontally and vertically, we will create a forum for discussion on nuclear weapons issues and sustainability.

C. Presenting a concrete image of a world without nuclear weapons

What does a world without nuclear weapons look like? Would it bring possibilities and prosperity to us humans? We hope to illustrate those concrete pictures through the discussion on human security and reference to precedents such as the existing nuclear-weapon-free zones in the Southern Hemisphere, together with young people.

With the aim of realizing these, we envisage mainstreaming the elimination of nuclear weapons towards 2030 along two paths - civil society and intergovernmental - in order to position it in the post-SDGs global agenda.

** Working Group is open for more concrete proposals and is planning to hold further discussion to follow in October, 2022.*

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Introduction

More than three quarters of a century have passed since humankind acquired nuclear weapons and immediately used them in actual warfare. In 1945, at the end of the World War II, an atomic bomb was dropped on Hiroshima on August 6, and another on Nagasaki on August 9. Consequently, Hiroshima and Nagasaki were the first two cities to suffer nuclear attacks. Since then, Hiroshima and Nagasaki have been totally devoted to appeal for world peace and the complete abolition of nuclear weapons.

The destructive force of the atomic bombs is categorized at a completely different level compared to that of conventional weapons. The heat rays and blasts caused by an atomic bomb alone were so devastating that they destroyed the city and the lives of people living there in a flash. Even those who barely survived the atomic bombings, or *hibakusha*, have been forced to suffer from illness related to radiation released by the atomic bomb through their lifetime. The residual radiation caused severe long-term damage to not only human health but also the overall natural environment and ecosystems. August 1945 marked the threshold of a global era of nuclear weapons, or more precisely a global era where the use of nuclear weapons would be regarded as real. At the same time, it was also the starting point for an era where people would live next to weapon systems that could entail the risk of threatening the future of humankind and the survival of the earth.

Since atomic bombs were dropped on Hiroshima and Nagasaki, humankind has not experienced the tragedy of a nuclear weapon use in actual warfare. As long as nuclear weapons exist in the world, there is no guarantee that no more cities will suffer from utter devastation like Hiroshima and Nagasaki. In fact, as of this point of time (March 2022), Russian President Vladimir Putin has launched a military invasion of neighboring Ukraine and ordered that his country's nuclear forces be on high combat alert, heightening the risk of nuclear weapons being used in actual warfare. In Ukraine, the Russian forces have even attacked one of Europe's largest nuclear power plants, as well as research facilities where nuclear substances are handled. It can be said that a nuclear war has now become a "clear and present danger" to all of us. UN Secretary-General António Guterres firmly stated, "The prospect of nuclear conflict, once unthinkable, is now back to the realm of possibility.

The security and safety of nuclear facilities must also be preserved.”ⁱ Russian journalist Dmitry Muratov (2021 Nobel Peace Prize Laureate) and Beatrice Fihn, Executive Director of the International Campaign to Abolish Nuclear Weapons (ICAN) (2017 Nobel Peace Prize Laureate), issued a joint statement, which says, “We warn about the unprecedented risk to international peace and security posed by the menace of nuclear weapons, and the urgent threat created by Putin’s reckless action and rhetoric.” The statement also points out a harsh reality by saying, “The fate of humanity today rests on the rationality of a few leaders who control nearly 13,000 nuclear weapons, a terrifying force powerful enough to destroy the earth many times over.” It concludes that, toward the abolition of nuclear weapons, “The time to act is now.”ⁱⁱ

We must now make a new, radical transformation to a world free of nuclear weapons. Moreover, issues that we have been simultaneously faced with, including the climate change crisis represented by global warming and the global COVID-19 pandemic, will not be solved without both international collaboration and the drastic change of our ways of thinking and acting. All these issues can be considered to be issues critical to the “sustainability” of humankind and the earth. In response to this situation, the Hiroshima Organization for Global Peace (HOPE) has established a working group that comprises experts in not only nuclear issues and security but also the global environment, global health, science and technology, and other fields to discuss the theme “Toward the establishment of a post-SDG global agenda, including the abolition of nuclear weapons.” Young people as next-generation leaders have also participated in these discussions.

This initiative aims to position the abolition of nuclear weapons in the comprehensive context of its relationship with the sustainability of humankind and the earth and develop a new nuclear abolition theory. The working group has explored the simple principle that the human species will never achieve a truly sustainable world without completely eradicating nuclear weapons, or in other words, exiting to a “post-nuclear-weapon world.” Nuclear disarmament discussions have so far had two elements—the focus of peace and security and a humanitarian, ethical, and legal focus, in both of which significant achievements have been made. However, our working group has added “Sustainability” as a new third element with the aim of reconfirming the significance of the total abolition of nuclear weapons from more diverse perspectives and calling for a more active commitment of the international

community in creating a better future.

“An exit to a post-nuclear-weapon world” here means realization of a world free of nuclear weapons. However, we cannot turn back the hands of the clock to return to the world where humanity did not yet have nuclear weapons nor shut our eyes to the unmeasurable threat posed by nuclear weapons to the sustainability of humankind and the earth. Therefore, achieving a world free of nuclear weapons involves the resolute determination and choice of humanity to “exit” from the current world dependent on nuclear weapons for strategy and order. Creating a more sustainable future requires the world to make two kinds of transformations: a transformation toward the abolition of nuclear weapons themselves and a transformation into a world where no nuclear weapons are needed. While discussions within our working group are under way, we are planning to mainstream the target of exiting to a “post-nuclear-weapon world,” which we have theorized based on our abovementioned views on the current issues, through the two channels of civil society and intergovernmental relationships in order to clearly position the target as an important new normal in post-SDG global goals, which will be thoroughly discussed at the UN towards 2030.

1. Shifting to a New Post-SDG Paradigm: “Sustainable Peace and Prosperity for All”

The 2020s is the decade of action to implement the 2030 Agenda,ⁱⁱⁱ which the UN General Assembly adopted with a pledge that “no one will be left behind” in 2015. We must promote bolder initiatives than before. However, it is an undeniable fact that the COVID-19 pandemic, whose worldwide spread marked the start of the decade, has caused a sharp slowdown or regression in our efforts to achieve the Sustainable Development Goals (SDGs). Meanwhile, one of the latest reports of the Intergovernmental Panel on Climate Change (IPCC), which collects and provides scientific information on climate change, states that it is “unequivocal” that greenhouse gas emissions from human activities have caused global warming, revealing human influence on the global environment.^{iv} Moreover, the Russian invasion of Ukraine from February 2022, with an increasing possibility of Russia’s limited use of tactical nuclear weapons, has radically challenged the post-WWII international order and revealed the structural and institutional fragility of the UN Charter-based system. These recent developments have urged us to recognize that the human species and the planet are currently faced with a crisis of sustainability

and that mere short-term fixes or procrastination without major changes to the status quo will no longer help us tackle this extremely severe crisis.

However, a grave crisis could be a marvelous opportunity to shift the world fundamentally. The world is now witnessing a bold shift to an era of a post-COVID and decarbonized new normal toward a more sustainable future. An exit to a post-nuclear-weapon world should be part of this movement toward a sustainable new normal. A concrete transformation of our mindsets and behaviors, as well as ideas for a just transition, need to be explored based on such a broader perspective.

In view of a world beyond 2030, our initiative aims to include “exiting to a post-nuclear-weapon world” in the global goals that UN member states will set jointly as post-SDG goals. However, to avoid misunderstanding, we would like to add that our initiative does not have to wait for any post-SDG goals and that naturally we should constantly remind the world about relationships between nuclear weapons and sustainability and continue our activities for abolishing nuclear weapons through a process toward the new goals, that is, the process of discussions about the current SDGs and actions to achieve them.

As is widely known, with 2030 as the target year, the SDGs call for behavioral transformation in the five “P”s—people, planet, prosperity, peace, and partnership—to build a sustainable, better future. The preamble of the 2030 Agenda, which sets the SDGs, says, “There can be no sustainable development without peace and no peace without sustainable development.” In addition, Goal 16 reads, “Promote peaceful and inclusive societies for sustainable development ...” Nevertheless, the agenda sets no goal or target related to the abolition of nuclear weapons nor even includes mention thereof.

It is said that the SDGs have two major origins: the Millennium Development Goals (MDGs) and sustainable development.^v On the line of the MDGs, the High Level Panel on the Post-2015 Development Agenda was established prior to negotiations for goals that we now know as the SDGs. In 2013, the panel released

the report “A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development.”^{vi} One of the 12 goals set in the report concerns peace, but there is no mention of nuclear disarmament or nuclear weapons.

On the other hand, the line of sustainable development originated from “Our Common Future,”^{vii} a report released in 1987 by the UN World Commission on Environment and Development (WCED), which was chaired by former Norwegian Prime Minister Gro Harlem Brundtland. The line led to the UN Conference on Environment and Development (Earth Summit) in 1992 and the World Summit on Sustainable Development (Johannesburg Summit) in 2002, where discussions focused on global environmental issues and their relationships with the economy and society. The nature of this line was also inherited by the UN Conference on Sustainable Development (Rio+20), which was held in 2012 prior to negotiations for the SDGs. Rio+20 discussed the integration of the economic, social and environmental dimensions of sustainable development but did not include political and security issues in its focus.

The SDGs were set through intense three-year intergovernmental negotiations from 2012 to 2015. Since nuclear-weapon states and other states that possess nuclear weapons participated in the negotiations, it is thought that it was naturally difficult to set a goal or target concerning nuclear weapons. Without any governmental authority or power to enforce laws and maintain order, the international community has an anarchic nature. Since the basic unit of international community is the sovereign states, political power conferred by the people or citizens of each state is exercisable within the territory of the state (national government). This in turn means that the state should be basically accountable only to its people. No states exist primarily as servants of the entire international community. Therefore, for example, even if Target 16.4 in the SDGs urges the international community to “significantly reduce illicit financial and arms flows,” licit arms flows are not included in the scope of the target. Goal 16 does not concern weapons that can have massive impacts on the sustainability of humankind, including nuclear weapons and other weapons of mass destruction, biological weapons and chemical weapons. Although Goal 16 is thus far from sufficient from a security perspective, the negotiations for the SDGs were thrown into considerable confusion over whether or

not to include this goal, barely reaching an agreement.

Another factor for confusion over Goal 16 is that the concept of peace belonged to the area of politics and security in the UN categorization and was not included in the category of sustainable development. However, it is well known that growing emphasis has been placed on nuclear disarmament and the ultimate goal of abolishing nuclear weapons in the international arena of discussions. Every year since 1994, the UN General Assembly has cast a majority vote for resolutions on nuclear disarmament toward the ultimate abolition of nuclear weapons, which have been submitted under the leadership of the Japanese government. In addition, UN Secretary-General Guterres launched “An Agenda for Disarmament” (May 2018)^{viii} and issued the report “Our Common Agenda” (September 2021)^{ix} as a follow-up to the “Declaration on the commemoration of the 75th anniversary of the United Nations.” The report includes in the “New Agenda for Peace” not only the non-use and non-proliferation of nuclear weapons but also the reduction of strategic risks in view of the eventual elimination of nuclear weapons. The Treaty on the Prohibition of Nuclear Weapons, which will serve as an exit to a world without nuclear weapons, came into effect in 2021.

Meanwhile, we also need to remember that the first sentence of the preamble of the 2030 Agenda says, “This Agenda is a plan of action for people, planet and prosperity,” emphasizing that the SDGs do not aim for “development” but “prosperity.” Furthermore, in September 2020, UN member states adopted the “Declaration on the commemoration of the 75th anniversary of the United Nations,” which defines 12 areas of commitments in addressing global challenges. Based on this declaration and the outcome of the UN75 Initiative, UN Secretary-General Guterres launched a process of reflecting on the future of multilateralism and issued the abovementioned Secretary-General report “Our Common Agenda” in September 2021. At the beginning of the report, Guterres states, “Humanity’s welfare—and indeed, humanity’s very future—depend on solidarity and working together as a global family to achieve common goals. For people, for the planet, for prosperity and for peace.” This statement is noteworthy because he has chosen the word “prosperity” rather than “growth.” This reminds us that economist Tim Jackson emphasizes in a thought-provoking manner in his book *Prosperity without Growth: Foundations for*

the Economy of Tomorrow that it is necessary to eliminate external diseconomies resulting from growth strategies and devise specific measures to achieve a “lasting prosperity” for humanity and the planet.^x

We believe that, if we take into consideration these developments too, we should clarify at least the following two points to make a post-SDG world truly sustainable. The first point is that UN member states’ discussions about new global goals for the future beyond 2030 should be based on fully broadened imagination to focus on goals and targets that will lead to the achievement of “Sustainable Peace and Prosperity for All,” rather than limiting themselves to sustainable “development” and “growth.” The other point is that it is a matter of fact that no sustainable planet or prosperity can be achieved without peace and security and that considering sustainable peace and security requires strengthening a foundation for the sustainability of the earth as the home of humankind and for the fruit of prosperity for all people with no one left behind.

At the beginning of “Our Common Agenda,” UN Secretary-General Guterres emphasizes, “In our biggest shared test since the Second World War, humanity faces a stark and urgent choice: a breakdown or breakthrough.” Everyone surely has the experience of being thrown into the turmoil of the real world or being faced with difficult challenges to find themselves at a crossroads or turning point in their destiny. While discussing many issues, we may have a feeling of *déjà vu* when it is pointed out that our current position is at a critical crossroads, even if it is rhetorical. Nevertheless, we in the working group share keen awareness that we are truly at a crossroads now, where human activities, that is, the choices of each of us have significant impacts on the sustainable future of the earth. In other words, the sustainability of the earth depends on how boldly we can transform our actions now. We are challenged to make a radical transformation—a drastic paradigm shift, which involves shedding new light on completely new perspectives and once neglected alternatives and incorporating them into our practices, instead of being content with the status quo or its extension, procrastinating on measures to address difficult issues, or sticking to common sense or conventional stereotypes. Nuclear disarmament also requires this level of transformation, which means exiting to a post-nuclear-weapon world, that is, completely abolishing nuclear weapons.

2. Amplification of Three Global Crises and the Growth of a Threat of Nuclear War

The underlying reason for our urgent need for a paradigm shift is that there is serious concern that the earth and humanity will exceed the tipping point and irreversibly head for a catastrophe that makes them unsustainable unless we radically change our ideas, means and actions. In fact, our world is currently faced with three global crises: a crisis concerning the limits of the earth, a crisis due to great divisions of the world and society, and a crisis due to the abuse of scientific and technological innovation. We are gravely concerned that, since the beginning of the 2020s, these three global crises have deepened, amplified each other, and become more serious. The growing climate crisis and the loss of biodiversity due to the COVID-19 pandemic are directly linked to the limits of the earth. The major factor behind recent incidents that have made the international situation unstable, including the Russian invasion of Ukraine and the restoration of the Taliban government in Afghanistan, is the changing global power balance, including geopolitical changes in relationships between major powers, such as those between the U.S. and China and between the U.S. and Russia, and the rapidly increasing presence of large emerging countries, such as China and India. All countries, whether developed, emerging or developing, are experiencing a growing economic gap and inequality within them, which reflect a steeply increasing crisis due to the great division of the world and society. Moreover, issues concerning the abuse of scientific and technological innovation underlie many factors behind these crises.

The first crisis warns that human activities have affected the capacity of the earth and ecosystems so severely that a new geological epoch called the “Anthropocene” has been proposed as part of the earth’s geological history of 4.6 billion years and the limits of the earth are approaching. In fact, global warming, failure in adapting to or addressing it, extreme weather events, and the resulting increasing severity of natural disasters can be crucial global issues that need a sharp medium- to long-term lookout. Those will have huge impacts on the life and dignity of humanity, as well as their society and economy, or in other words, constitute a serious threat to human security. This issue has become a focus of political controversy in many countries and will surely continue to be so. At the same time, this crisis has raised issues concerning global commons, including human-caused environmental

disasters, a threat to biodiversity and natural resources, and marine conservation. Climate and resource crises can also cause international and interregional conflicts. However, these issues can not only pose enormous risks to the entire world but also provide ideal opportunities for innovation in new frontiers, including the green economy, green recovery, environmental technology, and renewable energy. Moreover, since these issues essentially go beyond national boundaries, they can even accelerate international cooperation in adopting solutions and partnerships between multiple actors, such as governments, international organizations, companies, and civil society.

The second crisis has been caused by the unprecedentedly rapid and wide spread of divisions of the world and society at all levels. These divisions include geopolitical conflicts between major powers, a gap between wealthy and poor nations, inequality and intolerance between people within a country, and disproportionate conflicts between state actors and non-state actors. We are deeply concerned that our world faces the high risk of being unable to overcome the rejection of integration and these divides although it now needs partnerships most urgently in its history.

The Russian invasion of Ukraine, which deeply shocked the world, has clearly revealed that there are still anachronistic political leaders who have developed a sense of crisis behind the seemingly peaceful end of the Cold War and plot to expand the scopes of their geopolitical rule even by illicitly changing the status quo by force—often while justifying it by self-righteously insisting that they are only aiming to recapture lost territories. Fierce competition for global hegemony between the U.S. and China is not just an ideological conflict between democracy and autocracy but also an economic competition, a battle for resources, and even a conflict for digital hegemony. This situation can be thought to show a relative decline in the U.S.’s international influence, or from a broader perspective, an aspect of the drastic change of the post-WWII world order. The U.S., Russia, Britain, France and China have been called the “five major powers” as the five permanent members of the UN Security Council (P5) or as nuclear-weapon states under the Non-Proliferation Treaty (NPT). However, as shown by the rise of emerging countries (so-called BRICS), including India, Brazil and South Africa, and the G20’s increasing international influence, the 21st century has invalidated conventional categorization between

major and minor powers and between developed and developing countries. Southeast Asia, Middle Eastern Islamic countries, Latin America, and Africa have been increasing their presence as regions. New powers have begun to challenge the hegemony of the countries once called “major powers.” Also, this trend is not limited to international relations. Non-state terrorists and violent radicals have posed increasing malicious threat to the current world order and international relations. In addition, Tech Giants now equal or eclipse states in their power. Given that the UN is working more closely with businesses than before, businesses are expected to play a more important role in setting global post-SDG goals.

The international community’s response to the COVID-19 pandemic has revealed that, even when facing a global crisis, the world is seriously divided and it is extremely difficult to build a system for international cooperation with the highest priority placed on international public interest. Furthermore, when medical equipment, such as masks, was in short supply worldwide, countries competed with each other for it, and some countries conducted so-called “mask diplomacy,” utilizing medical supplies to make the international situation or diplomatic trend more beneficial to themselves. Although it was known that an equal global distribution of vaccines would be more effective for bringing an end to the pandemic, countries again competed with each other in the quantities of vaccines ensured and the speed of vaccinations—showing a prevailing trend toward “vaccine nationalism.” This trend was found not only in the responses of national governments but also in the discourse of media reports and citizens’ criticisms against their governments.

This kind of competitive nature of relationships between sovereign states appears most obviously in the field of security. Is it morally permissible for a state to sacrifice other states and their citizens for the sake of its own security? In the current situation where national boundaries also bound the range of shared conscience, responsibility, ethics, and empathy, it may not always be impermissible. What is necessary to radically transform this situation? In particular, the international community is a collection of diverse ethical systems. For example, in religious terms alone, communities in Christian, Islamic and Buddhist denominations, as well as Hindu, Jewish, and other religious communities, have their own value systems. What obstacles should be removed to enable people to hold the minimum universal

values of, for example, the prohibition of the use and possession of nuclear weapons while respecting each other's different value systems? What common positive expectations will inspire people to do so? What means will help make it permanent? It can be said that, while the word "global" no longer always has a positive implication, we are challenged to transform the situation where national boundaries and identities have resulted in enclosures, artificially formed ethical and empathetic communities.

Civil society has recently witnessed the remarkable global spread of movements for gender equality, against sexual harassment (*#MeToo*), against workplace harassment, for the rights of LGBTQ people, and against racism (*Black Lives Matter*). In addition, global civil movements against climate crisis advocate the concept of "climate justice." These movements have a common nature as movements that were launched by those who have so far been treated as minorities or peripheral people to protect their own rights and dignity and have attracted strong public support from the perspectives of justice and fairness. We should not overlook the fact that these movements have been underpinned by the sense of dissatisfaction or crisis people have in response to growing global inequality—economic gaps, unequal access to resources, water and healthcare, the digital divide, etc. Eliminating inequality, achieving justice and fairness, and ensuring diversity and inclusion will surely continue to be key global challenges. Meanwhile, anti-immigrant movements, the attitude of putting one's country first, and hate speech have also been spreading around the world. With such discourse amplified on social media, issues concerning information management in the press, fake news, etc. have had considerable impacts on the real-world economy, politics and even international relations.

The third crisis is related to the fact that, although rapid progress in scientific and technological innovation as the crystallization of human wisdom is opening up completely new possibilities for the earth and our lives, there has been an unignorable risk that the intentional and unintentional abuse of such innovation will turn the fruits of science and technology into a human tragedy in a flash. Rapid progress in scientific and technological innovation, sometimes referred to as the Fourth Industrial Revolution, mainly in the field of information and communications technology has drastically changed society, the economy, politics and military affairs.

Innovations that have contributed to the change include the internet of things (IoT), big data and artificial intelligence (AI). Moreover, the COVID-19 pandemic has accelerated the widespread use of digital technology as an alternative to real travel and contact and as a means to effectively control the public, thereby speeding up the digitalization of society. Social and economic communication in virtual space has also been advancing, having a substantial impact on the real world.

Scientific and technological innovation certainly can be a drive for a sustainable society in some applications. However, we here use the word “crisis” because we predict—in consideration of the context inherent in such innovation, the severity of its possible impacts, and humanity’s capabilities to address possible problems—that scientific and technological innovation will cause an irreversible situation. Now in the 2020s, the introduction of scientific and technological innovation is dramatically accelerating. The acceleration can be partly explained by global capitalism, which needs to avoid depression and secure markets and frontiers in a sustainable manner, and by competition between major states and between major companies over scientific and technological innovation. The introduction of new scientific and technological innovations can make the entire world a frontier with a huge market. This means that the paradigm of global capitalism is updated by science and technology. However, this will in turn create competition between countries and between companies for the power to dominate the newly established paradigm. Since the fastest development and introduction means a victory in this competition, research, development and introduction will further speed up unavoidably.

It can be pointed out from the framework of ethical, legal and social issues (ELSI) that the abuse of currently explored or already somewhat established scientific and technological innovations will cause such issues as infringement of individual rights and privacy, changes to conventional social and cultural values and ethics, impacts on the environment and energy (due to at least temporary huge electricity consumption because of digitalization), growing inequality, a lack of a governance framework that will enable a just transition to a new economic and social system, etc.

Furthermore, we must pay due attention to the fact that this overall crisis due to the abuse of scientific and technological innovation and the two other crises (the crisis concerning the limits of the earth and the crisis due to great divisions of the world and society) have amplified each other, facing us with a more serious, larger-scale integrated crisis. The clearest evidence for this reality is issues concerning nuclear weapons, which embody the most advanced science, technology and innovation of humankind but are directly linked to a crisis of the sustainability of humanity and the earth, or in other words, have forced us to live next to a grave threat of a nuclear war that can make the earth and humanity unsustainable with weapons with force multiple times more powerful than that of the atomic bombs dropped on Hiroshima and Nagasaki.

Needless to say, once a nuclear weapon is used, it will have devastating impacts on the entire global environment, including on the global climate. The very process of developing, producing, testing and maintaining nuclear weapons has caused serious environmental damage, including radioactive contamination, to various areas on the earth. Furthermore, the characteristics of the latest nuclear weapons completely differ from those used on Hiroshima and Nagasaki. Collaboration between military affairs and emerging technologies, which have been applied to hypersonic missiles, armed drones, killer robots, LAWS and AI weapons, has drastically increased the force and predictability of weapons. However, advanced weapons are more unstable in some ways, for example, entailing the risk of becoming uncontrollable due to cyberattacks. The use of advanced technologies, including the full-scale application of quantum computer technology, can carry a heightened risk of causing the abuse of nuclear weapons due to system malfunctions.

People in the past could have ignored concern about these risks as a needless fear. However, our total shock at the fact that a political leader currently has the realistic option of using tactical nuclear weapons on Ukraine and that there is public discourse about the likelihood that any inappropriate response would cause a third world war, which could mean a nuclear war, has made us keenly aware that such risks should never be treated as fictional. No one can guarantee that, in future crises, humankind will be able to avoid “mutual assured destruction” with weapons of mass destruction as a “hard landing” solution to contradictions, just as they used to do

globally.

As long as nuclear weapons exist, the risks that they will be used, even accidentally, will never decrease if divides continue to grow globally. In consideration of this, to avoid these crises and achieve a shift and transition to the new paradigm of a more stable “sustainable world,” it is essential for humanity to disable ourselves from “mutual assured destruction” with weapons of mass destruction in advance by abolishing nuclear weapons, which we already possess physically and are capable of using. In the boarder context of the global and universal risks we currently face, we are required to avoid reaching the limits of the earth, prevent great divisions of the world, and stop the abuse of scientific and technological innovation through global partnerships.

However, our own responses to the still devastating global COVID-19 pandemic may have heightened our concern, rather than our hopes, because it has not been easy to foster global cooperation in COVID-19 control measures, where “Nobody is safe until everyone is safe.” Meanwhile, since it was scientifically proven unequivocal that human activities have caused climate change, fresh light has been shed on the sustainability of the global environment and human society. Encouragingly, a remarkable shift toward decarbonization has taken place in the international arena of discussions, including the UN, while companies and citizens are participating in efforts to achieve carbon neutrality and net-zero emissions in their business activities or daily lives.

If we are forced to address common risks that could challenge the future of humankind and the survival of the earth through collaboration and partnerships, how will we be able to deal with state sovereignty and meet our obligations and responsibilities in society and markets? We today are required to provide more holistic solutions to this question from the perspective of a crisis of the sustainability of humanity and the earth. While the threat of a nuclear war is now not only a threat to sustainability but also a clear and present danger, we should appeal for a broad international consensus to be urgently built about exiting to a post-nuclear-weapon world.

3. Our Ideas for Transformation and a Just Transition to a Sustainable Future

The SDGs, which were adopted by the UN General Assembly in 2015, focus on the 5Ps and provide action guidelines for a better, sustainable future. Partly because of a slowdown and regression in progress toward their achievement due to the COVID-19 pandemic, prior to 2023, which will be the midway point toward 2030, there has been widespread awareness of the need to further accelerate efforts to achieve the goals. As part of international efforts to combat global warming, the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26), held in Glasgow, UK, reached an agreement that efforts should be pursued to limit the temperature increase to 1.5% above pre-industrial levels. This agreement can be seen as an important step toward carbon neutrality. However, global responses to the COVID-19 pandemic, which has raged all over the world, are still under way, including equal distribution of vaccines. In addition, the Russian military invasion of Ukraine, which was launched in February 2022, has not only forced local people to suffer an extremely severe humanitarian crisis but also raised a very serious challenge to the world, bringing the threat of nuclear weapons into the spotlight again. None of the challenges we currently face are easy to solve, but, as discussed earlier, in the face of a serious crisis of the sustainability of humanity and the earth, we currently stand at a crossroads so crucial that we cannot have any bright outlook without making a radical transformation that exceeds our past limits. If so, how can we make a “just transition” to a drastic paradigm shift, including an exit to a post-nuclear-weapon world, realizing the vision of “Sustainable Peace and Prosperity for All,” which we propose as one of the global post-SDG goals? Our working group is still discussing this question, and we need to further elaborate on specific proposals. At this point in time, our preliminary points and ideas can be outlined as follows:

If this working group is tasked to unravel the mutually related three global crises, help build a better, sustainable world for humankind and the world, and, in that process, implement bold initiatives to achieve decarbonization, overcome divisions, and exit to a post-nuclear-weapon world, we need to adopt a theoretical approach to ensure a just transition to the world’s transformations from two angles: a transformation toward the abolition of nuclear weapons and a transformation into a

world where no nuclear weapons are needed.

As an approach toward the former—a transformation toward the abolition of nuclear weapons—and a transition for that, the working group has been reviewing nuclear deterrence theory, exploring a new security system that can replace nuclear weapons, and reconsidering the calculation of the costs and benefits of nuclear weapons. We have also proposed that a new scientific advisory organization be established to discuss these subjects based on evidence.

It is never easy to review nuclear deterrence theory, which is deeply embedded in the existing system of security policies. Generally, such a review will require reviewers to be either highly confident that the alternative means they propose will be more effective than nuclear deterrence or able to show that risks entailed by nuclear weapons vastly eclipse their benefits. It is recognized that it is difficult to compare the security benefits of nuclear weapons or a threat of other actors' use of nuclear weapons directly with risks entailed by the existence of nuclear weapons simply on the same qualitative and quantitative scales. This recognition has made our discussions tougher. This means that there can be no simple tradeoff between nuclear deterrence as a means for security crisis management and various risks entailed by nuclear management because both differ in both the political intentions and effects. If so, rather than the level of the severity of nuclear risks, the effectiveness of alternatives to nuclear deterrence will be a criterion for the decision to abolish nuclear weapons. In addition, if policymakers determine that nuclear risks are unmanageable (or that the effects of nuclear deterrence eclipse recognized nuclear risks), they will decide to abolish nuclear weapons. In this case, those policymakers' security dilemma will be left unsolved, so some measures should be still adopted to prevent arms races or unstable international relations.

However, existing nuclear-weapon-free zones are substantially a “world free of nuclear weapons.” A total of over 110 countries, mainly in the Southern hemisphere—Latin America, the South Pacific, Southeast Asia, Africa and Central Asia—are members of any of the five nuclear-weapon-free-zone treaties. Given that these nuclear-weapon-free zones themselves do not deny nuclear deterrence between

nuclear-weapon states, we may be able to judge this kind of initiative to be effective to some extent as a mechanism in a transition to the complete abolition of nuclear weapons.

On the supposition that there will be no changes in the essence of the current strategic international relations (the structure of norms and values centered around sovereign states in the international community), measures that can replace nuclear deterrence by deterring war without relying on nuclear weapons should be weapons or tactics that meet the following requirements: enabling calculation rational enough to prevent major conflict that can cause devastating damage; being able to build a barrier that can lead the opponents to imagine possibilities for catastrophic results; and being able to cause a delay in the opponents' judgment by avoiding making the barrier explicit and to prevent them from taking countermeasures by keeping them strategically ambivalent. If there is such a weapon, it must conform with norms of international law of war, including the principle of discrimination, the principle of equilibrium, and military necessity, etc. to prevent the same issue of inhumanities as that caused by nuclear weapons. It is fundamentally ideal to transform the hostile nature of international relations into a harmonious one so that peace can be maintained without relying on such weapon-based deterrence.

Moreover, a close look at the issue of nuclear deterrence from a broader perspective will remind us of the fact that global warming and resulting extreme weather events have increased the severity of natural disasters and that the COVID-19 pandemic, as a serious threat to the security of human life, has raged over most countries, including nuclear-weapon states and other states that possess nuclear weapons. Nuclear weapons are by no means omnipotent, so it is important to reconfirm that they have never helped prevent climate crises or infectious diseases or protect human lives.

By the way, reconsidering the calculation of the costs and benefits of nuclear weapons is an effective way to increase the incentive to abolish nuclear weapons. This can help promote in-depth research on compatibility between international law of war and the use of nuclear weapons and heighten legal and normative barriers to

the use of nuclear weapons. It will be very important in the future to sophisticate studies, both theoretically and systematically, on where the responsibility lies for the possession and use of nuclear weapons, including liability for damage caused by the use of nuclear weapons (nuclear liability), and on accountability for the justification of the possession and use—especially for how high nuclear costs are compared to their benefits.

It is also useful to pay due attention to opportunity cost due to the existence of nuclear weapons to help increase the incentive for a transformation to the abolition of nuclear weapons from the perspective of calculating the costs and benefits of nuclear weapons. For example, in March 2020, soon after the pandemic began to rapidly spread throughout Europe and the Americas, ICAN announced the results of comparison between nuclear spending and healthcare needs in nuclear armed countries. The data shows that an annual cost of approximately 4.6 billion euros for French nuclear weapons in 2019 would have been enough to pay for 100,000 beds in intensive care, 10,000 ventilators, 20,000 nurses AND 10,000 doctors. It is also estimated that an annual cost of approximately 7.2 billion pounds for UK nuclear weapons in 2019 would have been enough to pay for 100,000 beds in intensive care, 30,000 ventilators, 50,000 nurses AND 40,000 doctors, while an annual cost of approximately 35.1 billion dollars for U.S. nuclear weapons in 2019 would have been enough to cover 300,000 beds in intensive care, 35,000 ventilators, 150,000 nurses AND 75,000 doctors.

Another ICAN study has found that in 2020, amid the worldwide spread of the pandemic, nine nuclear armed countries spent 72.6 billion dollars (approximately 8 trillion yen) on their nuclear weapons, and that their total nuclear weapons spending increased by 1.4 billion dollars (approximately 150.0 billion yen) year on year. Of the total spending, the U.S. accounted for 37.4 billion dollars (approx. 4.1 trillion yen), China for 10.1 billion dollars (approx. 1.1 trillion yen), and Russia for 8.0 billion dollars (approx. 900.0 billion yen). In Western nuclear armed countries—the U.S., the UK and France in particular—many defense companies profited from their nuclear-weapon-related business contracts with the national governments. The Stockholm International Peace Research Institute (SIPRI) has also shown based on data that world military expenditure increased even amid the pandemic. The data

shows that the estimated world military spending in 2020 was 1,981 billion dollars (approx. 213,749.9 billion yen), an increase of 2.6% year on year, setting an all-time record in the history of SIPRI military expenditure estimation, which originated in 1988.

These figures inspire us to ask how much benefit would have been gained if the same amount as military expenditure, including spending for nuclear weapons, had been used for civilian purposes. The UN Children's Fund (UNICEF) has reported that 40% of the world's population, or three billion people, do not have a handwashing facility with water and soap at home. Meanwhile, a report of the UN Office for Disarmament Affairs says that extending basic water, sanitation and hygiene to unserved populations would cost less than 2% of annual military spending. Furthermore, the fund necessary for global combat against COVID-19 (for example, the 2022 annual budget of 23.4 billion dollars for hiring Access to COVID-19 Tools [ACT] Accelerators) could be covered only with about an eighty-fifth of the world military expenditure announced in the abovementioned SIPRI report. The UN General Assembly First Committee approves a draft resolution on "Relationship between disarmament and development" every year. The resolution expresses concern about increasing world military spending, which could finance development spending. This means that military spending entails high opportunity costs.

Although all military expenditure is not all evil, unprecedentedly increased government spending for combat against COVID-19 worldwide appear relatively minor compared to the military expenditures worldwide. Also, it is also necessary to fully recognize that measures to abolish nuclear weapons will involve expenses and that realizing a world free of nuclear weapons can necessitate discussions about possible increases in military expenditures. Nevertheless, while we should further sophisticate our discussions from now on, it will be valuable to devise a mechanism for allocating a certain percentage of world military spending to human well-beings.

It is crucial to ensure that our discussions and policy-making will be based on objective data and evidence in the process of developing models of transformation and transition to the complete abolition of nuclear weapons while taking into

consideration these points. Many organizations and platforms with a scientific advisory function have recently made significant progress, including environmental alliances such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the International Union for Conservation of Nature (IUCN), in addition to the IPCC, which has scientifically demonstrated mechanisms and causes for global warning. While referring to these examples, our working group is developing specific proposals, including that of building a community of scientists who give scientific advice to policymakers in the field of nuclear disarmament and non-proliferation.

Scientific organizations specializing in nuclear disarmament and non-proliferation include the International Atomic Energy Agency (IAEA) and the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO). There is also the Organization for the Prohibition of Chemical Weapons (OPCW), the implementing body for the Chemical Weapons Convention, although it is outside the field of nuclear weapons. However, these organizations are in charge of implementing the respective treaties or conventions, such as analyzing and providing scientific data and adopting guaranteeing and verification measures, and do not have a function of giving scientific advice on policies. Therefore, scientific advice on nuclear disarmament and non-proliferation has been given mainly by non-governmental organizations and groups. Prominent examples include the International Physicians for the Prevention of Nuclear War (IPPNW) and the Pugwash Conferences on Science and World Affairs, both of which were awarded the Nobel Peace Prize for their contributions in the field of nuclear disarmament and non-proliferation (in 1985 and 1995, respectively). In addition, the International Committee of the Red Cross (ICRC) is said to have paved the way to the Treaty on the Prohibition of Nuclear Weapons by scientifically verifying inhumane damage from the use of nuclear weapons, which allowed the ICRC to take part in ICAN receiving the Nobel Peace Prize in 2017. However, in consideration of the growing complexity of nuclear disarmament theories and practices and the expansion of nuclear-weapon-related science and technology beyond the conventional scopes of physics and medicine into such fields as cyberspace, space, and AI, we believe that it is time to establish scientific advisory bodies that can have direct impacts on governments in a wider range of disciplines.

There are multiple possible models for scientific advisory bodies in the field of nuclear disarmament and non-proliferation: an international organization under the UN umbrella, a support organization for the Treaty on the Prohibition of Nuclear Weapons, an assistant organization for the denuclearization of Northeast Asia, and an international community of experts in nuclear disarmament. However, in any case, we in the working group hope to propose early establishing a scientific advisory body that enables evidence-based discussions on “a post-nuclear weapon world” and various aspects of sustainability while using existing international environmental advisory bodies and organizations as models.

Approaches toward the other kind of transformation and transition—a transformation into a world where no nuclear weapons and a just transition thereto—also need thorough consideration. The working group has already discussed transformation of the scope of security, a shift from “monopoly and competition” to a global governance framework for “sharing and cooperation,” and transformation into a diverse and inclusive society. We have proposed expanding a multifaceted network of, and interactions between, diverse actors, including not only the UN and states but also local governments, in the process of transition that enables these transformations and shifts.

When we consider what threat we are faced with and what security mechanism will be ideal for us amid the current progress of globalization, what we hit upon first is that, while sovereign states have continued to exist as key players in international relations, though fictionally, the most serious threat to such states today is mostly no longer the existence of their opponents. Instead, climate change as a crisis concerning the limits of the earth constantly threatens the lives of people in a country and biodiversity therein. Climate change issues have already posed a series of many acute, grave crises to us. A typical example is the COVID-19 pandemic, which has resulted from a loss of biodiversity. This means that an imminent and serious security threat has already been posed to us by the limits of the earth, no matter where we are on the globe. It is welcome that, in the G7 and G20 frameworks, major countries have seriously discussed climate change and the global environment, accelerating concrete efforts toward a decarbonized society. Nevertheless, national security is still discussed within the conventional framework. In the current

situation, security issues are discussed separately from global environmental issues, as seen in the UK's nuclear armament as a countermeasure against China's armament. However, each country should focus its national security efforts not only on geopolitical threats but also more intensely on the security threat of the limits of the earth and its elimination. Additionally, we believe it is now clear that the existence of nuclear weapons can only play a limited role in building peace, even if it is a source of common threats to the world in a new era.

This observation may induce someone to ask us how the Russian invasion of Ukraine should be viewed. This invasion, where Russia has posed a serious threat to Ukraine, is a cruel, radical challenge to the post-WWII international order. The very fact that Russia has caused such a war situation evidences the country's fundamental misunderstanding of changes to its own current security status and its completely anachronic attitude, including its threats with nuclear weapons. The likelihood of such a situation urges us to accept the reality that it is impossible to drop all our guards over a tyrant's outrageous acts. In an extreme situation where the survival of a nation is at stake and there is no other choice than to rely on arms to protect one's rights and interests, the rights of self-defense will remain available. Nevertheless, more holistic consideration leads us to understand that each state needs to transform its military spending for individual national security against other countries to spending for shared initiatives for global-level common security against the global threat of the limits of the earth and make a gradual transition of the scope of security.

Very thought-provoking discussions concerning the scope of security can be found in the Special Report issued by the UN Development Programme (UNDP) in February 2022 "New threats to Human Security in the Anthropocene."^{xi} In the conventional concept of human security, people deprived of freedom due to fear, want and intolerance and faced with harsh circumstances have been positioned as its focus, and efforts have been devoted to saving them through protection and empowerment measures. In addition to that concept, this report uses the concept of the Anthropocene, which represents the reality that human activities cause threats to the environment, health, and science and technology, and faces up to that reality. The report argues that people themselves should pursue human security through

“the eyes of humankind” and that human security in the Anthropocene, which is achieved through solidarity based on agency, must systematically consider independence across all people and between people and the planet. This argument gives us great intellectual inspiration for transformation from the logic and scope of national security.

Therefore, the most important challenge we currently face in response to a crisis concerning the limits of the earth is whether or not humankind can have self-awareness as active players with agency and overcome the crisis through global solidarity beyond national boundaries. If so, it is essential for states to take the climate change crisis, a crisis of biodiversity, and various aspects of a crisis due to unsustainability shown by the SDGs as a serious crisis of common security and human security and tackle them in solidarity with each other by replacing military spending as investment in national security with investment in “sustainable peace and prosperity” in order to prevent a catastrophe and make a transition to a more stable, sustainable economy and society. Moreover, this way of building human solidarity will help overcome great divisions of the world and society through transformation to an economically and politically equal and fair world and reduce the speed of competitive, chaotic, and unfair introduction of new science and technology.

The three global crises that humanity currently faces (the limits of the earth, great divisions of the world and society, and the abuse of scientific and technological innovation) also have the power to enhance social diversity unavoidably. A deepened crisis concerning the limits of the earth, for example, a deepened climate crisis, will force a larger number of people to suffer climate disasters and live with various forms of vulnerability. Population aging will increase the population of patients suffering from dementia, noninfectious diseases, etc. Meanwhile, the decline in the Japanese population will surely lead those who have so far lived in both urban and rural areas in the country to live together with people from abroad. Low- and middle-income countries will experience a decline in traditional social norms amid still continuing economic growth, enabling citizens, especially in urban areas, to live while asserting their diverse identity acquired through their growth, including gender identity, and to create new communities and cultures, though in potential conflict with traditional

norms. Capitalism underpinned by accelerated scientific and technological innovation will facilitate the formation of many small and medium-sized cultural clusters and marketize them, forming diversity bubbles. In future society, more diverse people will share the same real and virtual space at the same time, where a mode of social inclusion will be necessary to enable these people to live together in a stable and harmonious manner.

Future generations challenge us, living in an era of crises, to overcome those crises and reduce acute and chronic risks faced by human society and ecosystems while accepting the existence of more diverse people and communities, whereby achieving a paradigm shift that will enable the future generations to live more stably. Such a new paradigm will not be created unless we can establish a mode of social, political, economic and cultural inclusion that enables diverse people and communities to coexist peacefully in their own satisfactory ways. And we must establish such a mode of inclusion by broad social consensus. We can find early signs of that possibility in the current enrichment of the concept of “human rights” as a bundle of political and social rights and its application to the economic system. More specifically, examples include the correction and elimination of historical, social, cultural and political injustices, including colonialism, sexism and racism, as represented by the trends of the Black Lives Matter movement and the #MeToo movement; the restoration of the intrinsic value of non-financial elements through a more profound combination of the concept of human rights, including the above, and capitalism, as seen in recent public interest in “business and human rights” and ESG (environmental, social, and governance); the firm establishment of both corporate social responsibility (CSR) and creating social value (CSV); and the possibility of creating a hybrid economic and social system whereby corporate ownership will be further diversified and evolved.

However, these trends may be severely affected by a crisis due to great divisions of the world and society. In comparison with a crisis concerning the limits of the earth, which will restrict human activities more severely, a crisis due to great divisions of the world and society is likely to be set aside in the process of tackling the climate crisis. However, in the process of combatting the COVID-19 pandemic as an unprecedented crisis, there has been escalating conflict between major countries, rather than collaboration, as shown by “vaccine nationalism,” “vaccine diplomacy,”

and the malfunction of frameworks for multilateral cooperation. Here, a crisis due to great divisions of the world and society has not been overcome through solidarity but has been deepened in competitive international relationships. To help solve such a fundamental challenge, the post-SDG goals must focus on “diversity and inclusion” under the vision “Sustainable Peace and Prosperity for All” and facilitate a shift to a new paradigm and a just transition.

In addition, when scientific and technological innovations are introduced, it is necessary to predict the impacts of the introduction, in advance if possible, and formulate a plan to avoid negative impacts in order to make as just a transition as possible. However, in the modern world, there is no agent for the governance of scientific and technological innovation to control the introduction following a certain plan and ensure a just transition. Although science and technology are introduced globally, the system to distribute benefits from them are not well established in an equitable manner. In addition, the current mechanisms for solving problems caused by scientific and technological innovation basically rely on the accumulated efforts and agreements of sovereign states, regional intergovernmental organizations, such as the European Union, and multilateral organizations, such as the United Nations and OECD. Therefore, the problem solving process is even slower than the innovation introduction process. The speed gaps and time lags between profit production and distribution and between introduction and problem solving constitute major problems in the contemporary system for the global economy. Unless these problems are solved globally, there can be the risk that “hard landing” solutions will be adopted. Therefore, it is important to build an appropriate global governance system for the introduction of scientific and technological innovation in order to enable the well-planned process of predicting the impacts of the introduction, reducing negative impacts, and making a just transition to a new economic and social system established by the introduction while replacing the rule of “monopoly and competition” with the rule of “sharing and cooperation.”

“Sustainable peace and prosperity,” where people respect diversity and inclusion and do not impose environmental burdens on the earth, will help building relationships of harmonious coexistence not only between states but also between humankind and the earth. To build such relationships, the working group proposes

building an interdisciplinary multi-layer network of diverse actors, including the UN, states, local governments, and civil society members, and engaging all those stakeholders in discussions at all levels. In his abovementioned report “Our Common Agenda,” UN Secretary-General Guterres emphasizes the importance of networking people in tackling the common challenges we face now in the 21st century by saying “now is the time for a stronger, more networked and inclusive multilateral system” to protect the global commons and deliver global public goods. Proposing one of our next steps, he says, “Throughout, we need stronger involvement of all relevant stakeholders, and we will seek to have an Advisory Group on Local and Regional Governments.”

When we consider what a world without reliance on nuclear weapons for security looks like, it should not be replaced by new kinds of weapons. The ideal answer to the above question should be a world where sustainable peace and prosperity can be ensured by achieving a wide range of elements, including diverse and inclusive society with resilience, where all of us enjoy peace and prosperity.

Conclusion

While the current discussion about security is dominated by the states alone, our working group re-examined the issue of nuclear weapons beyond the conventional framework from diverse perspectives, including that of the sustainability of humankind and the earth, and considered visions and challenges in order to achieve a paradigm transformation toward a better future in view of a post-SDG world. We emphasize the need for transformation to the complete abolition of nuclear weapons and to a world where no nuclear weapons are needed, that is, a “post-nuclear-weapon world” as a transformation indispensable to prevent humankind and the earth from facing an unsustainable catastrophe. Fortunately, in various arenas of discussions, including the UN, an international consensus on the significance of the abolition of nuclear weapons is being built on a solid foundation in various discussions. It is now

a crucial moment for creating a nuclear abolition roadmap. The reason we propose that global common post-SDG goals, which will be discussed by UN member states, include a clear goal of exiting to a post-nuclear-weapon world” is that we believe that it is necessary at this important historical turning point to show clear evidence of humanity’s determination to take appropriate action and make the choice to achieve a world free of nuclear weapons. Our subsequent goal is to lead worldwide action to achieve a post-nuclear-weapon world no later than 2045, the centenary of the atomic bombings on Hiroshima and Nagasaki.

The Ukrainian crisis, which we are now witnessing, has reminded us of the reality that the world is still under threat of nuclear attacks even after many years of nuclear disarmament efforts in the international community. However, this reality must be transformed. In a video titled “United Nations: Solutions for Urgent Times,” which was created by the UN in 2020 to commemorate the 75th anniversary of its founding and the fifth anniversary of the adoption of the SDGs, UN Secretary-General Guterres overviews various challenges faced by the world today, including the COVID-19 pandemic, climate change, environmental destruction and human rights issues. He says that we should “recognize that the way we have been moving leads nowhere and that we need to change course.”^{xii} This is also the case with nuclear weapon issues. We must recognize that the world where the existence of nuclear weapons is taken for granted is no longer sustainable and appeal to the international community that it should be determined to realize a radical paradigm shift.

No magic will happen in our journey toward the abolition of nuclear weapons. It involves steady efforts not only to review existing nuclear strategic theories but also to prevent the mutual amplification of the three global crises that humanity is faced with—the limits of the earth, great divisions of the world and society, and the abuse of scientific and technological innovation—pursue “common security” as a result of transformation from conventional national security, value diversity and inclusion, and transform the current governance system to a global one based on “sharing and cooperation.” By doing so, it is theoretically possible to achieve a world where no nuclear weapons are needed, which is essential for a truly sustainable future. That is the working group’s conclusion.

We in the working group hope that UN member states will incorporate “Sustainable Peace and Prosperity” into global discussions on the post-2030 agenda. Therefore, our interim proposal includes a promise to achieve a “post-nuclear-weapon world.” We will continue to discuss more concrete proposals and ideas for achieving such a world and further elaborate on and sophisticate them. We will also provide inputs through various channels to mainstream our ideas and vision while involving civil society and leveraging intergovernmental diplomatic negotiations.

i Remarks by UN Secretary-General Antonio Guterres to the Press on the War in Ukraine (New York, March 14, 2022) <https://www.un.org/sg/en/node/262376>

ii The statement (The Time for Action is Now) is available in Russian and English at <https://novayagazeta.ru/articles/2022/03/01/vremia-deistvovat-seichas>
https://www.icanw.org/dmitry_muratov_beatrice_fihn_ican_joint_statement

iii The official title is "Transforming Our World: The 2030 Agenda for Sustainable Development." <https://sdgs.un.org/2030agenda>

iv Report of Working Group I of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), Natural Science Basis (August 2021). <https://www.ipcc.ch/report/ar6/wg1/>

v For intergovernmental negotiations on the SDGs, see Hiroshi Minami and Masaki Inaba, “SDGs: Kiki no jidai no rashinban [A compass for an age of crisis]”, Tokyo: Iwanami Shinsho, 2020.

vi Original publication can be downloaded from UNDP Turkey website. https://www.undp.org/sites/g/files/zskgke326/files/migration/tr/HLP_P2015_Report.pdf

vii Report of the World Commission on Environment and Development: Our Common Future. (Brundtland Commission, Oslo, March 1987). <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>

viii United Nations, Securing Our Common Future: An Agenda for Disarmament. (May 2018). Available at <https://www.un.org/disarmament/publications/more/securing-our-common-future/>

ix United Nations, Secretary-General's report on "Our Common Agenda," September 10,

2021. <https://www.un.org/en/un75/common-agenda>

^x Tim Jackson, *Prosperity without Growth: Foundations for the Economy of Tomorrow*, 2nd Edition (London: Routledge, 2016).

^{xi} UNDP, 2022 Special Report on Human Security “New Threats to Human Security in the Anthropocene: Demanding greater solidarity.”
<https://hs.hdr.undp.org/pdf/srhs2022.pdf>

^{xii} Documentary “Nations United: Urgent Solutions for Urgent Times” (January 14, 2021). <https://www.jointsdgfund.org/fr/node/601>