Harmonious Coexistence between Nature and Humankind in the COVID-19 Era

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The spread of COVID-19 has caused a global pandemic, posing a major threat to people's lives and health, as well as work and other aspects of their day-to-day lives. It has also had a great impact on society and the economy as a whole. Many people fear that the significant impact of COVID-19 will remain for a long time even after the pandemic has subsided.

What has resulted from the improper relationship between nature and humans

Behind the spread of COVID-19 infection lie two fundamental issues (Figure 1). The first is the improper relationship that humans have had with nature. One of the root causes of zoonotic diseases, as typified by COVID-19, is that humans have come too close to nature – where wildlife thrive. In East Asia, a region where zoonotic diseases often occur, wide buffer zones, as seen in Satoyama landscapes, used to be set between natural and human habitats. However, agricultural development and urban development have destroyed such buffer zones.

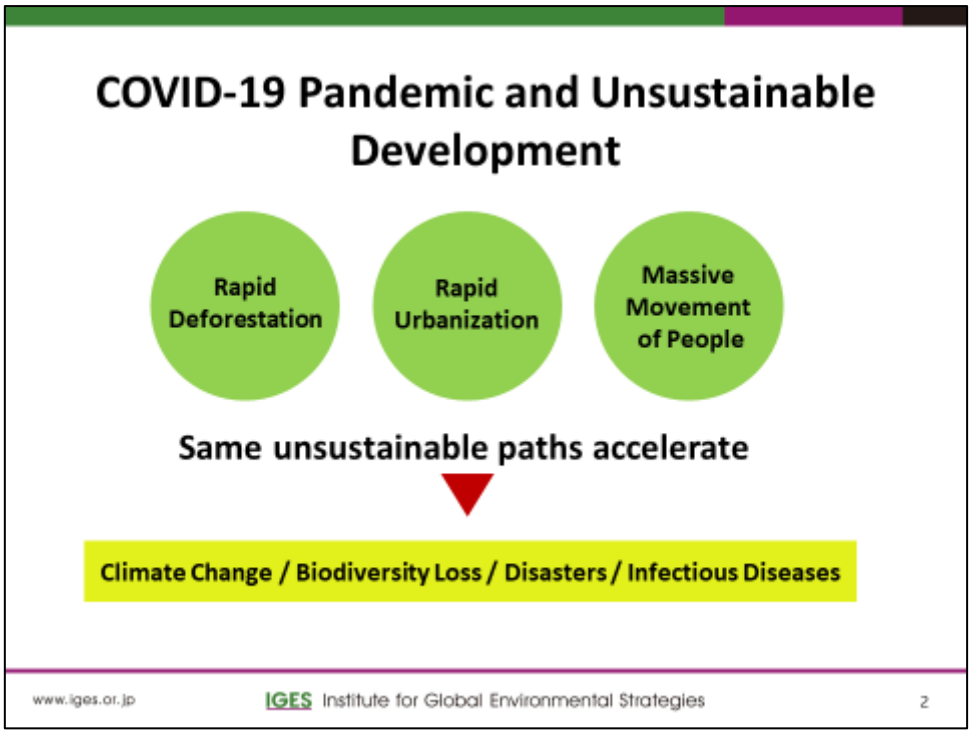

Figure 1: COVID-19 Pandemic and Unsustainable Development

The second is the trend of excessive globalization. While rapid globalization has promoted the exchange of goods and people around the world, and has contributed to the creation of a global economic zone, it has also given rise to various issues. For instance, the rapid liberalization of trade of agricultural, forestry and fishery products has brought significant economic benefits to countries exporting food; however, it has also caused great damage to the agriculture, forestry and fisheries in countries that import food. In such countries, coupled with population aging, this trend has threatened the existence of mountainous, agricultural and fishing villages.

The fact that COVID-19 has spread to all continents (including Antarctica) and most countries around the world within this short period of time highlights the negative aspects of globalization. Although COVID-19 has impacted everyone, it is said that people in developing countries and low-income individuals in developed countries in particular are severely affected. In other words, COVID-19 has further exacerbated social disparities. As such, how we can build an inclusive society after COVID-19 remains a great challenge.

The same can be said for other global issues, including the increasingly serious impacts of climate change, the rapidly advancing loss of biodiversity, and the intensifying damage from natural disasters, which are caused partly by climate change. Direct factors that underpin these issues are different from those that cause the spread of COVID-19 and other infectious diseases. However, they can be traced to unsustainable relationships between nature and humans becoming more widespread, if seen within a broader perspective.

We are currently required to consider how to reconstruct the post-COVID-19 world. Questions are being raised about whether we should aim to simply return to our conventional pre-COVID-19 society, or choose to transform our society in the post-COVID-19 era into a sustainable society based on the ideal relationship between nature and humans. I believe that the international community should pursue a path toward a sustainable society with concerted efforts.

Necessary transformative change and redesign of society

What is important is to drive transformative change in order to realize sustainability. We have worked to achieve the United Nations (UN)' Sustainable Development Goals (SDGs), implement measures to mitigate and adapt to climate change, conserve biodiversity and the sustainable use of biological resources, and promote risk reduction measures against

intensifying natural disasters. It has often been said that it is important to promote great transformative change in order to realize these goals. Unfortunately, the situation has not changed significantly (Figure 2).

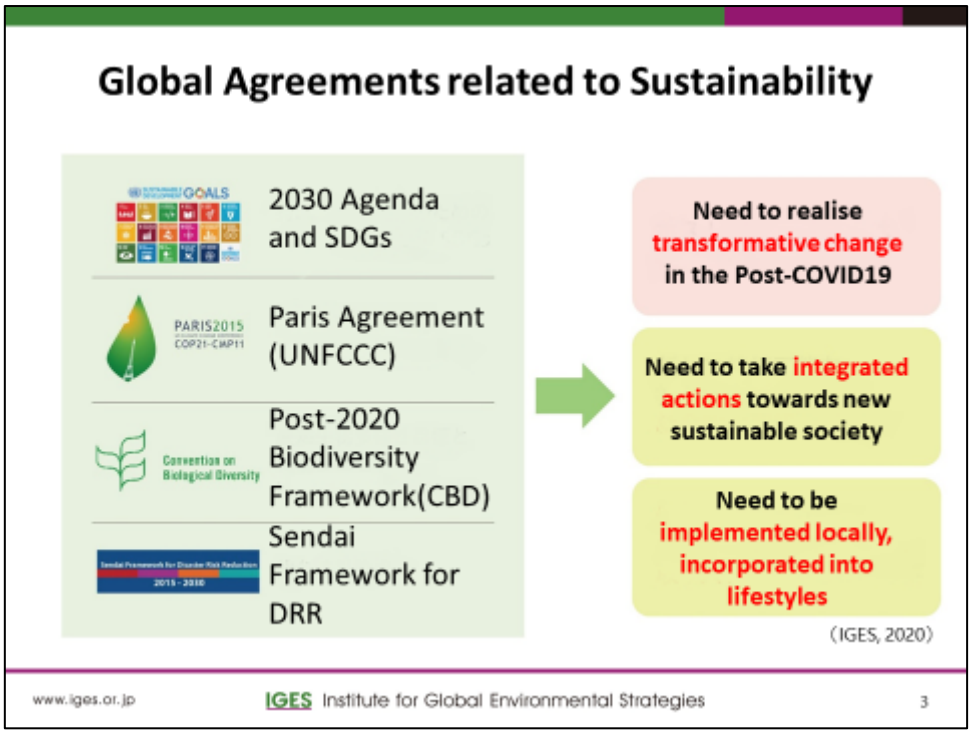

Figure 2: Global Agreements related to Sustainability

However, COVID-19 has forced us to transform our societies. As a result of the severely restricted mobility of goods and people, for instance, CO_2 emissions have greatly fallen for the first time since the end of World War II. In order to ensure the reduction is not temporary, the EU has implemented various measures, including providing relief to airlines that have promised to discontinue short flights, which emit more CO_2 per kilometer than trains. We are now being challenged to see whether we can further accelerate these initiatives.

One of the important perspectives to consider when transforming society is that we should take both individual and integrated approaches to resolve the global issues we face. In the current situation where there are individual agreements on each issue, it is common that member countries and the secretariat under each agreement hold meetings to discuss and take measures to resolve the relevant issue individually. However, since, for example, the issues of climate change and biodiversity are interlinked, it is required to resolve these issues simultaneously. There is recognition that such an integrated approach deserve recommendation by the UN, as shown by the UN's Climate and SDGs Synergy Conference.

At this conference, I emphaised the need to further integrate discussions on biodiversity and disaster risk reduction.

Similarly, to realize a sustainable recovery from COVID-19, it is necessary to resolve issues from a multifaceted perspective. It is also necessary to find complex solutions at multiple levels by seamlessly combining discussions made at different levels from the global, regional and individual perspectives. Moreover, it is important to simultaneously pursue the resolution of global and local issues by promoting multilevel exchanges. To this end, it is desirable to address these issues from a multifaceted perspective through cooperation between various stakeholders, including the UN and other international organizations, national and local governments, private companies, universities and other research and education institutions, NGOs, and citizens.

Another important point in order to achieve a sustainable recovery from COVID-19 is that we need to consider a long-term approach to transformative change while providing a short-term response to the current emergency situation. The Institute for Global Environmental Strategies (IGES), where I serve as President, proposes the Triple R Framework for a post-COVID-19 society from such a perspective (Figure 3).

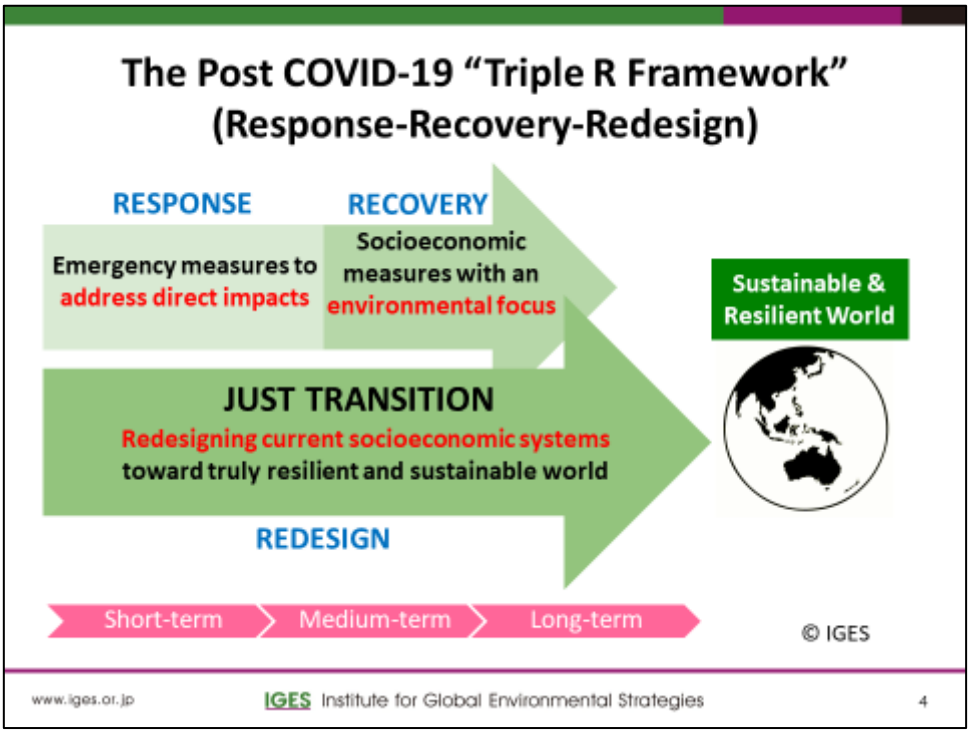

Figure 3: The Post COVID-19 "Triple R Framework" (Response-Recovery-Redesign)

The Triple R Framework is a concept that aims to directly respond to the COVID-19 crisis, take environmental and socioeconomic measures to recover from the crisis, and simultaneously redesign current socioeconomic systems toward a just transition to a truly sustainable and resilient world. Green recovery from COVID-19, led by the EU and others, is a policy based on the same concept that we propose in the Triple R Framework.

I will introduce an example where climate change adaptation, biodiversity conservation, and recovery from natural disasters are combined according to the Triple R Framework to strengthen the resilience of local communities.

Currently, Japan proposes the concept of “Adaptive Recovery,” which is highly evaluated by the international community. This concept is associated with the approach of “Build Back Better” promoted by the UN Office for Disaster Risk Reduction (UNDRR).

Figure 4 shows the process of Adaptive Recovery from climate disasters in accordance with the Triple R Framework. It aims to ensure that local communities can recover from disaster in a resilient manner by promoting ecosystem-based climate change adaptation and disaster risk reduction while responding to disasters, including providing humanitarian relief and securing emergency evacuation solutions. In addition, it is required to simultaneously redesign the future society toward resilience by making progress on multi-sector and multi-level cooperation and response to complex risks.

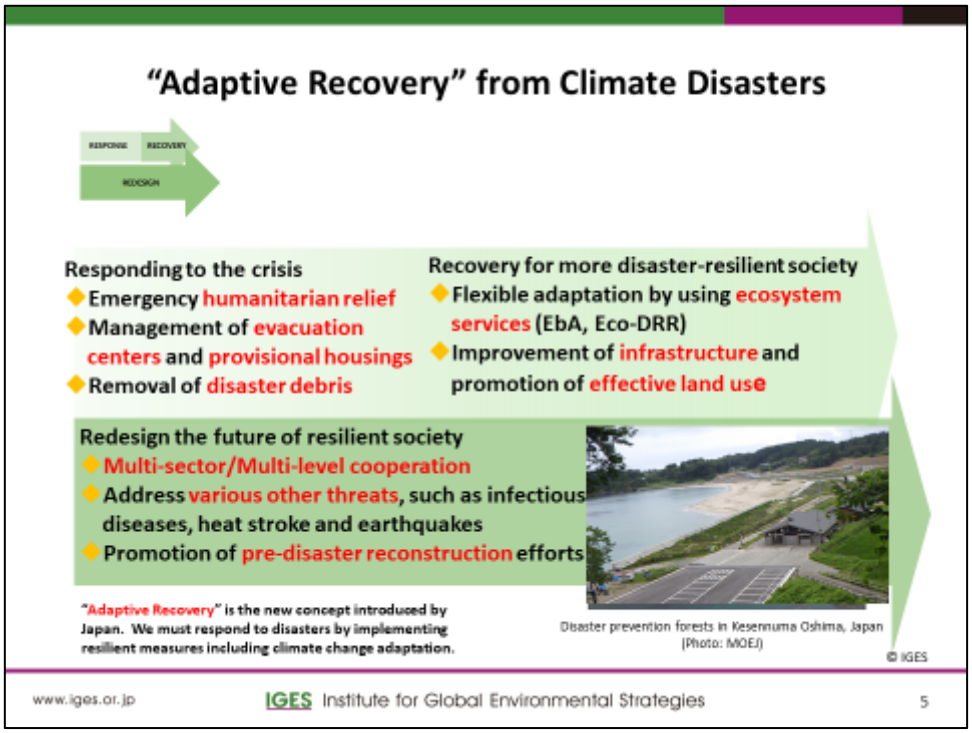

Figure 4: "Adaptive Recovery" from Climate Disasters

Circulating and Ecological Sphere toward integrated transformative change

In 2018, as Chair of the Central Environmental Council, I submitted the 5th Basic Environment Plan to the Minister of the Environment, which was formalized by the Cabinet. This plan has two major characteristics. Firstly, it introduces the concept of "planetary boundaries" and specifies that we should aim at societal growth within the limit of the global environment. On that basis, we incorporated the concept of the SDGs, which aims to materialize the integrated improvement of the environment, the economy and society, into this plan as a core philosophy.

Secondly, the plan states the creation of the "Circulating and Ecological Sphere (CES)" as a means of driving transformative change, including innovation in people's lifestyles, by promoting integrated actions to create a sustainable society and implementing specific actions locally based on this concept (Figure 5). Through this, we aim to achieve a society that allows for harmonious co-existence between nature and humankind by implementing disaster risk reduction and other initiatives; a resource-circulating society; and a decarbonized society by promoting the 3Rs of "Reduce, Reuse and Recycle" and facilitating clean energy and improving energy efficiency. We also aim at regional development that connects localities to global communities through the exchange of people, information and

technologies.

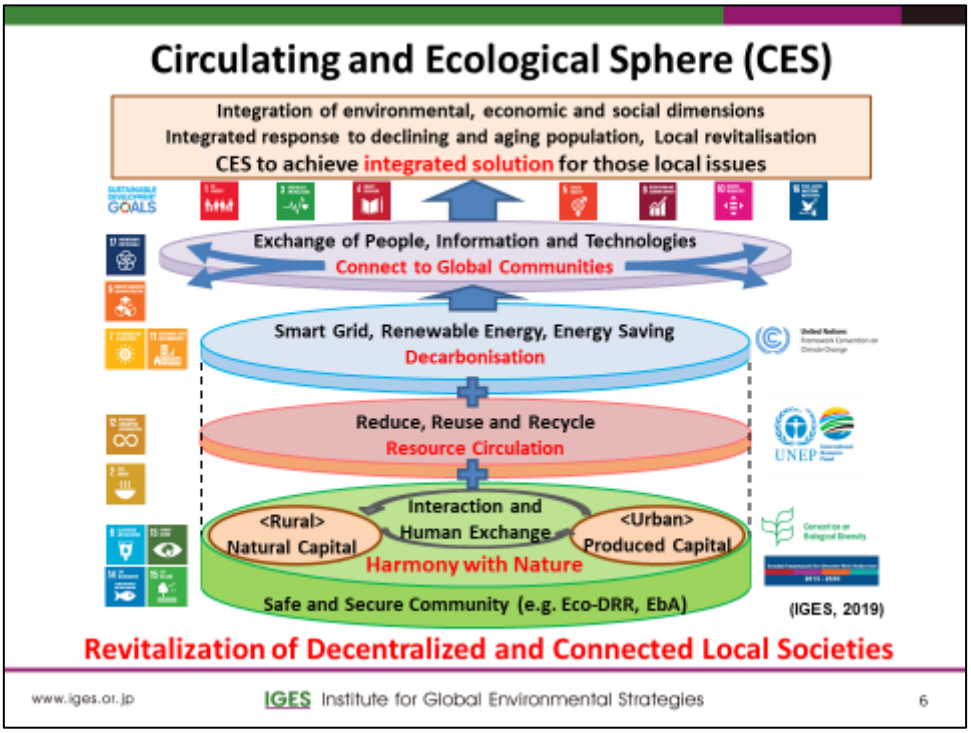

Figure 5: Circulating and Ecological Sphere (CES)

By creating CES, we aim to localize the SDGs. The basic goal is to achieve regional development that connects localities to global communities while building self-reliant and decentralized communities through the appropriate combination of natural, produced and human capital. This concept attracts attention as an ideal image of a sustainable society in the post-COVID-19 era. The Ministry of the Environment is currently considering how to implement this vision.

Agriculture, forestry and fisheries, tourism, and the use of renewable energy are all economic activities that depend on natural capital; however, siloed measures have been taken so far. Yet, it is important to view all of these activities as natural capital-based businesses in an integrated manner and aim at regional development through the overall optimization of activities. In addition, in a post COVID-19 society, it is required to set decentralized lifestyles in place and build a society in which people can lead healthier lives. An important key to enable these new lifestyles is the advancement of informatization. New workstyles that have been established in response to the COVID-19 pandemic, such as teleworking, should pave the way for a post-COVID-19 society.

As I discussed at the beginning, the root causes of COVID-19 are the loss of buffer zones, such as *Satoyama* landscapes located between natural and human habitats, and the spread of unsustainability caused by rapid globalization. The CES, which represents self-reliant and decentralized societies where nature and humankind harmoniously co-exist, can promote transition to a society capable of resolving these issues. We wish to promote the concept of the Circulating and Ecological Sphere in cooperation with local communities in Japan, as well as in other parts of Asia and beyond.

In the international community, discussions are being held regarding the Post-2020 Biodiversity Framework, which will replace the Aichi Biodiversity Targets adopted in Nagoya in 2010. The 15th Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP 15), which was originally scheduled to take place in 2020 in Kunming in Yunnan Province, China, was postponed until 2021. Although we regret its postponement, we should nevertheless make maximum use of it, considering that the moratorium allows us to formulate new biodiversity targets looking ahead to the post-COVID-19 world.

The Satoyama Initiative, launched in 2010, has contributed significantly to the sustainable use of biological resources, which is the second goal in the Convention on Biological Diversity. This initiative is expected to continue to contribute to the targets of the Post-2020 Biodiversity Framework, which will succeed the Aichi Targets. Although it focuses on the creation of a society in harmony with nature, it is expected to evolve into efforts to promote resource circulation and decarbonization, adopting the ideas of the CES. This will contribute to the achievement of the SDGs and support integrated actions for the SDGs in both developing and developed countries.

The Satoyama Initiative is also expected to contribute to reconsidering how humans should interact with nature in a post-COVID-19 society. The conservation and restoration of socio-ecological production landscapes and seascapes (SEPLS), which are represented by the *Satoyama* landscapes located between wildlife and human habitats, will lead to the creation of a more resilient society against zoonotic diseases. It is significant to create a vision that will lead to the further development of the Satoyama Initiative in biodiversity hotspots, such as Yunnan Province, China. I hope to continue to contribute to the progress of the initiative.

* For more information on the Triple R Framework for the post-COVID-19 era, please see the page of research projects related to COVID-19 on the IGES website.
https://www.iges.or.jp/en/projects/covid19

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Professor Takeuchi was born in Wakayama City in 1951. After graduating from the Faculty of Science of the University of Tokyo in 1974, he entered the Graduate School of Agriculture of the said university, where he received his doctorate in agriculture. After serving as Professor at the Graduate School of Agricultural and Life Sciences of the University of Tokyo, Vice-Rector and Senior Vice-Rector at the United Nations University, and Director and Professor/Project Professor at the University of Tokyo Integrated Research System for Sustainability Science (IR3S), he has served as President of the Institute for Global Environmental Strategies (IGES) since 2017. He also became Project Professor at the University of Tokyo Institute for Future Initiatives in 2019. He has served as Chair of the Central Environmental Council of the Ministry of the Environment, and Editor-in-Chief of the journal *Sustainability Science*. He specializes in environmental studies and sustainability science.