

How can we develop [Tokyo Statement 2023](#)
“Transforming Resilient and Sustainable
Societies Against Catastrophic Disasters”?

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Conference Structure

Keynote Speech

Theme 1: Experiences of Catastrophic Disasters and Transformation

1-1 The Great Kanto Earthquake and recovery

1-2 Catastrophic disasters and international cooperation

Theme 2: Pathways to Overcome Catastrophic Disasters

2-1 Projected catastrophic disasters

2-2 Transforming societies to overcome future catastrophic disasters:

2-3 Science and technology for supporting social changes

Young and Mid-career Researchers' WG

Integration Session

High-level Panel Session

Tokyo Statement 2023

Preface

- International Conference on Science and Technology for Sustainability 2023 - Transforming Society to Become Resilient and Sustainable beyond Catastrophic Disasters - was held on September 7-8, 2023. It was held in a hybrid of the auditorium of the Science Council of Japan and online, attended by **X** participants from **Y** countries.

- To mark the 100th anniversary of the Great Kanto Earthquake, two goals were set for the conference.
 - The first was to reflect on what Japan has experienced and learned in the 100 years since the disaster, as well as what countries and regions devastated by huge earthquakes, tsunamis, and giant cyclones have experienced, and to share this information widely to provide hints for international cooperation.
 - The second was to propose measures to build up the capacity of the society as a whole to overcome a catastrophic disaster that would cause a major change in the state of the nation and transform it into a society that can better recover from it.

Expected Contributions from Theme 1 : Experiences of Catastrophic Disasters and Transformation

- **Session1-1 : The Great Kanto Earthquake and Recovery**
- **Session1-2 : Catastrophic Disasters and International Cooperation**

Session1-1 : The Great Kanto Earthquake and Recovery (Points of Discussion)

Focusing on the 1923 Great Kanto Earthquake and recovery process from the earthquake, This session will discuss **the achievements made in the past 100 years and challenges that still need to be addressed.**

Session 1-2 : Catastrophic Disasters and International Cooperation (Points of Discussion)

- Numerus cases provide evidence that catastrophic disasters cause a devastating impact on countries and regions when they occur.
- The challenge we face is **how to connect our experience of such events with proactive disaster-risk reduction efforts** for the future generations.
- In this session, we will explore this issue from two perspectives: **scientists** actively involved in enhancing **catastrophic disaster preparedness** and those who analyze the situation from a **third-party standpoint**.

Expected Contributions from Theme 2 : Pathways to Overcome Catastrophic Disasters

- **Session2-1 : Projected Catastrophic Disasters**
 - **Session2-2 : Transforming Societies to Overcome Future Catastrophic Disasters: What to Protect and How to Recover and Rebuild**
 - **Session2-3 : Science and Technology for Supporting Social Changes**
- + **Young and Middle Career Scientists' WG**

Session2-1 : Projected Catastrophic Disasters(Point of Discussion)

Based on progress of disaster risk assessment, to share knowledge on the potential catastrophic damage that could occur in the future.

Session2-2 : Transforming Societies to Overcome Future Catastrophic Disasters: What to Protect and How to Recover and Rebuild (Points of Discussion)

To enable our changing societies to overcome catastrophic disasters:

activating risk communication, and transitioning to an autonomous, decentralized and cooperative society that reduces exposure and vulnerability to hazards.

To increase investment in the qualitative and quantitative upgrading of market services to improve self-help, mutual-help and mutual-help capability.

To increase society's overall capacity to continue regular, uninterrupted activity and services (business continuity) even in the event of catastrophic damage and to prepare for recovery and reconstruction prior to such disasters (proactive recovery capacity).

Session2-3 : Science and Technology for Supporting Social Changes(Points of Discussion)

- **What is the critical information to be shared for Science and technology to support social changes to realize resilient and sustainable society?**
- **How can we provide it to society?**
- **How can we help society utilizing the knowledge and information?**

Young and Mid-career Scientists' Working Group (Points of Discussion)

What are the **academic challenges** to realize “Transforming Resilient and Sustainable Societies Against Catastrophic Disasters”:

What is **transformative capacity** to make societies resilient?

How can we realize it?

Recommendations - What should we do with the remaining time(Input from keynote)

In order to acquire resilience to overcome catastrophic disasters of the scale estimated by the Japanese government, all stakeholders should continue their efforts not only to prevent damage but also to focus on scientific studies and practices promoting disaster response and recovery. In what follows, we propose measures to be taken in line with the four priorities for actions in the Sendai Framework for Disaster Risk Reduction 2015-2030.

- (1) Deepening and elaborating understanding of disaster risk
- (2) Establishing new governance to cope with disasters
- (3) Ensuring investment in financial expenditure, capacity development, and technological development in response to disasters
- (4) Establishing proactive measures to enable Build Back Better

(1) Deepening and elaborating understanding of disaster risk

- It shall be established science and technology for improving disaster resilience and sustainability of societies with the ultimate three goals: 1) Maintaining and improving the physical, mental and social well-being of individuals, 2) Strengthening the capacity for mutual support in communities, and 3) the coherent realization of disaster risk reduction, climate change adaptation, and sustainable development in society.
- It shall be developed a disaster management system with an all-hazards approach, conversing multi-disciplinary knowledge covering all phases of disaster management, including forecasting/prevention, emergency response, and recovery/restoration.
- It shall be realized the consilience of knowledge for disaster resilience using information infrastructure to disseminate to society as proposed by the recommendation titled “Developing an Online Synthesis System (OSS) and fostering Facilitators to realize consilience,” from Science Council of Japan in 2020.

(2) Establishing new governance to cope with disasters

- It shall be established the governance contributing to the transition to an autonomous, decentralized, and cooperative society as suggested by the irreversible changes caused by the COVID19 pandemic.
- It shall be ensured transnational resilience where multiple countries cooperate with each other in addition to improving the national resilience of land, nations, and people in each country.
- It shall be stimulated risk communication on catastrophic disasters nationally and globally, started with discussions at Science Council of Japan.

(3) Ensuring investment in financial expenditure, capacity development, and technological development in response to disasters

- It shall be established the role of investment in reducing human activities and asset accumulation at risk exposed to disasters such as medium to long-term spatial reorganization plans and maintenance of critical social infrastructure.
- It shall be promoted the concentrated investment in (1) improvement of qualitative and quantitative enhancement of market services to improve self-help capacity and (2) enhancement and diversification of insurance and mutual aid programs to provide mutual assistance aid based on the system.
- It shall be enhanced individual resilience capabilities to deploy strategic capacity development programs to respond disasters more efficiently and effectively utilizing digital transformation (DX).

(4) Establishing proactive measures to enable Build Back Better

- It shall be strengthened the transformative capacity to build a new society after a disaster with the awareness that "in an emergency, we can only do what we normally do," as well as a system that promotes proactive measures using DX.
- It shall be presented a vision of society after a catastrophic disaster (sustainability, green energy/zero carbon, national spatial planning, transition to an autonomous decentralized and cooperative community in terms of finance, economy, industry, international cooperation, etc.)
- It shall be prepared the plans for recovery with presented vision in advance since the window of opportunity for framing plans is short in time.

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Your contributions are critical to the success of this conference!!

- We would like to thank you in advance for your opinion to improve the “Tokyo Statement”.
- Thank you for your kind attention!!
- Enjoy the conference!!!