

Special Seminar: Reflections on the 10th Anniversary of the Great East Japan Earthquake

March 18, 2021

Tokyo, Japan

Co-organized by the Japanese government and World Bank, the special seminar to commemorate the 10th anniversary of the Great East Japan Earthquake (GEJE) took place online on March 18 with around 300 participants in attendance. The seminar reflected on the reconstruction efforts and lessons learned on enhancing resilience to build back better from the perspectives of prominent experts in various fields.

The seminar commenced with opening remarks from **Mr. Takashi Miyahara**, Executive Director for Japan of the World Bank, followed by **Ms. Mari E. Pangestu**, Managing Director of Development Policy and Partnerships of the World Bank.

Mr. Miyahara expressed gratitude for the heartfelt messages of condolences and encouragement that Japan received from all over the world after the GEJE. He indicated that under the Sendai Cooperation Initiative for Disaster Risk Reduction launched by the Japanese government in 2015, JICA has been working on disaster risk reduction in more than 140 countries. The assistance amounted to \$US 4 billion and provided training to 40,000 people from 2015 through 2018. He indicated that as a report "[Lifelines](#)" published by the World Bank and Japan suggests, investing \$1 in disaster-resilient infrastructure yields \$4 worth of benefits to our people and societies. Investments in disaster risk identification, reduction, and preparedness are essential for building resilience to shocks. For instance, a report "[Unbreakable](#)" suggests, providing universal access to early warning systems has the potential to reduce asset losses by \$13 billion each year. In light of this, Japan alongside Global Facility for Disaster Reduction and Recovery (GFDRR), has been supporting countries in developing hazard maps and building early warning systems. In relation to building back better from COVID-19, he emphasized that Japan, together with the World Bank Group, will further strengthen their cooperation to enhance disaster resilience.

Paying tribute to the victims and families affected by the disaster, **Ms. Pangestu** stressed that Japan's quick and effective recovery and reconstruction efforts have shown countries around the world that it is possible to build back better. As we are in the fight against the pandemic, Ms. Pangestu spoke of the need to increase resilience to future shocks by working across sectors to build disaster- and pandemic-ready systems and stronger, more inclusive strategies and institutions.



Photo: Mr. Takashi Miyahara and Ms. Mari E. Pangestu share opening remarks.

After the opening remarks, **Ms. Kazuko Kohri**, Mayor of Sendai City, shared in a video message that to build a resilient city, not only the construction of tsunami protection infrastructure but also the nurturing of community disaster risk management (DRM) leaders, promotion of DRM education, and enhancement of disaster response capacity at the community level are crucial. Lastly, she reiterated Sendai City's commitment to share its knowledge on multi-sector DRM and risk reduction initiatives for the future of the world.

Following the message, the participants learned about Sendai City's reconstruction efforts which have led to a more disaster-resilient city with the participation of multi-stakeholders including citizens.

A keynote presentation was made by **Mr. Masakatsu Okamoto**, former Vice-Minister of Reconstruction Agency, Japan. First, he explained that the large-scale reconstruction work has been almost completed over 10 years by carrying out upland and inland relocation and raising the land and consolidating towns. He also highlighted that industries, mainly agriculture, fisheries and tourism, have almost recovered, gradually bringing foreign tourists back to the region. While the reconstruction of housing and infrastructure was considered to be a key in rebuilding from the disaster, the Japanese government also realized the regeneration of industries and livelihoods such as providing shopping areas and employment opportunities. By supplying private business owners with free facilities and subsidies and by revitalization of communities and relationships between community members, the regeneration was realized – creating a vibrant and lively town.



Caption: Ms. Kazuko Kohri and Mr. Masakatsu Okamoto share messages and lessons learned from the GEJE through video messages.

Key Takeaways from Panel Discussion: “A Conversation on Lessons from the GEJE on Resilience – Looking back to Look Forward”

Moderated by **Ms. Aiko Doden**, Special Affairs Commentator, Senior Director of NHK World TV, panelists shared their diverse experiences and perspectives on the key lessons from GEJE and how it has evolved over time. Engaging discussions were held on how the lessons on resilience have become even more relevant today and in the future, as the world faces more diverse, extreme, and uncertain hazards and shocks including climate change and the COVID-19 pandemic.

Mr. Yusuke Amano, Senior Vice President of Japan International Cooperation Agency (JICA) shared two key lessons among many: 1) What we prepared before the disaster was proven to be effective, for instance the emergency alert system helped stop the bullet train immediately, which achieved zero casualties. Given this, the investment in Disaster Risk Reduction (DRR) is critical in reducing damages and losses caused by disasters. 2) We need to continue to improve our capacity to cope with future mega-disasters. Highlighting the speedy recovery of the major transportation infrastructure after the disaster, he mentioned that agility to exceed what we have prepared is essential to building resilience. With these key lessons, JICA contributed to projects that led to significant damage reduction from flooding in the Philippines, and contributed to the resilient post-earthquake recovery in Nepal.

Mr. Fumihiko Imamura, Professor of Tsunami Engineering and Director of the International Research Institute of Disaster Science (IRIDeS), Tohoku University, explained how the tsunami warning system worked in 2011 and pointed out that the tsunami information issued only 3 minutes after the earthquakes was quick but underestimated the magnitude, thereby misinforming tsunami height, which was generated by database. As time passed, the information became more accurate with real-time information from an offshore tsunami detection system, but it was not timely and swift enough to inform the warnings. Based on this experience, he highlighted that the real-time observation system that facilitates 150 sensors connected by fiber cables was installed so that it can provide accurate tsunami information. Now a new method is being applied with Artificial Intelligence (AI) that can overcome limited observation system and

that can help predict the arrival times of tsunamis even with limited data by utilizing simulated scenarios.

Ms. Naoko Ishii, Professor of Institute for Future Initiatives and Director of the Center for Global Commons, The University of Tokyo, former CEO and Chairperson of the Global Environment Facility, mentioned with a global risk report that natural disaster, extreme weather and climate change have been increasingly and widely recognized as risks by global leaders over the past 10 years. The rise in the number of extreme weather events is driven by our economic system that has pushed the limitation of the earth system. She explained that the fundamental solution is the transformation of our economic and societal system that could avoid further collision between the economic system and earth system. Additionally, she shared the key messages from the Global Commission on Adaptation Report that states the need to revolutionize the way we enhance resilience: 1) understand and make risks more visible, 2) improve policy and investment decisions by incorporating assessments, and 3) yield opportunities to bring in private sector funding.

Mr. Sameh Wahba, Global Director for Urban, Disaster Risk Management, Resilience and Land Global Practice of the World Bank, indicated that the lessons from the GEJE have greatly impacted the work of the World Bank, especially in enabling mainstreaming resilience across sectors. He highlighted the significant contribution of the Japan-World Bank Program for Mainstreaming DRM in Developing Countries, which has provided invaluable analysis, knowledge and lessons from Japan and the GEJE on ways enhancing resilience of investments. The Program leveraged Japanese expertise to support more than 90 client countries since 2014, helping inform the design of over \$32 billion in World Bank financing and contributing to the Sendai Framework for Disaster Risk Reduction goals. For example, through the program, he highlighted that the important lesson from GEJE on business continuity planning have been shared and helped strengthen the resilience of industries and economic zones in Turkey and Bangladesh.

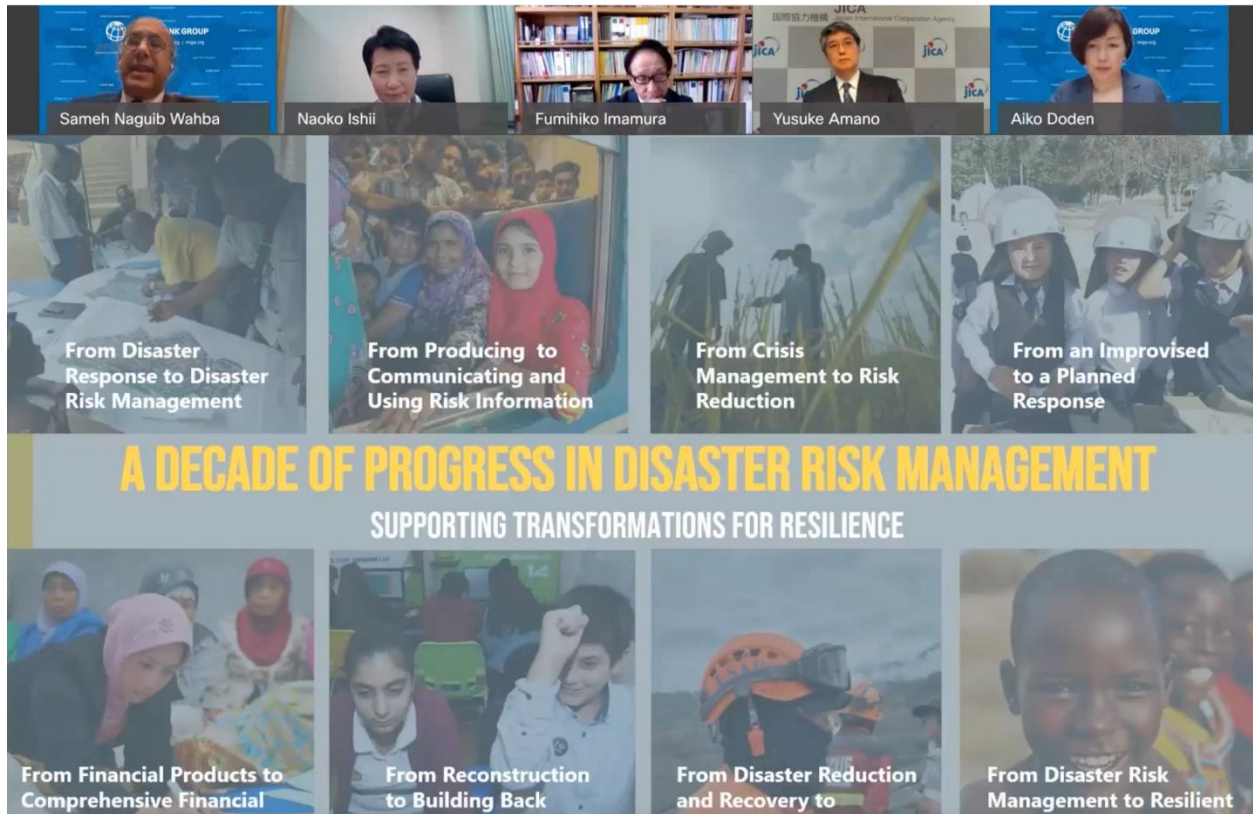
In response to the first question, the panelists were asked about any key synergy created in their respective field.

First, **Mr. Imamura** stated that many collaborations and much advice and support on recovery and reconstruction received from United Nations entities, the World Bank, NGOs, companies and universities helped revise and develop a new DRM strategy that can be applied not only for Japan but also for other countries. Next, **Ms. Ishii** said that resilience is gained through a comprehensive, systemic approach which is joined by multi-sectoral stakeholders. To build back better, she underlined that systemic approach, participation from a variety of stakeholders including citizens, private sector, national and local government, and local leadership in disaster management is the key. Lastly, **Mr. Amano** expressed the need to further integrate knowledge from science and technology in DRR initiatives, so that these interventions can be based on evidence. At JICA, he added, the collaboration with academic communities has been one of the focuses in the area of DRR.

Following the second question, the panelists were invited to share their views on key lessons and practices from Japan that could be useful for developing countries in achieving Sustainable Development Goals (SDGs).

Mr. Wahba mentioned three important components: 1) comprehensive approach, 2) public private partnership and 3) combination of structural and non-structural measures such as nature-based solutions. Regarding public private partnership, he emphasized that private sector plays an important role in bringing innovations and agility. **Mr. Amano** highlighted the challenges that developing countries face in preventing economic damages from disasters. Therefore, he indicated that development partners such as JICA and the World Bank can work together by synergizing the financial support to developing countries. To achieve this, it is critical to have the same vision, strategy and plan on the investment in DRR among various stakeholders and donors. **Mr. Imamura** reflected on the disaster preparedness and activities such as earthquake resilient buildings and disaster prevention drills which were in place before 2011. However, the damages the GEJE inflicted were beyond the capacity and prediction. As disaster mitigation and risk management becomes increasingly important, he pointed out that it is necessary to make a reliable assumption with the uncertainty in mind. Lastly, **Ms. Ishii** underscored the importance of a comprehensive, global vision and strategy on how we can transform our system towards achieving net zero emissions by 2050. For this, a shared vision and long-term vision are important, as well as comprehensiveness and multi-stakeholders. She also indicated that COVID-19 highlighted the importance of “build back better” that should be an integral part of the comprehensive vision.

To conclude, **Ms. Doden** stressed that people in disaster-stricken areas in Tohoku said that reconstruction is not only about building the right infrastructure but about rebuilding resilient communities which require a holistic approach. Building back better is a seamless process from disaster prevention to sustainable, equitable and resilient development. To that end, she emphasized that all stakeholders – international organizations, governments, private sector, civil societies, and media – need to be on board and stay on board.



Caption: (from left) Panelists and moderator, Mr. Sameh Wabha, Ms. Naoko Ishii, Mr. Fumihiko Imamura, Mr. Yusuke Amano, and Ms. Aiko Doden, discuss lessons from the GEJE on resilience and way forward on managing disaster risks.

Closing the seminar, **Ms. Maitreyi Das**, Practice Manager, Global Programs of Urban, Disaster Risk Management, Resilience and Land Global Practice at the World Bank, remarked that the real heroes of reconstruction and of building back better are the communities in Tohoku, and we need to continue learning from them.

The World Bank Group (WBG) provides technical and financial support for risk assessments, risk reduction, preparedness, financial protection, and resilient recovery and reconstruction. For more than a decade, the World Bank has forged a strong partnership with Japan, a global leader in mainstreaming disaster risk management or DRM, to advance disaster resilience in developing countries through advocacy, knowledge, and investment. Many of these activities are funded through the Japan-World Bank Program for Mainstreaming DRM in Developing Countries which was established with the generous support from Japan’s Ministry of Finance.

The critical lessons learned from the GEJE and views shared in the seminar will further augment the Japanese knowledge and extensive practice in dealing with natural disasters that occur more frequently and threaten our lives.

Related Resources

- [Special Seminar: Reflections on the 10th Anniversary of the Great East Japan Earthquake](#)
- [Resilient Dialogue Sendai](#)
- [Learning from Megadisasters: Lessons from the Great East Japan Earthquake \(2014\)](#)
- [Learning from Megadisasters: Lessons from the Great East Japan Earthquake \(2012\)](#)
- [The Sendai Report](#)