

What is GEA?

The origins of GEA can be traced back to the International Eminent Persons' Meeting on Financing Global Environment and Development in Tokyo, Japan, held one year before the 1992 United Nations Conference on Environment and Development (UNCED), the first international Earth Summit in Rio de Janeiro, Brazil. In response to a request from UNCED Secretary-General Maurice STRONG, former Prime Minister TAKESHITA Noboru played a major role in organising the event, bringing together former United States President Jimmy CARTER and other figures shaping international opinion. GEA is an NGO founded by former Prime Minister TAKESHITA, with membership from Japanese leaders, supra-party Diet members, business leaders and academics. GEA regularly holds international conferences, inviting participation from those at the world's top research institutes and international organisations, as well as influential figures who shape international opinion, to bring to light the critical situation of the global environment and disseminate the adopted recommendations to the rest of the world.

Chair's Summary

The Global Environmental Action (GEA) International Conference 2022: "Challenges and Opportunities for Sustainable Societies: Climate Change, Energy and Food Security" was convened in Tokyo on 27 and 28 October 2022.

This conference was organised by GEA, co-convened by the Government of Japan (Ministry of Foreign Affairs; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Agriculture, Forestry and Fisheries; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism; Ministry of the Environment) and co-sponsored by the Tokyo Metropolitan Government. The aim of the conference was to further advance the international discussion on the resolution of various issues in the fields of climate change, energy, and food security, and to disseminate to the rest of the world key recommendations on the technological, social and economic innovations necessary for realising a sustainable society.

1. Opening Ceremony

In attendance of Their Majesties the Emperor and Empress, the conference began with an opening speech by GEA Chairman YAMAGUCHI Shunichi, an address by His Majesty the Emperor, and a guest speech by Prime Minister KISHIDA Fumio. This was followed by a keynote speech by Hans J. SCHELLNHUBER, Emeritus Director at Potsdam Institute for Climate Impact Research (PIK) a video message by Fatih BIROL, Executive Director at the International Energy Agency (IEA), a special lecture by KOIKE Yuriko, Governor of Tokyo, and a video message from Alok SHARMA, President of the 26th Conference of the Parties to the UN Framework Convention on Climate Change (COP26). The Chair of the GEA International Conference 2022 was TAKEMOTO Kazuhiko, Visiting Professor at the UNU Institute for the Advanced Study of Sustainability (UNU-IAS) and Project Professor at the University of Tokyo.

Opening Speech

GEA Chairman YAMAGUCHI Shunichi began his opening speech by expressing his gratitude for being able for convening this year's conference. Noting the recent news of extreme weather events, such as large typhoons and torrential rains in Japan and around the world, he stressed the responsibility of the entire global society to reduce CO₂ emissions to address the global environmental crisis that is climate change, and secure a bright future for the next generation. He also expressed his hope that experts acting on the global frontlines and GEA members would engage in active discussion and that insights from these discussions could contribute to the international discourse, such as the UNFCCC COP27 to be held in Egypt next month.

His Majesty the Emperor's Address

In His address, His Majesty the Emperor expressed that paving the way for conserving the global environment from climate change and other threats is a challenge for which we must take immediate action. His Majesty also stated that this conference is an invaluable opportunity to gather global wisdom and foster cooperation between people from different countries and backgrounds to move forward towards creating a sustainable society. His Majesty highlighted that 2022 is an important year that marks the beginning of the implementation of the Paris Agreement, with practical rules concluded at COP26 last year, and the start of discussions next month to develop a legally binding instrument on plastic pollution, including in the marine environment. As the world needs to make progress on initiatives to meet the Sustainable Development Goals (SDGs) and other such goals, how every individual should act to achieve the future we want is called into question. Then, His Majesty expressed hope to convene active discussions and disseminate key messages to the rest of the world, as well as making further progress on specific measures toward realising a sustainable society, so that we may realise a future where people—we, our children, and grandchildren—and all living beings can enjoy the gifts of the global environment for a long time.

The Guest Speech by Prime Minister KISHIDA Fumio

Prime Minister KISHIDA Fumio emphasised that, with more frequent natural disasters and extreme weather events, climate change is an urgent issue common to all human beings, and that effective action from all countries is essential to achieve the goals of the Paris Agreement. He stated that, while the invasion of Ukraine by Russia has changed the situation surrounding energy security, it is still necessary to achieve net-zero by 2050, ensuring a stable energy supply. He stated that the Green Transformation (GX) is the key enabler for this, and the climate issue is rather an engine of growth to transform the structures of energy, industry, people's livelihoods, and the community. He expressed hope for leading decarbonisation and growth in the world through global strategies, such as the "Asian Zero Emission Community." Additionally, he stated that biodiversity conservation and measures against marine plastic litter are as important as climate action. To illustrate, he also mentioned the new plastic waste recycling and promotion law, which took effect in April this year, and the recently published roadmap towards "30 by 30," a goal to conserve at least 30% of ecosystems on land and in the ocean by 2030. He stressed that it is essential for Japan, as the host of the G7 Summit next year, to lead the

international community by confronting complex and intertwined global issues. To conclude, he expressed his high expectations for fruitful and active discussions on the realisation of a sustainable society, focusing on climate change, energy, and food security at the conference.

Keynote Speech by Prof. Hans J. SCHELLNHUBER

Hans J. SCHELLNHUBER, Emeritus Director at Potsdam Institute for Climate Impact Research (PIK), stated that, for many populations living in environments vulnerable to climate change, in addition to the decrease in food production due to the conflict in Ukraine, resource depletion is an especially alarming issue. He delivered his speech on the “Planetary Boundaries” concept and some new initiatives in the EU, summarised as follows:

- The first assessment (2009) on planetary boundaries demonstrated that three of the nine planetary boundaries (climate, biodiversity, and the nitrogen cycle) have been breached. The latest assessment (2022; unpublished) shows that that six limits had been breached, with the integrity of the biosphere at exceptionally high risk.
- Despite the high ambitions of the Paris Agreement, climate action has so far been insufficient. Even a 1.5°C average temperature increase from pre-industrial levels could cause massive and irreversible climatic changes at multiple locations around the globe. Furthermore, as pointed out in his article, anthropogenic climate change could lead to the threat of civilization’s extinction, propelling him call on the IPCC to produce a special report on this issue. Unless there is a fundamental change in the national policies on climate change, a temperature rise well beyond 2°C is expected; thus, it is important to reduce CO₂ emissions and strengthen nature as a carbon sink.
- The EU, with its “European Green Deal,” aims to reduce CO₂ emissions by 55% by 2030 and become the world’s first carbon-neutral continent. Decoupling economic growth and emissions from fossil fuels is well within reach. It is clear from the example in Germany, where gross domestic product increased by 48% between 1990 and 2020, while emissions decreased by 41%.
- Nature-based solutions (NbS) are effective for the reduction of CO₂ emissions. Reforestation of the one billion hectares of degraded area worldwide is one possible measure. Others may involve using wooden materials produced under sustainable forest management in urban buildings. As a means to store carbon for the next 100 years, cycling the production and use of wood could contribute to a massive reduction, including of past emissions.
- The newly launched EU initiative “New European Bauhaus” aims to address issues such as climate change by co-creating sustainable, beautiful, and innovative lifestyles and spaces. They have held meetings on using organic resources toward architecture for a new era.

Finally, he expressed his hope for retrimbering the city and buildings in line with NbS in Japan, a country where 70% of land is forest. He cited historical wooden buildings such as the Horyuji Temple and recent innovation by a Japanese architect BAN Shigeru.

Video Message by Dr. Fatih BIROL

In his video message, Fatih BIROL, Executive Director of the International Energy Agency (IEA), stated that the recent energy crisis had affected almost every part of the world, especially Europe as the epicentre, due to the region's high dependence on Russia for oil, natural gas and uranium. Additionally, soaring energy prices have also had tremendous impacts in developing countries, predominantly those in Africa. He mentioned that many governments are taking various policy measures to address the energy crisis and accelerate the transition to clean energy. Some governments, such as the US, Japan, Europe, China and India, have invested vast amounts of money in accelerating the spread of clean and renewable energies, hydrogen and nuclear power, and electric vehicles. He expressed his hopes that the energy crisis motivates efforts toward progress in the fields of energy security, climate change countermeasures and industrial policy, and serve as the turning point in the energy policy history toward a future with better, safer, and cleaner energy.

Special Lecture by Ms. KOIKE Yuriko

KOIKE Yuriko, Governor of Tokyo, opened her keynote speech mentioning the challenges associated with extreme weather due to climate change and the effects of the energy crisis around the world. To tackle such challenges, the Tokyo Metropolitan Government, with a population of 14 million, has been working on decarbonisation and energy security and has been implementing various initiatives to realise a green and resilient global city. She introduced the new Tokyo Environmental Master Plan and the recently developed roadmap, which aim to achieve net zero emissions by 2050. The HTT Tokyo initiative encourages zero emission buildings through installation of solar panels on residential homes which cover a large part of power consumption. She added that Tokyo became the very first city in Japan to promote the mandatory installation of solar power generation equipment in new houses, targeting house builders. The initiative also includes the broader use of ZEVs to reduce emissions in the transport sector, the development of green hydrogen technology as a means of renewable energy, and the promotion of green finance. Tokyo is also aiming to lead city-to-city collaboration, calling for climate action through its "TIME TO ACT" movement and "G-Nets" (Global City Network for Sustainability). She concluded her speech with the catchy concept of "SusHi Tech Tokyo" (Sustainable High City-Tech. Tokyo), and commented on the willingness of Tokyo to promote a variety of ideas and technologies to overcome challenges faced by cities, and convey its ideas to the rest of the world.

Video Message by Mr. Alok SHARMA

Alok SHARMA, President of the 26th Conference of the Parties to the UN Framework Convention on Climate Change (COP26), began by emphasising that the UK Presidency has been working towards the implementation of the Glasgow Climate Pact. He expressed that he has been pushing for greater progress in public and private finance, calling on

multilateral development banks and garnering support for the Just Energy Transition Partnerships, despite formidable challenges such as the war in Ukraine. He said that, while the chronic threat of climate change has worsened, as shown in extreme weather events in Japan and the UK, more countries are realising that their energy systems should not be dependent on fossil fuels. He then reiterated the UK's climate commitments, including reducing emissions by 68% by 2030 compared to 1990 levels and expanding renewable energy to generate 100% clean power by 2035, mentioning the role that Japanese investments have played to facilitate this renewable energy transition. He expressed hopes for the leadership of the Japanese G7 Presidency in 2023 to make further progress on electric vehicle deployment, coal phase-out and industrial decarbonisation, citing Japan's emission reduction targets and elimination of overseas fossil fuel financing. Finally, he stressed the need to demonstrate continued commitment to climate at COP27 in Egypt, building on the work of the Glasgow Climate Pact, enhancing energy security and reducing energy costs, to ultimately keep 1.5 degrees alive.

2. Thematic Sessions

- ① Decarbonisation and Energy Security
 - Recent developments on climate change in Japan and global settings
 - Geopolitical implications for climate security and energy transition
 - International trends on offshore wind power and implications for Japan
 - The role of finance in moving toward carbon neutrality
 - Simultaneous resolution of climate change and other relevant issues through maximising synergies
- ② Climate Change Adaptation and Water
 - Scientific findings and projections on climate change and increased disaster risk
 - Effective and efficient enhancement and promotion of weather disaster countermeasures that take climate change into consideration
 - International cooperation on weather disaster preparedness in the era of climate change
- ③ Establishing Sustainable Societies: *Bringing Biodiversity and Food Security into View*
 - The decisive decade for a sustainable future
 - “Food system” as a nexus challenge
 - Overcoming negative consequences of food systems
 - The role of business, finance, local governments and research institutions
- ④ Circular Economy and Countermeasures for Marine Plastic Litter
 - Opportunities of a circular economy
 - Mapping and monitoring the plastic pollution crisis
 - Accelerating the shift to a circular economy for plastics
 - Fostering international cooperation to overcome the transboundary plastic crisis

3. Wrap-Up Session and Acknowledgements

Under the facilitation of the Chair of the GEA International Conference 2022, each session chair reported on the critical points of their respective thematic session, and all GEA members and session speakers further deepened their discussion. A report on the discussions at the conference will be published on the official conference website in due course (Please Read the QR code on the back cover for the session summaries.). In his closing remarks, the Chair stressed the importance of returning to GEA's starting point and delivering opinions to policymakers worldwide. Then, he stated that he would promptly compile the results of the discussions and deliver them to international forums, such as the UNFCCC COP 27 to be held in Egypt next month. Finally, he expressed his gratitude for the timely and active discussions in each session, as well as appreciation to the GEA Executive Committee members and the GEA Secretariat for their efforts in organising the conference, to the speakers and participants from Japan and abroad who spoke on-site or online, and to all those involved in the smooth convening of the conference.

28 October 2022
GEA International Conference 2022 Chair
TAKEMOTO Kazuhiko

Read the QR code for the outcomes of the conference.