



## Summary of Keynote Speech

Jim SKEA, Chair of the Intergovernmental Panel on Climate Change (IPCC) began his speech by expressing his gratitude and honor to have been invited to deliver a keynote at the start of the GEA International Conference.

He explained that the Sixth Assessment Cycle of the IPCC produced more than 10,000 pages of reports. Therefore, he focused on the three goals of the Paris Agreement; limiting global warming, fostering resilience to climate change, and aligning financial flows with the first two goals. He also mentioned that his speech would cover the efforts of governments to contextualize these goals in sustainable development and eradication of poverty, as well as touch upon the IPCC's plans for the Seventh Assessment Cycle, which will run until 2029 or 2030. The main points are as follows:

### Limiting Global Warming

- Children born today are likely to live until 2100 and could face a significantly warmer world with serious consequences in higher emission scenarios. Due to actions already taken, the highest emission scenario with a warming of up to 4°C is now less likely. However, only rapid and immediate emissions reductions, consistent with the lower scenarios, will avoid the worst impacts of climate change.
- Both historical and present-day per capita emissions vary widely across the globe. North America and Europe together account for nearly 40% of cumulative carbon dioxide emissions since the start of the industrial era. The Southern Asia region and another region, Japan, grouped together with Australia and New Zealand in the Pacific region, each accounted for just 4%.
- In 2019, North America had per capita emissions of around 19 tons of carbon dioxide equivalent, closely followed by Australia, Japan and New Zealand group together with the Middle East and Eastern Europe at around 13 tons. Meanwhile, per capita emissions in Southern Asia and Africa are only two to three tons per capita.
- Those who are most vulnerable to the impacts of climate change have contributed the least to global warming, indicating a lack of progress on greenhouse gas emissions and equity.
- There is an emissions gap between current Nationally Determined Contributions (NDCs)<sup>1</sup> and what is needed to achieve the long-term temperature goal of 1.5°C under the Paris Agreement. Additionally, the implementation gap means that current policies are not enough to achieve the NDCs.
- IPCC concluded that it is likely that warming of 1.5°C will be exceeded temporarily in the

<sup>1</sup> The Paris Agreement (adopted in December 2015; entered into force on November 2016) requires each country to prepare, communicate and maintain successive nationally determined contributions (NDCs) to reduce national emissions every five years (Article 4, paragraph 2). <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs>

early 2030s, while ambitious emission reduction scenarios could bring warming back down.

- Wind and solar offer the largest potential for emissions reductions to energy supply by 2030. Other options with significant or lower potential over this timescale include bioelectricity, geothermal energy, nuclear power, and carbon capture and storage. Another attractive near-term option is reducing fugitive methane emissions from oil and gas systems as methane is a powerful greenhouse gas (GHG) with a relatively short lifetime in the atmosphere.
- Not all emission reduction options are on the supply side. The latest IPCC mitigation report<sup>2</sup> had a chapter dedicated to the demand side, consumption and human behavior which assessed how human needs for nutrition, mobility, shelter and manufactured products could be met with lower emission levels. The conclusion was that GHG emissions could be reduced by between 40 and 70% by 2050 using demand side measures.

### **Fostering Resilience to Climate Change**

- Hottest day temperatures are projected to increase by between 50 and 100% more than average temperatures in middle latitude and semi-arid regions. A combination of heat and humidity with a warming of around 3°C, could pose serious risks to human health, and cause a decline in productivity of food systems.
- Wildfire damage, permafrost degradation and biodiversity loss increase when global warming is between one and two degrees. For ocean and coastal systems, warm water corals are already affected, and will be almost lost completely at 2°C warming, with three quarters potentially lost even at 1.5°C warming.
- Adaptation measures can substantially reduce the risk of climate change. Proactive adaptation can keep risks to human health to moderate levels at warming levels of below 2°C. The socio-economic development pathways we follow can reduce risks to suitable fuel, food availability and access.
- Adaptation action has certainly increased, but progress is uneven and slow. Most observed adaptation is fragmented, small in scale, incremental, sector-specific and focuses more on planning rather than implementation. Implementation is limited due to a lack of resources and institutional capacity, and there are widening gaps between adaptation action and requirements particularly among lower-income populations.

### **Aligning Financial Flows to the First two Goals**

- Only 4 to 8% of tracked climate finance is allocated to adaptation, and more than 90% of adaptation finance comes from public sources.
- The gaps between the current investment and the amount required by 2030 to put the world on a 1.5 or 2°C pathway is actually narrower than for adaptation. The gaps are narrower for energy supply, noticeably electricity generation, but wider for energy

---

<sup>2</sup> IPCC, 2022: Summary for Policymakers [P.R. Shukla, J. Skea, A. Reisinger, R. Slade, R. Fradera, M. Pathak, A. Al Khourdajie, M. Belkacemi, R. van Diemen, A. Hasija, G. Lisboa, S. Luz, J. Malley, D. McCollum, S. Some, P. Vyas, (eds.)]. In: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.001.

efficiency, transport and land use measures. Gaps are also substantially greater for developing countries.

- Closing these investment gaps requires increased levels of public finance and publicly mobilized private finance flows from developed to developing countries, based on the New Collective Quantified Goal on Climate Finance (NCQG), to be agreed at COP29<sup>3</sup>. It also requires reducing risks and leveraging private flows through public guarantees, local, and corporate capital market development and building greater trust in international cooperative processes. It should be emphasized that trillions of dollars are needed.

### **The Three Goals of the Paris Agreement in the context of Sustainable Development and Efforts to Eradicate Poverty**

- The IPCC's Sixth Assessment Report systematically explored the links between climate action and the Sustainable Development Goals (SDGs) including SDG 1 (eradication of poverty), SDG 2 (zero hunger) and SDG 3 (health and wellbeing).
- In the near term, one example of synergy is to look at the impact of the adoption of electric or hydrogen fuel cell vehicles on urban air quality, with positive consequences for human health. It is also vital to be aware of the potential for trade-offs. Another example is the consequence of large-scale land use change associated with bioenergy production, with implications for SDG 2 (food security) and SDG 15 (biodiversity).

### **The Seventh Cycle of the IPCC assessment**

- The IPCC decided that the three Working Group (WG) reports would be produced in the traditional order in the Seventh Cycle<sup>4</sup>: WG1: the physical science basis; WG2: impacts, adaptation and vulnerability; and WG3: mitigation of climate change. The joint leadership of the three WGs will produce a Special Report on Climate Change in Cities by 2027.
- The IPCC Task Force on National Greenhouse Gas Inventories, or TFI, is supported by a Technical Support Unit (TSU) which is hosted by the Institute for Global Environmental Strategies (IGES) in Japan. TFI plays a vital role in developing the methodologies by which countries report estimates of emissions and removals of GHGs to the UNFCCC. In this cycle, the TFI has been charged with producing two methodology reports, one on short-lived climate forcers, and the second on carbon dioxide removal technologies and carbon capture, utilization and storage.
- Going forward, the IPCC will update technical guidelines on impacts and adaptation, with an emphasis on adaptation indicators, metrics and methodologies, which will support the Global Goal on Adaptation. Other upcoming publications include the WG2 report on impacts, adaptation and vulnerability, and a synthesis report due by late 2029.

In conclusion, Professor Sir Jim Skea had one final message, urging the world not to despair in the sight of these gloomy messages, reminding us that the future is in our hands, and that we have the means to confront the challenge of climate change.

---

<sup>3</sup> <https://unfccc.int/NCQG>

<sup>4</sup> <https://www.ipcc.ch/2024/01/19/ipcc-60-ar7-work-programme/>

## Summary of and Comments from the Thematic Sessions

### Session 1: Strategic Approaches for a Decarbonized Society

#### Session Chair:

- TAKAMURA Yukari  
Professor, Institute for Future Initiatives, The University of Tokyo

#### Speakers:

- YAMASAKI Toru  
President and Representative Director, The San-in Godo Bank, Ltd.
- UESADA Akihito  
Mayor of Matsue City, Shimane Prefecture, Japan
- MIYAKE Kahori  
Fellow Officer, ESG Solution Planning and Promotion Department, Sumitomo Mitsui Trust Bank, Limited
- KATO Keita (Keith)  
President and Representative Director, SEKISUI CHEMICAL CO., LTD.
- MATSUNAGA Tsuneo  
Director, Satellite Observation Center, Earth System Division, National Institute for Environmental Studies, Japan

#### Discussant:

- Jim Skea  
Chair, Intergovernmental Panel on Climate Change (IPCC)

### Global and Japanese strategies for the 1.5°C target

- It is crucial to promote initiatives that “chase two rabbits”. It is important not only to reduce greenhouse gas emissions, but also to contribute to enhancing the wellbeing<sup>5</sup>

<sup>5</sup> The World Health Organization (WHO) defines health as “a state of complete physical, mental, and social well-being, and not just the absence of disease or infirmity.”

of each and every person, and achieving the SDGs through economic and social policies. Initiatives and insights were reported aiming for simultaneous solutions with biodiversity and pollution control measures.

- According to the latest science<sup>6</sup>, realizing the international community's 1.5°C target will require efforts to achieve significant GHG emission reductions over the next decade until around 2030, with the aim of achieving carbon neutrality around 2050.
- Climate change measures can raise the value of companies and enhance the character of the region. It is important to improve the branding and competitiveness of Japanese companies by visualizing the value of CO<sub>2</sub> reductions through carbon pricing.
- In order to increase the predictability of technology development and investment, there is a need to set a higher target based on science and to develop concrete policies that can be realistically implemented, with an awareness of the emission reduction pathways aligned with the 1.5°C target.

### **Carbon neutrality in 2050 and the next decade**

- In order to realize these early, significant reductions and achieve a sustainable and better society, it is essential to make the best use of existing technologies and promote measures focusing on renewable energy, energy saving, and electrification. At the same time, it will be important to promote the introduction and diffusion of innovative technologies towards carbon neutrality in 2050.
- Expanding the use of renewable energy sources, which is key to achieving significant reductions at an early stage, is becoming increasingly important in terms of ensuring the competitiveness of Japanese companies.
- Lightweight and flexible perovskite solar cells have the potential to encourage installation in locations previously difficult to reach in terms of load-bearing capacity and geometry, significantly increasing solar PV deployment and enhancing local resilience.

### **Acceleration of initiatives by local authorities, communities, businesses including SMEs, financial institutions and residents**

- It is important to promote inter-departmental, cross-company, cross-sectoral and inter-regional, as well as industry-government-academia cooperation to strengthen actions (coordinated action), involving various stakeholders. Innovative incentives need to be provided to promote and institutionalize such coordinated and strengthened action. This

---

<sup>6</sup> IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001

kind of process also contributes to a just transition.

- At the city and regional level, it is easier to formulate and implement integrated policies across environmental, economic and social sectors. Knowledge developed in Japan can be shared with overseas stakeholders, contributing to the decarbonization of the world as a whole.

### Specific policies include:

- Promoting spillover effects from large enterprises to SMEs through the value chain. Policy support and cross-company collaboration will be vital to achieve this.
- Providing financial support for initial investment that leads to medium- to long-term decarbonization impacts and carbon credits<sup>7</sup> to encourage SME initiatives.
- Carbon and biodiversity credits<sup>8</sup> can provide financial incentives for community-level initiatives. Mechanisms to generate high integrity carbon credits are important for further development.
- Financial institutions encourage decarbonisation and local economic cycle initiatives by local stakeholders through the provision of finance, knowledge, and information.
- Building cross-sectoral structures for municipalities and relevant institutions, utilizing external resources.
- Enhancing regional branding for cities and local areas, while raising awareness among citizens and local businesses towards decarbonization.

### Monitoring greenhouse gas emissions using satellite data

- There are high expectations for long-term assessment of the effectiveness of emission reduction measures towards 2030 and for monitoring and action on methane emissions.
- Use of satellite data could lead to the measurement of the effectiveness of mitigation measures at national, city and enterprise level.
- By using satellite data, communication will be encouraged between emission and observation sides.

---

<sup>7</sup> Carbon credits are tradable credits certified by a third party for the reduction or elimination of greenhouse gas (GHG) emissions and are used to meet voluntary or public targets.

<sup>8</sup> Biodiversity credits are measured, evidence-based credits, certificates of positive biodiversity outcomes, and are considered a financial instrument to support biodiversity conservation and restoration. Currently in the early stages of development, various definitions and scopes of application are being proposed.

## Session 2: Coping with Biodiversity Loss

### Session Chair:

- NAKASHIZUKA Tohru  
President, National Institute of Forestry Research and Development

### Speakers:

- Karen LIPS  
Vice President, International Institute for Applied Systems Analysis (IIASA)
- YOSHIDA Masahito  
Professor Emeritus, University of Tsukuba
- Thomas KASTNER  
Senior Scientist, Senckenberg Biodiversity and Climate Research Centre
- IIZUKA Yuko  
Executive Officer and General Manager, Sustainability Department, Sumitomo Forestry Co. Ltd.

### Nature Positive, the 2030 mission of the Kunming-Montreal Global Biodiversity Framework (KMGBF)<sup>9</sup>

- Climate change, biodiversity loss, and environmental pollution are referred to as the triple planetary crisis. Biodiversity loss is closely linked to our human society and even to human physical and mental health (sustainable diet, planetary diet). In other words, biodiversity conservation has synergies with human wellbeing. Nature-based Solutions (NbS) contribute not only to biodiversity conservation, but also to climate mitigation and adaptation, disaster prevention and reduction. Furthermore, considering the use of materials derived from living organisms, biodiversity is also linked to marine plastic pollution.
- There has been a rapid increase in the media coverage of climate change, while coverage of biodiversity issues still remains scarce. In addition, compared to climate change, biodiversity issues are more difficult to understand because of their localized nature, the complexity of their causes and effects, and difficulties in setting clear

---

<sup>9</sup> While the past goal focused on halting biodiversity loss, the Kunming-Montreal Biodiversity Framework (KMGBF), adopted at the 15th Conference of the Parties to the Convention on Biological Diversity (2022), sets an ambitious target to reverse biodiversity loss (“nature positive”) by 2030.

numerical targets. Meanwhile, there are also attempts being made towards a solution.

- The lack of public attention on the benefits of biodiversity for humanity has contributed to the delayed response to biodiversity loss. Robust narratives are needed on the relationship between biodiversity loss and humans. In Central America, an infectious disease affecting amphibians caused a sharp decline in wild frog populations. As a result, insects such as mosquitoes, that the frogs fed on, rapidly multiplied, leading to a decade-long mosquito-borne malaria epidemic in Costa Rica. This type of scientific evidence is very important.
- The response to such a complex crisis requires the collaboration of a diverse range of actors. While there has been an increase in relevant research, only a few research papers have been reflected in policy. In addition, 95% of scientific research is conducted in developed countries, which account for one-fifth of the world's population, while research in developing countries remains scarce. Public participation in scientific research (Citizen Science) can serve as a bridge between scientists, the general public, and policy. Involvement in scientific research also helps raise public awareness. Additionally, it is essential to foster international joint research and interdisciplinary research.
- While the impacts of biodiversity loss on humans are not always immediately visible, it is important to clearly communicate on what is already happening. Awareness raising and scientific communication on changes in the nature around us need to be promoted.

### 30 by 30 (KMGBF Target 3)<sup>10</sup>

- The “30 by 30” target will be achieved not only through the expansion of protected areas and improvement of their management quality, but also by establishing and managing other effective area-based conservation measures (OECMs). In addition to national efforts, private sector efforts will also play a crucial role in reaching this target.
- In order to achieve the goal of reducing the extinction risk of all species by tenfold<sup>11</sup>, it is necessary not only to promote the designation of endangered native wild animal and plant species, but also to promote the development of conservation and recovery projects aimed at the concrete restoration of species. This will require a significant increase in financial and human resources.
- Japan’s protected areas cover 20.3% of its land, but only 13.3% of its seas. As a country with the sixth-largest territorial waters and Exclusive Economic Zone (EEZ) in the world,

---

<sup>10</sup> The 30 by 30 target has been set to effectively conserve at least 30% of land and seas as healthy ecosystems by 2030 (KMGBF Target 3).

<sup>11</sup> A goal has been set to reduce the extinction rate and risk of all species by tenfold by 2050 (KMGBF Goal A).



Japan will need to implement innovative measures to achieve this target.

- As an initiative to expand OECMs, the Ministry of the Environment has established a certification system for “Nationally Certified Sustainably Managed Natural Sites” in Japan. A total of 253 sites, approximately 0.2% of the national land area, have been certified in Japan by 2023. Clear incentives need to be offered to increase registrations.
- To achieve the 30 by 30 target, a gap analysis should be conducted between current protected areas and areas of importance for biodiversity conservation, and ecosystems that are not adequately protected in existing protected areas should be included in these areas. In addition, when expanding protected areas and registering OECMs, they should be designed and connected in a way that enhances the continuity of existing protected areas and reduces the risk of extinction.

### **Sustainable agriculture and forestry, fisheries, and resilient food systems and food security (KMGBF Target 10)<sup>12</sup>**

- Trade in agricultural products plays an important role in food security in most countries. Globalized food systems are closely linked to sustainability issues such as land use change, water use, and GHG emissions, and are also responsible for the loss of ecosystem services and biodiversity in remote producing areas. Invasive alien species and pesticide pollution are also affecting native pollinators such as honeybees.
- The issue of global responsibility for ecological degradation through trade in agricultural products is becoming more widely recognized, and corporate commitment is also increasing. There is growing interest in ambitious supply chain policies such as the EU Anti-Deforestation Regulation, but practical challenges for policy implementation such as monitoring difficulties, low market share of the EU, and issues of legitimacy and justice, have also become apparent.
- Research is underway to quantify the global impacts of the food system on biodiversity (e.g. crop trade and vertebrate extinction projections). However, challenges remain, including limitations of the available data and difficulties in estimating values for biodiversity and nature.
- While simple indicators are required for policymaking, there is no single indicator that can capture the multidimensionality of biodiversity. Communicating research findings and uncertainties remains a challenge.
- International cooperation and a systemic perspective are also essential to solve the problem of negative impacts of the global food system.

---

<sup>12</sup> KMGBF Target 10 calls for the sustainable management of production areas through the sustainable use of biodiversity in agriculture, forestry and fisheries, and for the contribution of these industries to the resilience of production systems, food security, as well as the conservation and restoration of biodiversity.

## Business impact on biodiversity and sustainable consumption (KMGBF Target 15)<sup>13</sup>

- There are companies that have already established sustainable procurement policies and achieved the target. In addition, initiatives are being implemented in producing areas in developing countries that engage local communities in forest restoration activities. Establishment of green corridors connecting protected forests is another example of biodiversity conservation at the landscape level. These activities will be useful for considering what the business sector can do in the future.
- One pioneering company aims to simultaneously fulfil the three values of environment, society, and economy, as well as to create new value. That is, to create economic value while addressing climate, nature, and equity at the same time. Decarbonization and a circular bio-economy which maximize the value of forests is one example. Promoting forest utilization will contribute to decarbonization and a circular bio-economy. CO<sub>2</sub> captured by forests can be stored for a long time in wood used in construction, and wood residues can be utilized for biomass power generation. Efforts to reduce emissions are particularly important in the construction industry, which accounts for 37% of global GHG emissions. Besides emission reductions during building use, it is also important to reduce raw material-related emissions through the increased use of timber. Japan boasts one of the largest areas of forest cover in the world, but its low timber self-sufficiency rate remains an issue. To address this issue, it is necessary to promote the utilization of forests that have reached the optimal harvesting stage.
- Companies have been quantifying their conservation efforts and other initiatives (inputs). However, in order to assess the value of nature as natural capital, it is necessary to monitor, quantify and visualize the positive impacts resulting from such efforts and initiatives. This means measuring the multifaceted functions of nature, which is not easy, but trials are ongoing.
- Furthermore, it is important to look at how incentives are set up for the valued nature. The development of markets for high integrity carbon credits and biodiversity credits is also important. Performance-linked finance is another emerging scheme.

---

<sup>13</sup> The business and financial sectors are required to assess and disclose their dependence on and impacts on biodiversity to reduce biodiversity risks and ensure sustainable production patterns (KMGBF Target 15).

### Session 3: Addressing Marine Plastic Pollution

#### Session Chair:

- Suchana (Apple) CHAVANICH  
Professor, Department of Marine Science, Faculty of Science, Chulalongkorn University

#### Speakers:

- Luis Vayas-VALDIVIESO  
Chair of the Intergovernmental Negotiating Committee (INC) on Plastic Pollution  
Ambassador of Ecuador to the United Kingdom of Great Britain and Northern Ireland
- KOJIMA Michikazu  
Chief Senior Researcher, Inter-disciplinary Studies Center, The Institute of Developing Economies, Japan External Trade Organization (JETRO)
- TOKAI Tadashi  
Professor Emeritus, Tokyo University of Marine Science and Technology
- Drahomíra MANDÍKOVÁ  
Group Chief Sustainability Officer, Asahi Group Holdings, Ltd.

### The State of Plastic Pollution

- While surveys and studies are gradually revealing the state of plastic pollution and its effects on living organisms, further scientific knowledge is required.
- The main sources of microplastics (MicP)<sup>14</sup> pollution include land-based sources of plastics, such as those derived from improper waste collection and disposal. Waste derived from fishing gear is also a major issue. Sources of MicP are diverse including particles from tire wear, paint, textile fibers, agricultural equipment, artificial turf.
- It is also important to understand the current status of legacy plastics (that have already been generated and are present in the environment, such as those on the seafloor).
- It is now known that the density of drifting MicP is high in the seas around Japan and in subtropical circulations, that the origin of seafloor litter collected differs depending on the sea area, and that large amounts of macro plastics and MicP are accumulated on the deep-sea floor. However, much remains unknown about the distribution of MicP in the sea and on the sea floor, their degradation and miniaturization, and the presence of MicP

---

<sup>14</sup> Microplastics are plastic particles smaller than 5 mm in diameter. Macroplastics are plastic materials greater than 5 mm.

smaller than 0.33 mm.

- Regarding the impacts on living organisms, including on human health, there are concerns about the deaths of marine life due to accidental ingestion of plastics, physical impacts from micro or nano size plastics<sup>15</sup> in water or air, and the impacts of associated chemicals. Previous studies have shown the persistence of MicP in living organisms and possible bioaccumulation of additives. Although the risks to the environment and human health is not yet fully understood, precautionary measures are required along with better scientific understanding on the associated risks.

### Importance of data management and harmonization

- To establish a scientific foundation for measures against plastic pollution through international coordination/cooperation, it is crucial to standardize and harmonize data management methods and share data to allow comparative assessments on plastics pollution. It is also essential to identify the sources of marine plastics as well as to improve the availability and transparency of data for effective countermeasures.
- Moving forward, it is crucial to foster international cooperation both in research and countermeasures.

### Challenges facing developing countries and the role of international cooperation

- Estimates suggest that unmanaged plastic waste accounts for a significant portion of the macro and microplastics released into the environment globally.
- In developing countries, as incomes are rising and plastic use is expanding, waste management remains inadequate, especially in small cities, rural areas, and urban slums. It is estimated that this contributes to higher levels of plastic leakage. Thus, international cooperation plays a key role in improving waste management.

### Promoting a circular economy as a countermeasure against plastic pollution

- Given the diverse sources of plastic waste and the diversity and complexity of related stakeholders, it is necessary to take measures throughout the entire life cycle as well as among governments, NGOs, industry, and the scientific community as a whole to reduce plastic pollution. Measures include reducing plastic usage, promoting alternative materials, applying EPR, promoting recycling (e.g. through industrial standards and green public procurement) as well as design for durability and longevity, and

---

<sup>15</sup> Nanoplastics are still under debate, and different studies have set the upper size limit at either 1000 nm or 100 nm.

establishing waste management systems across wider area, especially among municipalities. There is a need to develop and disseminate technologies to reduce plastic leakage at the production and consumption stage (upstream), adopt biodegradable materials, and prevent leakage.

- Ensuring effective implementation of policies and regulations at the national level is the foundation for the application of sound technologies and global collaborative actions against plastic pollution.
- Scientific research and policy coordination are essential to identify priority issues and harmonize policies in order to promote effective actions by companies and other stakeholders. In addition, it is necessary to strengthen the dissemination of scientific knowledge to society as well as to promote education to encourage consumers to change their behavior.
- In order to actively invest and assist in future pollution solutions, companies are expected to contribute not only through actions directly relevant to waste reduction and recycling, but also through other means based on the “Beyond Value Chain” concept. This requires specific and clear rules and incentives at each stage, as well as ensuring close collaboration with SMEs and providing support for their capacity building.
- In promoting measures such as the development of alternatives, the synergies and trade-off between CO<sub>2</sub> emission and plastic pollution should be recognized and considered. In addition, plastic pollution prevention can contribute to healthier biodiversity, including for instance protection of mangrove.
- With regard to biodegradable plastics and biomass plastics<sup>16</sup>, it is necessary to clarify their definitions and provide clear standards through certification.

### For an effective global plastic treaty and its implementation

- Negotiations are underway to develop an International Legally Binding Instrument (ILBI) to end plastic pollution in accordance with the UNEA Resolution 5/14<sup>17</sup>. The early and successful adoption of the Instrument at the 5th session of Intergovernmental Negotiating Committee (INC-5) is essential to promote actions against plastic pollution at the global level. It is hoped that at INC-5 due to be held in Busan, discussions will converge toward an effective and progressive treaty in which all countries can participate.
- The upcoming convention needs to be strengthened continuously and incrementally as a Living Document to ensure effective and ambitious implementation.

---

<sup>16</sup> This term refers to plastics made from renewable organic resources such as plants. Biodegradable plastics and biomass plastics, which ultimately decompose into carbon dioxide and water through the action of microorganisms, etc., are sometimes collectively referred to as “bioplastics.”

<sup>17</sup> <https://wedocs.unep.org/handle/20.500.11822/40597>

## Session 4: Maximizing Synergies and Minimizing Trade-offs

### Session Chair:

- TAKAHASHI Yasuo  
Special Policy Advisor, Institute for Global Environmental Strategies (IGES)

### Speakers:

- Dechen TSERING  
Regional Director and Representative for Asia and the Pacific, United Nations Environment Programme (UNEP-ROAP)
- Diana ÜRGE -VORSATZ  
Professor, Department of Environmental Sciences and Policy, Central European University (CEU), Vice Chair, IPCC
- KANIE Norichika  
Professor, Graduate School of Media and Governance Keio University, Director and Founder of the xSDG Laboratory, Keio Research Institute at SFC
- KENMIYA Misa  
Director General for Sustainable Management, Japan International Cooperation Agency (JICA)

## The Significance and Necessity of Addressing Synergies at the Global Level

- Maximizing synergies and minimizing trade-offs at different levels is crucial for more effectively, efficiently and equitably addressing interconnected planetary crises such as climate change, biodiversity loss, and pollution. Specifically, the advantages of pursuing synergies include: 1) allocating funding and staff across multiple related issues allows for more efficient use of limited resources, 2) breaking siloes between agencies and actors working on different policy areas opens opportunities/limits overlaps needed for more effective and efficient policy implementation, 3) actions toward achieving multiple goals can reinforce each other, leading to outcomes that are greater than the sum of their individual parts, 4) identifying and addressing potential negative impacts in advance minimizes trade-offs, limits opposition, and reduces the changes of possible backsliding, and 5) incorporating diverse perspectives leads to policies and plans that can harness

the energies of different stakeholders to drive ambition actions while narrowing equity gaps.

- Continuing to harmonize planning and reporting across multilateral environmental agreements (MEAs) can simplify and reduce the reporting burden on countries. Lowering this burden is particularly important in developing countries. This could be achieved by identifying common elements in goals and indicators and sharing reporting formats across agreements. An information-sharing platform could also be established to centrally manage and share information on multiple agreements to improve access to information and promote cross-national and cross-agreement collaboration.
- In developing nationally determined contributions (NDCs) and national biodiversity strategic action plans (NBSAPs), it is also important to intensify efforts to integrate not only climate change action or biodiversity conservation, but also relevant SDG targets such as air and water pollution control, poverty reduction, and health promotion.
- It is important to focus on synergies and trade-offs not only in implementing and advancing the SDGs, but also in discussions looking beyond 2030.

### Promoting Inter-Ministerial Cooperation and Policy Integration

- Promoting inter-ministerial coordination and policy coherence is vital for implementing a synergistic approach. This can be achieved by establishing inter-ministerial coordination mechanisms involving high-level officials and setting a shared vision and corresponding goals across relevant ministries. Joint training sessions for personnel from relevant ministries can also foster a sense of shared community around synergies, nurture the development of human resources with cross-sectoral perspectives, and share knowledge, tools and data needed to assess synergies. It is also important to incentivize integrated efforts across organizations beyond their own interests in order to promote synergies.
- Scientists and international institutions need to provide evidence-based policy recommendations to help policymakers understand the direction and magnitude of synergies/trade-offs in varying contexts. It is crucial to identify policies with high synergy potential based on the latest research and conduct analyses that consider the characteristics of different sectors, regions and enabling environments. International institutions should also provide data, indicators, and tools to evaluate synergies while offering policymakers financing and technical support to implement the results of that analysis. For example, tools like the "JICA Climate-FIT"<sup>18</sup> can help assess co-benefits/trade-offs, limiting climate risks on key development priorities and strengthening

---

<sup>18</sup> <https://www.jica.go.jp/english/activities/issues/climate/index.html>

adaptation measures in light of their cross-issue connections.

- Collecting and widely sharing successful cases of synergistic approaches from around the world with policymakers and other stakeholders can encourage context-appropriate replication. Systematizing the collection and analysis of examples of synergies by policy area, region, scale, and sector and creating a searchable database is also important. Detailed case studies of particularly successful examples (as well as barriers to achieving desired results) should be conducted to analyze success factors and challenges. Each of the above kinds of analysis and information-sharing is needed because whether and to what extent synergies exist and can be achieved depends heavily on context. More granular assessments of synergies are essential to deepening and spreading knowledge in this area.
- Introducing synergy evaluation into policy/project assessment processes should also be considered. By incorporating a process for ex ante and ex post evaluation of synergies and trade-offs when implementing new policies or projects, potential impacts can be identified and addressed both in advance and moving forward.

### Measures to Expand the Practice of Synergies

- Synergistic solutions are often implemented in cities and rural areas. To adapt synergies to different contexts, it is essential to localize efforts to achieve synergies below the national level. In cities, demand-side measures involving cooling, buildings, mobility, and waste management can serve as an important focal point for synergistic action. These measures have potential because they target the upstream sources of GHG emissions while aligning with other development priorities in the SDGs (resource efficiency, good health, job creation, and sustainable lifestyles). Local communities, as they are often most aware of their unique challenges and needs, should be actively involved developing the tools and knowledge needed for synergistic planning and project implementation.
- Local synergistic solutions also need to be collected and shared widely to encourage other subnational governments to adopt similar practices. Strengthening multi-level and urban-rural cooperation, as in the initiative of the Circulating and Ecological Sphere (CES), can also help in this regard.
- In developing countries, achieving the full benefits of a synergistic approach requires knowledge sharing, capacity building, and technical cooperation. Building platforms and networks for sharing information on policies, technologies, and best practices with high synergistic potential is essential. This will make it easier for policymakers and practitioners in developing countries to access successful cases and evaluation tools.



- More work is needed on synergies/trade-offs between climate and social justice, gender equity, and youth empowerment. Investments in synergistic activities aimed at helping vulnerable people and communities is likely to yield significant impacts and should be a focal point of this work. Understanding not only aggregate benefits but who benefits/losses can also help limit trade-offs and achieve synergies. Strengthening the science-policy-society and multi-stakeholder engagement is also important.
- Mandatory information disclosure is set to increase, and companies may be able to expand synergistic efforts by recognizing non-financial values they did not recognize/regard as costs. Deepening scientific/technological knowledge and relationships between companies and civil society could help recognize these hidden values.
- Diversifying resources allocated to work on synergies is needed to help implement and scale up these efforts. For example, the Green Climate Fund (GCF)<sup>19</sup> plays a critical role in supporting climate change measures in developing countries and can provide tailored support for recognizing and acting upon synergies through a variety of financing mechanisms, including grants, loans, and guarantees. Results-based lending (where funding is disbursed after agreed-upon outcomes are achieved) or blended finance (which combines public and private funds) can also create incentives to adopt and implement projects with high synergistic potential.

---

<sup>19</sup> <https://www.greenclimate.fund/about>