

**Integrative Strategic Research Programme
for the 8th Phase (ISRP8)**

**FY2023 (Year 3)
Business Report**

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Institute for Global Environmental Strategies

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1. Impacts and Outputs

The Institute for Global Environmental Strategies (IGES) continues to act as an agent of change to generate significant impacts towards sustainable and resilient society, including those for post COVID-19 (Coronavirus disease 2019) response-recover-redesign in broad areas of IGES expertise (climate change & energy, sustainable production & consumption, biodiversity & forests, and climate adaptation & water) through co-design, co-implementation, co-production and co-delivery with key stakeholders.

In the Integrative Strategic Research Programme for the 8th Phase (ISRP8), IGES will further promote an integrative and inclusive approach across sectors and disciplines at the institute by materialising the concept of the regional Circulating and Ecological Sphere (CES) with the launch of the Integrated Sustainability Centre (ISC). Furthermore, Common Focal Areas have been introduced in which each research unit should work together to form a higher level of impact.

The key performance indicators for impacts and outputs set out in the ISRP8 are 30 impact cases each year, 150 strategic publications each year and 100 academic publications each year. Section 1.1 below provides an overview and the progress of the intended impacts and initiatives in the Common Focal Areas, followed by Section 1.2 on the highlights of impact generation (impact cases, deliverables, strategic networking and communication) in FY2023.

1.1. Common Focal Areas¹

Common Focal Areas are defined as priority areas where IGES will make efforts collectively to enhance impact generation beyond each research unit. Therefore, the Common Focal Areas are expected to provide an internal framework to drive and motivate research units to co-work and collaborate to generate greater impacts in those areas in cooperation with the Strategic Management Office (SMO). SMO Knowledge and Communications (KC) and SMO Research and Publications (RP) will facilitate such collaboration among research units to mainstream impact generation and to align with the Common Focal Areas, utilising various occasions attended by the management, for example, monthly thematic meetings on the Sustainable Development Goals (SDGs), climate change, biodiversity, and circular economy and sustainable lifestyles.

Common Focal Areas are identified by reviewing intended impacts during ISRP8 by each research unit and selecting key issues to be addressed taking account of global, regional and domestic urgencies and priorities related to sustainable development, as well as considering IGES' strengths (Table 1).

Common Focal Areas are composed of four parts: Focal Areas, Sub-focal Areas, Related Units, and Major Planned Activities. The Focal Areas are expected to be those target areas seeking greater impacts, i.e. (1) accelerating implementation of the SDGs ("Put SDGs on the ground"); (2) accelerating implementation of the Paris Agreement ("Make society net zero and resilient"); (3) accelerating implementation of the Kunming-Montreal Global Biodiversity Framework ("Put biodiversity on the path to recovery by 2030"); and (4) shaping circular economy and sustainable lifestyles ("Make it circular"). It should be noted that these four Focal Areas are closely linked to each other. In particular, IGES will promote an integrated approach to the various issues of (2) climate change mitigation and adaptation and (3) biodiversity. Furthermore, it is necessary to pursue and propose specific measures and solutions to address these issues through various activities in (4) circular economy and sustainable lifestyles. Sub-focal Areas are key components that IGES has been engaged in, with competent expertise and networks close to the target areas. In each Sub-focal Area, research units are expected to work collaboratively and also try to find

¹ Modification from "Focus Areas" to "Focal Areas" has been made for the sake of accuracy in English.

synergies among the Sub-focal Areas aiming for bigger impacts. Major planned activities were selected by each relevant unit.

Since this is the first time for IGES to set this type of framework, it is expected that the Common Focal Areas will be reviewed through the ISRP8 period, as necessary.

Table 1: Common Focal Areas

Focal Areas	Sub-focal Areas	Notes * All focal areas and sub-focal areas are not mutually exclusive, but rather closely interlinked.
(1) Accelerating implementation of the SDGs “Put SDGs on the ground”	a. Enhancing implementability of SDGs in the Asia-Pacific region	Activities relevant to global, regional and national review processes and contribution to knowledge production are included.
	b. Localising SDGs and shaping Regional Circulating and Ecological Sphere (CES)	Closely linked with other sub-focal areas such as ‘net zero cities,’ ‘sustainable land use and ecosystem services’ and ‘circular economy.’
	c. Promoting just transitions and green recovery in the wake of COVID-19	Activities relevant to social SDGs such as Goal 5 (gender equality) and Goal 10 (reduced inequalities) are included.
(2) Accelerating implementation of the Paris Agreement “Make society net zero and resilient”	a. Ensuring implementability of the Paris Agreement	Activities relevant to global negotiation, review processes and contribution to knowledge production are included.
	b. Promoting Net zero Japan	Closely linked with sub-focal areas such as just transition/green recovery, sustainable land use, circular economy and sustainable lifestyles.
	c. Promoting Net zero Asia	Activities on Asia’s transformative and inclusive policies to achieve net zero and development goals are included.
	d. Promoting Net zero Cities	Closely linked with other sub-focal areas such as ‘localising SDGs and shaping Regional CES.’
	e. Mainstreaming and promoting implementation of climate adaptation	Closely linked with ‘sustainable land use and ecosystem conservation’ and CES.
(3) Accelerating implementation of the Kunming-Montreal Global Biodiversity Framework “Put biodiversity on a path to recovery by 2030”	a. Strengthening global biodiversity policy processes	Activities relevant to global negotiation, review processes and contribution to knowledge production are included.
	b. Promoting sustainable land use and ecosystem conservation	Activities relevant to forest conservation are included. Closely linked with ‘localising SDGs and shaping Regional CES’.
	c. Facilitating non-state actors’ involvement in conservation	Activities involving businesses, and indigenous peoples and local communities are included.

(4) Shaping circular economy and sustainable lifestyles “Make it circular”	a. Mainstreaming circular economy	Activities in this sub-focal area are highly relevant to other sub-focal areas in climate and biodiversity.
	b. Mainstreaming sustainable lifestyles	Activities in this sub-focal area are highly relevant to other sub-focal areas in climate and biodiversity.
	c. Ending pollution and improving environmental quality	Activities include, but not limited to, solid waste, waste water, and air quality management.

The intended impact generation for each sub-focal area in FY2023 and the progress of the initiatives are as follows. (Note that the italicised intended impact part of each sub-focal area is a restatement of the description in the 2023 Business Plan.)

(1) Accelerating implementation of the SDGs (“Put SDGs on the ground”)

a. Enhancing implementability of SDGs in the Asia-Pacific region

The SDGs were adopted nine years ago (in September, 2015), but progress has been either slow or non-existent on most of the 17 goals that are the centerpiece of the 2030 Agenda on Sustainable Development. The lack of progress is especially worrying in the Asia-Pacific region for environmental issues such as those captured in the SDGs concerning Life on Land (Goal 15), Life Below Water (Goal 14), Climate Action (Goal 13) and Responsible Consumption and Production (Goal 12)² (). One of the main problems confronting policymakers in Asia is how to accelerate progress in implementing the SDGs.

IGES aims to address this problem by working with governments, businesses, civil society and other stakeholders in the Asia-Pacific region to accelerate implementation of the SDGs. To do so, much of IGES research is working at multiple levels with diverse partners such as the United Nations Environment Programme (UNEP), the United Nations Department of Economic and Social Affairs (UNDESA), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), the Ministry of the Environment, Japan (MOEJ), the Global Compact Network Japan, West Java Province (Indonesia) and Sado City (Japan), to offer timely recommendations on how to make headway on the SDGs from an integrated perspective to policymaking. Some of IGES’ research draws upon analysis of global and regional trends to influence outcomes from key processes such as the Asia Pacific Forum on Sustainable Development (APFSD) and the High-Level Political Forum (HLPF). An additional branch of work aims to encourage Japanese businesses to bring the SDGs into their core business processes, including supply chains. Yet a third stream of work involves the collaboration between local and regional governments to mainstream the SDGs (and integrated approaches) into planning processes. A new project funded by the Wellcome Trust in the UK will work with cities in Japan and other G7 countries to integrate health co-benefits into climate policies. For all of the above areas and contributions, IGES also aims to create synergies across divisions and between stakeholders, and address trade-offs where they exist.

In FY2023, IGES strengthened its efforts to help multiple stakeholders accelerate progress on the SDGs in Asia and the Pacific, and beyond. Important milestones included organising an expert group meeting on synergies between the SDGs and climate change as well as contributing to four reports on the same theme. IGES also provided support for drafting, negotiating and adoption of the synergy resolution

² UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific), *Asia and the Pacific SDG Progress Report 2021*.

(UNEP/EA.6/L.7) at UNEA (United Nations Environment Assembly). In addition, IGES has developed a framework for strengthening follow up and review of the SDGs at the national and local levels in Japan and other countries. Further, IGES was also awarded a contract from the Asian Development Bank (ADB) to assist with the development of the Asia-Pacific SDG Partnership Report 2025 that is produced by ADB, UNESCAP, and United Nations Development Programme (UNDP). IGES also contributed to the *Sixth ASEAN State of the Environment Report*, which will provide ASEAN countries with up-to-date information on the status and trends of the region's environment, and UNEP's *Global Environmental Outlook* (GEO-7). Finally, IGES is implementing a project funded by the Wellcome Trust in the UK that will work with cities in Japan and other G7 countries to take a more integrated approach to climate planning and help make progress on the health-related and other SDGs.

b. Localising SDGs and shaping the Regional Circulating and Ecological Sphere (CES)

Achieving greater societal sustainability and resilience requires new approaches to integrating diverse knowledge around social, cultural, economic and environmental/ecological dimensions. The world is faced with enormous social, political, economic and environmental challenges, stemming from resource overconsumption (particularly by the wealthy), environmental degradation, population pressures, climate change and deeply entrenched inequalities, among others. The ambition expressed in the UN2030 Agenda and its Sustainable Development Goals, the Paris Agreement, and the Sendai Framework for Disaster Risk Reduction underscores the urgency with which societies need to transform towards a more liveable, just and ecologically sustainable future. Achieving these ambitious goals and targets with business as usual will not be possible unless they are localised and implemented through an integrated approach. The Circulating and Ecological Sphere (CES) is a conceptual framework that promotes integrated approaches to sustainability challenges including environmental, economic and social challenges by simultaneously making progress with decarbonisation, local resource circulation and living in harmony with nature.

The 8th ISRP of IGES has prioritised elaboration of the CES concept in the context of developing countries in Asia and application of the CES approach for addressing sustainability challenges through local actions. IGES and START International, USA have launched a collaborative initiative, namely the "CES-Asia Initiative" for advancing the CES Concept in South and Southeast Asia. IGES, START International and the leading academic and research institutes in South and Southeast Asia, established the CES-Asia Consortium on 14 October 2021 with the aim of advancing the CES concept for enabling resilience of city regions in South and Southeast Asia. In collaboration with CES-Asia Consortium partners, IGES will promote the bottom-up approach through advanced research, co-development process and capacity building that strengthens understanding and promotes the utilisation of the CES concept, in order to address sustainability challenges in Asia.

In FY2023, IGES co-hosted a Regional Workshop in Bangkok, Thailand, from 17-19 January, 2024. The workshop focused on "Navigating Interconnected Local-to-Global Action Spheres to Advance the Post-2030 Agenda: Utilizing the Co-Benefits of the Circulating and Ecological Sphere (CES) Approach for Integrating Climate and Sustainable Development Actions in Asian City-Regions." This event brought together CES-Asia Consortium partners, national and local governments, and donor agencies to collaboratively develop CES action-based pathways for Asian city-regions. The discussions and outcomes from the workshop have been compiled into a synthesis report. For promoting co-benefit approaches in ASEAN region, IGES also contributed to the development of New Haze-free Roadmap in Southeast Asia that has the potential to save at least 10,000 lives per year. Further, at the local level, to apply the CES approach towards a healthy Net-Zero transition in the Hachinohe region, IGES and Hachinohe City signed a Memorandum of Understanding (MoU) on December 14, 2023. In collaboration with the CES-Asia Consortium and other partners, IGES's ISC-CES team has been working on projects in several city-regions, including Hachinohe in Japan, Nagpur in India, and Rajasthan in India, to advance the co-development of the CES Action Program.

In FY2023, research findings were published in journal papers, a discussion paper, and ISAP posters. The CES Book has been completed and will be released as part of Springer's Science for Sustainable Societies series. Additionally, IGES contributed to the UNDESA report on "Seeking Synergy Solutions: How Cities Can Act on Both Climate and the SDGs" as co-authors, presenting CES as a framework for synergistic localization of SDGs and climate actions.

c. Promoting just transition and green recovery in the wake of COVID-19

While the COVID-19 pandemic has led to enormous suffering and loss, it has also underlined the need to promote inclusive and sustainable transitions in the face of crises. The Ukraine crisis and related impacts on energy and food prices similarly suggest a need to work towards a more sustainable future as tensions escalate. However, it is not always easy for policymakers and other stakeholders to make a transition in the face of external and internal pressures for business-as-usual development. A significant problem facing policymakers and other stakeholders in Asia is how to manage transitions to a more inclusive and sustainable future.

IGES aims to address aspects of this problem by advising governments, businesses and other major stakeholders about opportunities to reshape unsustainable systems in the wake of COVID-19 and other crises. This includes promoting integration of a One Health approach (involving the integration of human, animal and environmental health concerns) at the national level. It also involves supporting the widespread adoption of CES at the local level. Finally, it includes the promotion of more socially just and inclusive decision-making processes at all levels of decision-making in and beyond Asia.

In FY2023, IGES contributed to the publication of a special issue of the journal *Sustainability Science* titled "Just and Sustainable Transitions in Net-Zero Asia" as part of an endeavour to deepen its vision for the post-COVID-19 world. It also organised ISAP2023, which delved into the three crucial dynamics—"integration," "inclusion," and "localization"—that are key to driving social transformation, under the theme of Accelerating Sustainability Transitions in Asia and the Pacific. Furthermore, IGES prepared a book entitled "An Integrated Approach to Building a Sustainable Society," which discusses an integrated approach linking science and policy toward the creation of a sustainable society, and introduce various practical cases where IGES has played a central role both in Japan and abroad. The book was published in July 2024.

(2) Accelerating implementation of the Paris Agreement ("Make society net zero and resilient")

a. Enhancing implementability of the Paris Agreement

At the heart of the successful implementation of the Paris Agreement is whether and how effectively a ratchet-up mechanism through which Parties will increase ambition over time can work. By the end of 2021, many Parties raised the level of their climate action (mitigation, adaptation and means of implementation), but a significant gap still exists between the current levels of action and the levels required to meet the goals of the Paris Agreement. By 2025, the year of the next round of the NDC (Nationally Determined Contribution) submission cycle, IGES envisages that the ratchet-up mechanism will be functioning.

To ensure this happens, IGES aims to generate impacts in the implementation of the ratchet-up mechanism. In particular, IGES will conduct research-based capacity building for Article 6 participation, reporting under the transparency framework, and participation in the global stocktake, while updating a reliable database of NDCs. To this end, IGES will work closely with international processes on climate change,

including the United Nations Framework Convention on Climate Change (UNFCCC), G7, G20 and other related processes.

At the same time, provision and dissemination of science-based information is essential for the urgent action needed to address climate change. To this end, IGES is also actively involved in the processes of the Intergovernmental Panel on Climate Change (IPCC) and UNEP Gap Report, contributing to the preparation and review of the Sixth Assessment Report (AR6), the upcoming Seventh Assessment Report (AR7) cycles, and UNEP's Gap Reports, as well as communicating the findings of the reports to relevant stakeholders such as local governments, business, and a general audience in an accessible manner.

In FY2023, IGES contributed to the implementation of the Article 6 mechanism, as well as the first Global Stocktake (GST) under the Paris Agreement by participating in COP28 as members of Japanese delegation. IGES began serving as the secretariat of the 'Paris Agreement Article 6 Implementation Partnership (A6IP) Center', which promotes the activities of the 'Paris Agreement Article 6 Implementation Partnership', launched at COP27, under an initiative of the Japanese Government's initiative, to support capacity building with regard to Article 6 of the Paris Agreement. Utilising the knowledge and expertise gained through its support for international negotiations, IGES continued to conduct a mutual learning programme for enhanced transparency in cooperation with the governments of Asian developing countries, focusing on reporting for Articles 6 and 13 of the Paris Agreement. In addition, IGES organised several knowledge-sharing workshops for enhanced transparency, including a side event at COP28, in collaboration with major international partners, such as the Capacity-building Initiative for Transparency - Global Support Programme implemented by the UN Environment Programme Copenhagen Climate Center (UNEP-CCC). Besides, IGES conducted capacity building for Article 6 implementation (A6IP) and capacity building for submitting initial report under Article 6, and organised workshops on promoting the implementation of JCM (Joint Crediting Mechanism) consistent with Article 6 (A6IP/JCM). Furthermore, IGES cooperated with the Japan Aerospace Exploration Agency (JAXA) to promote inputs from the Japanese satellite community into the Paris Agreement's processes including the GST. IGES also played a key role in bridging science and international policy discussions, by co-implementing a regional independent global stocktake hub in Southeast Asia (iGST). As the iGST regional hub, IGES made policy recommendations and submissions of views to the UNFCCC during the GST process.

b. Promoting Net zero Japan

Japan declared its commitment to net zero emissions by 2050 in October 2020. To this end, related national strategies, policies and plans, for example, the Green Growth Strategy, the Strategic Energy Plan, and the Plan for Global Warming Countermeasures, were developed to align with net zero emissions. However, they are not seen as compatible with the 1.5°C goal. Many local governments in Japan declared their intentions to become net zero by 2050 at a municipal level. However, most of them have not yet developed strategies, roadmaps and policies to attain net zero emissions.

Against these backgrounds, IGES aims to contribute to the process of developing the next Strategic Energy Plan by developing a net zero roadmap which is consistent with the 1.5°C goal and simultaneously considers various social issues, thereby generating impacts on domestic policy process. In addition, the roadmap will be co-created with stakeholders such as private companies and local governments to ensure its feasibility and broad support.

In FY2023, IGES published the technical report of the 1.5°C Roadmap through consultation with business stakeholders such as Japan Climate Leaders' Partnership (JCLP), and launched the 1.5°C Roadmap Homepage. Based on the 1.5°C Roadmap, IGES report also summarised five "changes" and 20 "opportunities" in the social economy, and presents concrete actions that companies can take in an easy-to-understand manner. Briefings to relevant ministries and council members, mass media events, and webinars were conducted in an effort to shape impact. IGES further carried out the simulation analysis of power grid system to achieve a zero-emission power system in Japan and published a peer-review article.

In collaboration with Glasgow Finance Alliance for Net Zero (GFANZ) Japan Chapter, IGES started research on managed phase-out of coal-fired power plants in Japan. IGES also contributed to the UNEP Emissions Gap Report 2023, as well as representing Japan in Climate Transparency, a Germany-based research network for G20 countries. Likewise, to communicate national and international trends toward decarbonisation, IGES continued to conduct the IGES Climate Change Webinar Series, which started in April 2021.

c. Promoting Net zero Asia

Asia is in a unique position as the world accelerates towards net zero targets. The region's vulnerability to climate change impacts demands urgent attention. In addition, there is a need to uplift the huge populations in developing economies out of poverty and ensure their well-being, thus placing a huge responsibility on the region. On the other hand, the leading four economies in the region, Japan, China, India and the Republic of Korea have all set timelines for achieving net zero goals, in tune with their national circumstances. The carbon market within the region also began making notable strides. It is, however, critically important for these countries to accelerate their efforts to achieve net zero and contribute to the 1.5°C goal.

By understanding how the net zero targets are gaining policy importance in the region, and also learning from experiences of each country, IGES continues to research several critical areas with an aim to contributing to the realisation of net zero in Asia. IGES is conducting research on net zero Asia and climate-resilient pathways for decarbonisation to develop guidance for a national long-term roadmap to synergise mitigation and adaptation by examining net-zero transition and its implications on resilience/adaptation. Research on transboundary climate risks in Asia is being carried out and will make recommendations for how Japan can contribute to regional efforts to deal with the physical risks of climate change impacts, as well as transition risks associated with decarbonisation in Asia. Research is also being done on co-innovation and use of the Joint Crediting Mechanism (JCM) for greater collaboration between developing and developed economies on environmental technologies, and this can lead to innovative solutions for deploying mitigation technologies in developing countries. By following and outreaching progress achieved by various countries in the development of carbon markets and pricing, as well as air pollution-climate co-benefit policies, and the finer nuances of policy impetus, IGES also contributes to policy promotion domestically and internationally.

In FY2023, IGES delved into research on climate-resilient development pathways for decarbonisation, developing guidance for long-term roadmaps in ASEAN member states that synergise mitigation and adaptation efforts. A cross-unit team of SMO-RP, CE, AW and BRC jointly developed the outline of the technical report and guidance, and published three conference proceedings on the ASEAN workshop for developing the guidance, international collaboration towards a net-zero and resilient ASEAN through the ASEAN Climate Change Strategic Action Plan 2025-2030 (ACCSAP), and solar photovoltaic (PV) diffusion and synergies with resilience and adaptation, as well as two peer-reviewed journal papers on solutions for addressing common challenges in national reporting for the Enhanced Transparency Framework, and the potential of agrivoltaics in ASEAN considering a scenario where agroforestry expansion is also pursued. IGES also contributed to a book chapter on all-hazards approach towards resilience building, and a working paper on renewables development for energy transition in ASEAN. A panel discussion was held at COP28 for the development of ACCSAP and establishment of ASEAN Centre for Climate Change (ACCC). Series of official dialogues on ACCSAP were also made at, among others, the ASEAN Working Group on Climate Change (AWGCC), the 17th ASEAN-JAPAN Dialogues on Environmental Cooperation (AJDEC), and the Japan-ASEAN Cooperation Symposium. Addressing transboundary climate risks in Asia, research was carried out on Japan's contributions to dealing with physical and transition risks associated with decarbonisation in the region. IGES research expanded into newer areas with added emphasis on co-innovation, hydrogen, critical minerals, and other essential aspects for net zero achievement. As part of research in these areas, IGES Climate and Energy (CE) team was involved in preparing policy recommendation documents for G7 and G20 jointly with reputed

organisations including Chatham House, Institute for Sustainable Development and International Relations (IDDRI) and Energy Foundation China; and also published a book chapter on hydrogen with Asia Development Bank Institute (ADBI). The CE team also has been contributing to globally policy documents including UNEP's 'GEO-7' and '10 New Insights in Climate Science (10NICS)'. Work on the JCM fostered greater collaboration with developing economies, by deploying mitigation technologies in developing countries. IGES also supported the implementation of climate policies in Asia by tracking and sharing the progress that has been achieved in carbon markets, pricing, air pollution-climate co-benefit policies. As part of the work on co-benefits the team contributed to the policy report by UNEP on clean air and climate.

d. Promoting Net zero Cities

Local actions are imperative to achieve the ambitious commitment to carbon neutrality, and local and regional governments play an important role to ensure and accelerate local climate actions. More than 1,100 cities and regions in the world had joined the global campaign "Race to Zero" by September 2022, and more cities are indicating their commitments to be net zero by at least 2050. In Japan, 1,112 local and regional governments had declared their commitment to zero carbon by 2050 by the end of June 2024. It is critical to maintain this "zero-carbon city movement", to encourage more cities to join the movement and ensure implementation of local climate actions. Climate actions not only address the climate crisis but also promote local economic opportunities such as creation of new industries and services, new or better job opportunities and just transition, which could contribute to the achievement of the SDGs at local level.

IGES has been working closely with local and regional governments in Japan and Asia towards zero-carbon city development through city-to-city collaboration projects, policy studies, and regional and international conferences aiming at capacity development of cities through knowledge sharing. IGES was engaged in city-to-city cooperation between Japanese cities and EU (European Union) cities on sustainability agenda including climate change. Through these activities, IGES aims to support local governments in developing roadmaps and actions for the realisation of zero-carbon cities and to improve climate literacy for citizens and local businesses.

In FY2023, IGES promoted city-to-city collaboration toward zero carbon society by participating in collaboration projects between Kuala Lumpur-Tokyo Metropolitan Government-Saitama City, Hai Phong City – Kitakyushu City; West Java Province – Kitakyushu City. Zero-carbon scenario development using the Asia-Pacific Integrated Model (AIM) was also conducted regarding the Hai Phong City – Kitakyushu City collaboration. The Seminar on City-to-City Collaboration for Zero Carbon Society was organised in February 2024 with participation of cities participating the MOEJ's City-to-City Collaboration Projects (C3P) aiming to share knowledge and experience of participating cities to enhance integrated climate actions at the city level. The seminar served as an event to commemorate the 10th anniversary of C3P.

As it is essential to change citizens' lifestyles in order to achieve zero-carbon city, IGES conducted awareness raising activities, as well as dialogue with local stakeholders in Kitakyushu City and Odate City by holding a "1.5°C Lifestyle Workshop," with a view to developing a template of the workshop that can be deployed in other municipalities. Based on the knowledge from the study on Climate Citizens' Assemblies in Europe in FY2022, IGES is contributing to the Climate Citizens Assembly in Sugunami Ward, Tokyo, that started in March 2024. In addition, IGES engaged in a project to explore challenges of subnational climate policy planning and implementation and possible support by intermediate supporting organisations, especially targeted at small and medium sized cities. IGES served as the secretariat of the G7 Roundtable on Subnational Climate Actions in October 2023 which the Japanese government proposed at the G7 Ministers' Meeting on Climate, Energy and Environment in Sapporo, and prepared the Summary Report of the Roundtable which was launched at a COP28 Japan Pavilion side event in December 2023.

e. Mainstreaming and promoting implementation of climate adaptation

The Paris Agreement stipulates adaptation as one of the two pillars of climate change measures along with mitigation, and calls for further adaptation actions in each country and globally coordinated efforts to achieve the Global Goal on Adaptation newly set in the Paris Agreement. In order to mainstream climate change adaptation and promote its implementation, a number of measures are needed, including further dissemination of information, capacity building of relevant organisations and actors, securing adequate funding, and sharing of good practices. In addition, synergistic effects with other pressing issues (e.g. adaptation and disaster prevention, adaptation and mitigation, adaptation and biodiversity conservation, adaptation and marine conservation, etc.) must be pursued to resolve adaptation issues in Asia-Pacific countries, including Japan.

IGES will play a leading role in the full-scale operation of the Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT), which was launched jointly with the Ministry of the Environment, Japan (MOEJ) and the National Institute for Environmental Studies (NIES) to improve the environment for decision-making and practical adaptation actions in response to climate risks, in order to contribute to enhancing adaptation capacity of Asian countries. Furthermore, IGES will disseminate valuable information on climate change adaptation in the Asia-Pacific region through AP-PLAT. In addition, IGES will participate in various international initiatives and contribute to global efforts on adaptation while strengthening cooperation with relevant organisations and networks. IGES will also actively participate in various international initiatives and contribute to global efforts on adaptation while strengthening cooperation with relevant organisations and networks. Finally, IGES will contribute to international negotiations on adaptation through strategic policy recommendations based on a comprehensive analysis of international adaptation policies and actions to ensure that the Global Goal on Adaptation functions as an effective policy goal and that the Global Stocktaking Process functions effectively to achieve it.

In FY2023, IGES took the lead in promoting AP-PLAT and partnership development in Asia-Pacific. Specifically, “AP-PLAT Three-Year Action Plan 2024-2026” and “Activity Plan for 2024” were developed through consultation with Supporting Organizations and Capacity Development Partner Organizations and established five goals for the next three-year activities of AP-PLAT. For AP-PLAT Capacity Development Programme, IGES conducted an online workshop to support the implementation of adaptation processes in developing countries, using the monitoring and evaluation support tool called JAMES. Using the guidebook on compound and cascading disaster risk produced in FY 2022, IGES also provided training in Bangladesh for the preparation of climate finance proposals that integrate disaster management and climate change adaptation, using the Guidebook on Compound and Cascading Disasters prepared for FY2022. This guidebook was recognised as an official training material by the Bangladesh Department of Disaster Management. Further, using SRF (IGES Strategic Research Fund), IGES organised two workshops involving key government agencies, think tanks, disaster experts, and research institutes to develop a policy guide on Compounding and Cascading Disaster Risk Management to supplement the policy gap in the existing policy frameworks and action. IGES is also editing the book “Compounding and Cascading Disasters in Changing Climate: The New Normal of Disaster Risk Management” for Springer “Disaster Risk Reduction: Methods, Approaches and Practices” Book Series.

IGES supported MOEJ and engaged in negotiations on Global Goal on Adaptation and other adaptation-related agendas under UNFCCC. Through following international trends on adaptation, IGES continued to make recommendations to MOEJ on the future contribution of Japan in the field of adaptation. IGES researchers are engaged with the Adaptation Without Boundaries (AWB) initiative, World Adaptation Science Program (WASP) and UNEP Global Adaptation Gap report 2023, among others. A researcher from IGES worked as lead author for the IPBES Nexus assessment report.

IGES explored how the nexus of human well-being and water relations can be applied in India, Bangladesh and Viet Nam under a three-year project. In FY2023, socio-hydrological models were used to quantify feedbacks between water resources and communities at multiple scales. Being the last year of this project,

the work was completed with significant research output, capacity development and a dissemination workshop. Moreover, another proposal draft has been developed to upscale the project activity. IGES has substantially increased engagements on Locally Led Adaptation (LLA), which has been receiving increased attention since the 2021 Climate Summit, and especially after the Global Commission on Adaptation launched eight Principles on LLA. In this context, IGES and APN are jointly implementing project on developing a model case of LLA as a direct contribution to the AP-PLAT capacity-building pillar covering South Asia (Nepal), South East Asia (Viet Nam) and Pacific (Fiji). IGES and APN co-organised a session on “Asia-Pacific Resilience: Empowering Local Solutions Together” at the 4th Gobeshona Global Conference (GGC4) on LLA on 8th March 2024. As a part of AP-PLAT, IGES also organised the session on “Bridging Science and Policy: AP-PLAT’s Practices on Locally-led Adaptation for Climate Resilient Asia-Pacific” at GGC4. IGES has been regularly contributing to GGC, which is a global event on LLA, since the first conference. IGES, as a regional member of HUC, has established a Thematic Working Group on TILK-LLA (Traditional, Indigenous, and local knowledge system for locally led adaptation) which aims to facilitate the co-development of LLA solutions prioritizing TILK system as a foundation of adaptation actions.

In the meantime, IGES is exploring possibilities of regional partnership with renowned international initiatives and institutions such as Global Hub on LLA of the Global Center on Adaptation (GCA), and, LLA Community of Practice. IGES is also working with APN, NIES, International Institute for Environment and Development (IIED), Thai Nguyen University of Agriculture and Forestry, Viet Nam, University of the Philippines Los Baños, Philippines to prepare a new JAIF project on LLA. The project idea was also presented at the 15th ASEAN Working Group on Climate Change (AWGCC) Meeting, on 29 May 2024, Bali, Indonesia. IGES’s work on transboundary climate change risks (TBRs) was carried out under NIES-IGES *Suishinhi* project and JSPS-ICSSR project mainly in collaboration with the AWB initiative, and several national partners in South and Southeast Asia. This collaboration with AWB will continue in the FY2024 with focus on the ASEAN region.

IGES started a research project on climate security in the Asia-Pacific region, under the Subsidy for the Research and Study Projects on Diplomacy and Security, Ministry of Foreign Affairs of Japan. In collaboration with researchers affiliated with the Sasakawa Peace Foundation and the University of Tokyo Institute for Future Initiatives, IGES is conducting policy-relevant research with the aim of bringing implications to policy and practice related to climate security in Japan, and in the Asia-Pacific more broadly.

(3) Accelerating implementation of the Kunming-Montreal Global Biodiversity Framework (“Put biodiversity on a path to recovery by 2030”)

a. Strengthening global biodiversity policy processes

Biodiversity policy and strategy at the international level (including on forests) plays a significant role in guiding biodiversity policy and strategy at the national and subnational levels. The prominence of such work has received a recent boost with the adoption, in December 2022, of the “Kunming-Montreal Global Biodiversity Framework (GBF) under the Convention on Biological Diversity (CBD), and the international legally binding instrument on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ).

The GBF was negotiated and adopted two years later than scheduled, due partly to the COVID-19 pandemic. Countries around the world, therefore, have had a shorter time to reach their targets. Developing countries have a particular challenge, as they host most of the world’s biodiversity but have the least capacity to conserve it. Support is needed from governments, and from organisations like IGES, with years of experience especially in Asia and the Pacific. As a global policy research institute focused

partly on biodiversity, IGES is becoming increasingly visible and active in international biodiversity processes, especially those involving the CBD and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). IGES provides technical advice and on-the-ground support, as well as conducting high quality and relevant research to inform biodiversity policy.

In FY2023, four IGES staff continued to work on two ongoing global IPBES assessment reports³⁴ and completed biodiversity-oriented chapters of the *Sixth ASEAN State of the Environment Report*. Various IGES publications were cited in IPBES assessment reports. IGES also continued supporting MOEJ's involvement in international efforts, including the G7 and G20 environment meetings, and IPBES, by convening meetings for the Japanese public and experts. As delegates of Japan to the 10th IPBES Plenary meeting, IGES staff supported and advised Government delegates, as in previous years. IGES started hosting the Technical Support Unit for the IPBES Task Force on Scenarios and Models (IPBES-TSU-SCM). IGES also hosted "the annual meeting of the IPBES task force on scenarios and models" and "IPBES fellows annual training workshop of the IPBES task force on capacity-building".

Moreover, IGES started supporting the Japanese CBD delegation at CBD SBSTTA-25 to negotiate the GBF indicators and the mechanisms for planning, monitoring, reporting and review. IGES produced more than 10 publications on international biodiversity policy as well as a webinar on landscape approaches in collaboration with the International Union for Conservation of Nature (IUCN), ASEAN Centre for Biodiversity (ACB), United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) and EcoAgriculture Partners.

b. Promoting sustainable land use and ecosystem conservation

The first two of the three objectives of the CBD are the conservation of biodiversity, and its sustainable use. The GBF includes a target to expand terrestrial and marine protected areas (including "other effective area-based conservation measures") to 30% each by 2030. While gains are being made in forest cover in some parts of the world, the biodiverse tropics continue to be lost to cultivation and other anthropogenic uses. Meanwhile, in developed parts of the world, land abandonment is often more of a challenge than land conversion, posing its own unique challenges. IGES will continue international collaborative research on land abandonment and restoration in Japan, Taiwan, the United States, France and Italy to generate policy recommendations.

IGES will contribute to the Forest Declaration Assessment, which assesses progress toward the global goals of halting deforestation by 2030 as set out in international declarations such as the Glasgow Leaders' Declaration on Forests and Land Use. In addition, IGES will conduct research on sustainable land-use management to achieve global biodiversity conservation and reduction of GHG emissions from the land sector. IGES will propose policy recommendations through exploring scenarios/pathways for a sustainable and resilient future under climate and ecosystem changes in Japan, the Philippines and Indonesia. In doing so, IGES will produce knowledge and provide policy inputs to Japan and global stakeholders by enhancing collaboration with key partner organisations

In FY2023, IGES contributed to the Forest Declaration Assessment as an assessment partner and produced a publication outlining the topic. IGES continued projects on sustainable aquatic food system research in partnership with WorldFish; on development of an integrated assessment model linking biodiversity and socio-economic drivers, and its social application (*Suishinhi S-21*); and on societal views on landscape and land-use change and their impacts on water and soils (Belmont Forum ABRESO project). Meanwhile work continued on the integration of traditional and modern bioproduction systems for a sustainable and

³ *Thematic Assessment of the Interlinkages Among Biodiversity, Water, Food and Health ("nexus assessment")*

⁴ *Thematic Assessment of the Underlying Causes of Biodiversity Loss, Determinants of Transformative Change and Options for Achieving the 2050 Vision for Biodiversity ("transformative change assessment")*

resilient future under climate and ecosystem changes (e-Asia ITMoB project). IGES also continued its work related to the MV Wakashio oil spill in Mauritius since 2020, as the Technical Cooperation Project by JICA (Japan International Cooperation Agency) was launched to support the Mauritian government to build the foundation to conserve and restore the coastal ecosystems effectively. As part of the project, an IGES staff member provides support to the promotion of sustainable tourism and assessment of ecosystem services in the project site. For another JICA project, IGES seconded a staff member to conduct research on peatland fires in Indonesia.

IGES also continued to serve as the Secretariat of the Satoyama Development Mechanism (SDM), one of collaborative activities under the International Partnership for the Satoyama Initiative (IPSI). The SDM provides seed funding to support IPSI members to implement projects related to conservation and restoration of socio-ecological production landscapes and seascapes (SEPLS). In FY2023 the Secretariat funded newly selected projects in India, Ghana, Sri Lanka and Argentina, and supported other ongoing projects. As part of the Secretariat work, IGES hosted the ISAP2023 thematic track called “SEPLS Management as Integrated, Inclusive and Localised Actions towards a Nature Positive Society”.

c. Facilitating non-state actors’ involvement in conservation

While great expectations are placed on governments to address environmental issues, including biodiversity and forest conservation, their capacity is limited and varies from country to country. Collectively, business and other non-state actors have arguably an even bigger role to play, and considerably more untapped potential. IGES is in a position to work with both governments and non-state actors, and even to foster public-private partnerships between them. An increasing proportion of IGES work on biodiversity involves non-state actors, especially businesses.

IGES will continue supporting forestry and timber business sectors, mainly in Japan, to purchase timber while avoiding illegally-sourced products. This will be done by supporting the Japanese government to develop a guideline for due diligence on timber products under the Clean Wood Act, and conducting research on legal frameworks of timber producer countries and due diligence policy in demand-side countries and practices by private companies. Given increasing global attention to promote private companies' actions, such as the EU regulation on deforestation-free products and the Science Based Targets initiative (SBTi) for zero-carbon transition, IGES will also research production and supply chains of forest risk focusing on the policies and practice on the ground, as well as providing support to the business sector so that businesses can improve their supply chains by conducting supply chain and landscape analysis.

In FY2023, IGES work on responsible timber trading and supported the Japan Federation of Wood Industry Associations to develop the due diligence guideline for domestically harvested timber under the Clean Wood Act. IGES implemented a project with the University of Tokyo on sustainable value chains, looking at coffee in Viet Nam and cacao in Ghana. In other work on biodiversity and business, IGES has also continued to support the Japanese committee for the development of a biodiversity standard under the International Standards Organization. IGES has also continued working with the Japan Business Federation, Keidanren, in a survey of the biodiversity impacts of Keidanren companies. The study showed the current progress of mainstreaming biodiversity into corporate management, contributions to the GBF, information disclosure based on the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations and integration of biodiversity and climate actions.

(4) Shaping circular economy and sustainable lifestyles (“Make it circular”)

a. Mainstreaming circular economy

Along with mainstreaming of plastic pollution issues, mainstreaming of the circular economy (CE) as a policy agenda is now observed widely both at global and national level. In the current discussion on circular economy, there is both waste management-focused CE, and CE beyond waste management and recycling. At the same time, CE approach beyond waste management and recycling is yet to materialise either as policy or as a business model. From now on, it is vital to develop and strengthen policy discourse and approaches to CE beyond recycling and as an entry point for transition to sustainable socio-technical systems.

In this context, IGES needs to develop a new theory of policy development for transition to circular economy and to conduct experimental projects facilitating new circular business models. In its capacity as a major policy think-tank in the Asia-Pacific region on circular economy policy, IGES will seek synergies and coordination among a range of on-going international initiatives on circular economy concentrating in the ASEAN and South Asian region. IGES will contribute in developing indicator systems for measuring the progress of CE beyond recycling in the International Resource Panel (IRP), Organisation for Economic Co-operation and Development (OECD) and other relevant processes. IGES aims to secure international collaborative research projects on food and plastics to enhance its expertise on policy research and incentive development for circular business models and lifestyles. By being involved with city action plan development on the 3Rs (reduce, reuse and recycle) and plastic pollution in ASEAN member countries and South Asian countries, IGES will try to establish several model cities such as those in Viet Nam, Cambodia, Myanmar, Sri Lanka and Indonesia.

In FY2023, IGES continued to be involved in key international processes on circular economy and resource efficiency, including G7 Resource Efficiency Alliance, G20 Resource Efficiency Dialogue, IRP, and OECD. For instance, IGES helped organise the G7-B7 joint workshop and a COP28 side event to mainstream the G7 Circular Economy and Resource Efficiency Principles (CEREP). IGES also contributed to the process of mainstreaming the circular economy in Asia-Pacific countries, particularly ASEAN countries. IGES also made a keynote presentation at a session on the circular economy at the Ho Chi Minh Economic Forum in Viet Nam. IGES continued to act as the leading institute to compile country-relevant information for G20 MPL (Marine Plastic Litter) report, G20 Resource Efficiency Dialogue portal site development, and relevant webinars. IGES is involved in several governmental committees in Japan to discuss policy measures, CE indicators, and industrial standards on circular economy. IGES continued to serve as a secretariat of Japan Partnership for Circular Economy (J4CE) and organised four public-private dialogues to increase motivation in private sector to take up circular business models.

b. Mainstreaming sustainable lifestyles

The IPCC AR6 Working Group III Report published in April 2022 has a new chapter focusing on demand-side mitigation measures, including lifestyle, society and culture. The need for lifestyle changes toward net zero societies has been broadly recognised. In addition, carbon footprint analysis has become widespread in the past decade, enabling a deeper understanding of the impact of citizens' lifestyles on greenhouse gas emissions. Changes in lifestyles can only be achieved if socioeconomic contexts of cities and communities are transformed and broader options of decarbonised products, services and behavioural choices are available. Therefore, strengthened support to the multi-stakeholder efforts to create alternative socioeconomic contexts, fully utilising scientific methods such as carbon footprint analysis and behavioural insights, are vital measures for realising inclusive transformations toward sustainable lifestyles.

IGES has taken on a leading role in promoting international cooperation, national and local policies, and grassroots initiatives to facilitate the transitions of lifestyles. Taking the opportunity of the UNGA agreement to extend the mandate of the SCP 10YFP (One-Planet Network) to 2030, IGES should collaborate with partners to re-activate the Sustainable Lifestyles and Education Programme to support city- and community-level efforts toward enabling sustainable lifestyles and livelihoods globally. It is also necessary to consider linkages with new international cooperation frameworks such as the Lifestyles for

the Environment (LiFE) proposed by the Government of India, which holds the G20 Presidency (in 2023), and the G7 Platform for Net-zero and Wellbeing in Life proposed by Japan, which holds the G7 Presidency (in 2023). At the same time, in each country and community, the project aims to strengthen methods to use scientific findings, such as carbon footprints, to shape local government policies and promote grassroots initiatives that are closely linked to lifestyles. Furthermore, IGES will contribute to international partnerships that facilitate collaboration between SMEs and others providing products and services, local communities and civil society organisations to ensure that decarbonised products, services, infrastructure and behaviour options are made available to cities and communities around the world.

In FY2023, IGES made significant contributions to climate action and sustainability initiatives across Japan. IGES played an essential role in planning and organising Climate Citizen Assembly Meetings in three areas in Kanagawa, using its 1.5°C Programme to facilitate citizen's discussions on mitigation actions. IGES also developed guidance and tools to support citizen-led local climate actions in various prefectures. Additionally, IGES completed the first phase of a Behaviour Insights for Plastic Reduction project with partners including ERIA (Economic Research Institute for ASEAN and East Asia), applying behavioural insights in educational settings to reduce plastic use, and released a Guidance Note on the application of BIs (Behavioural Insights) for plastic reduction. Based on the result, IGES and ERIA launched the 2nd phase of the project, aiming at developing training programmes for designing and implementing BI-informed interventions in more cities in Asia. Furthermore, IGES initiated on-site surveys in Minami-Sanriku and Osaka under the *Suishinhi S2I* project, focusing on food systems transitions and sustainable food consumption and production.

c. Ending pollution and improving environmental quality

Managing pollution is crucial to improving human health and well-being as well as moving towards a pollution-free planet in line with the SDGs. Addressing waste, chemicals and air pollution is also linked to climate change mitigation, especially when action is taken against short-lived climate pollutants (SLCPs, e.g. methane and black carbon). Emerging waste, such as plastics and health-care as well as the implication this has for chemicals and pollution is a powerful motivation for sound management of chemicals and waste, as agreed on by the Member States at UNEA (United Nations Environment Assembly)-5.2.

In this regard, IGES, along with UNEP, UNESCAP, the World Bank, Asian Development Bank (ADB) and others, will continue supporting national and local governments to develop integrated waste management strategies and policies considering the reduction of SLCP emissions, formulating evidence-based national plastic and marine litter action plans based on the 3Rs, as well as increasing resource efficiency and circularity while providing technical support to national and local governments in the region to strengthen institutional capacities and facilitate their implementation at the city level. To achieve this, IGES will continue its active involvement within the UNEP-CCAC (Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants)-Waste Hub and National Planning Hub in providing technical support and building capacities of developing countries in Asia (Indonesia, Cambodia, Myanmar, Pakistan, Sri Lanka) to reduce SLCP emissions from the waste sector, through managing food loss and waste, closing open dumps and reducing open waste burning. IGES also aim to integrate such measures into NDCs and other development plans. As for the plastic waste management, IGES will provide technical support to national governments in at least three countries in the region to build the capacity to establish sound data management, policies and monitoring systems to manage transboundary plastic pollution in close collaboration with UNEP and Economic Research Institute for ASEAN and East Asia (ERIA) Regional Knowledge Centre for Marine Plastic Debris. IGES will also engage with regional (ASEAN and South Asia) and global (International Negotiation Committee for Legally-binding Instruments for Plastic Pollution (INC), UNEA, G20, G7) policy dialogues for mainstreaming plastic pollution.

In FY2023, IGES Centre Collaborating with UNEP on Environmental Technologies (CCET) engaged in evidence-based policy research and provide technical support to national and local governments to

improve waste management. Their focus included countries like Sri Lanka, Indonesia (Padang City), Pakistan, Bhutan, and Cambodia, assisting in the formulation of action plans for managing municipal waste, including plastic waste, marine litter, e-waste, and healthcare. These initiatives aimed to enhance waste management systems, reduce environmental impact, and promote sustainable practices, zero waste, and a circular economy. In partnership with the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) and others, CCET supported Asian countries, including Cambodia and the Federal State of Micronesia, in reducing methane emissions and developing a regional roadmap to reduce open waste burning. This effort aimed to keep the goal of limiting warming to 1.5°C within reach while yielding co-benefits such as improved public health and agricultural productivity. CCET also contributed to the Assessment Report of Climate Impact of Black Carbon Emissions from Open Burning of Solid Waste, and studies on Gender/Informal Sector Involvement in Waste Management, and Training Needs Assessment Reports Towards Plastic Waste Management in the Tourist Sector. Additionally, CCET conducted numerous training sessions and capacity-building activities and engages in global policy dialogues including the Global Methane and Short-lived Climate Pollutants (SLCPs) Dialogue by CCAC and IPCC, and dialogues on zero waste, plastics, and chemicals pollution by UNEP International Environmental Technology Centre (IETC), the Basel, Rotterdam and Stockholm Convention Secretariat, and Strategic Approach to International Chemicals Management (SAICM). These engagements facilitated knowledge exchange and foster international cooperation and policy development. CCET aimed to strengthen partnerships with organisations like JICA, ADB, and the World Bank to enable financing for national and city waste management plans and innovative actions, supporting sustainable development and environmental protection.

For marine plastics and circular economy, IGES continued its support to ASEAN member states' policy initiatives. IGES contributed to the development of evidence-based policies for plastic pollution control in Cambodia and Myanmar, and assisted in drafting and submission of National Plastic Action Plans for formal approval in both countries. The Sustainable Consumption and Production (SCP) team also organized a regional training programme in Bangkok on National Action Plans for plastic pollution control and data monitoring for policymakers on marine plastic issues in ASEAN member countries. In addition, IGES continued to organise the Technical Working Group of Regional Knowledge Centre for Marine Plastic Debris in ERIA (ERIA RKC-MPD), and continues to support the OECD's flagship project on policy assessment. IGES published a report on "Building Data on the Plastic Value Chains in ASEAN Member States", "Regional Plastic Outlook in Asia". In addition, IGES worked with ERIA to develop a program proposal for a knowledge platform for the World Bank's Southeast Asia Regional Marine Plastic Litter Control Program (SEA-MAP) to improve ASEAN's capacity to implement regional actions to combat marine plastic litters. IGES engaged in International Negotiation Committee for Legally-binding Instruments for Plastic Pollution (INC) by highlighting key roles to be played by ASEAN+3 countries at the pre-meeting webinar and official side events of INC3 and organising an informal side-event at INC4 in collaboration with ERIA.

1.2. Highlights of impact generation

1.2.1. Impact Cases

In close collaboration with diverse stakeholders, IGES has aimed to generate "impact" that facilitates the transition towards realising sustainable societies since its ISRP7, which began in FY2017.

IGES will aim to report 30 impact cases each year as one of the key performance indicators specified in ISRP8. ISRP8 will also aim for greater impact cases (three large/significant impacts and seven medium) and a variety of impact types by employing effective outputs and means (communications, networking, knowledge management) for the impact-making process at IGES.

In FY2023, SMO-KC received 35 impact cases in total. Out of 35 cases, seven cases were categorised as “Impact 1” (changes in policy, planning and practices) and one case was categorised as “Impact 2” (changes in wider society), or large-scaled impact cases. In addition, 11 cases were categorised as “Outcome 3” (uptake of IGES proposal and acted upon by target stakeholders) or medium-scaled impact cases(see Table 2).

Table 2: ISRP8 Key Performance Indicators for Impacts

Indicator	Baseline (ISRP7)	Annual Target	2021 Results	2022 Results	2023 Results	2024 Results
Total impact cases reported	25	30	40	34	35	
(Breakdown) Large-scale cases	-	3	8	7	8	
(Breakdown) Mid-scale cases	-	7	16	9	11	
(Breakdown) Other cases	-	20	16	18	16	
Indicator without Target	Baseline (ISRP7)	Indicative Reference	2021 Results	2022 Results	2023 Results	2024 Results
(Breakdown) International processes	-	n/a	17	14	17	
(Breakdown) Policy and institutional changes	-	n/a	32	29	28	
(Breakdown) Practical solutions	-	n/a	24	27	25	
(Breakdown) Media	-	n/a	9	12	10	
(Breakdown) Academic	-	n/a	13	16	11	

Below is a list of selected cases with high-level impacts (Impact 2, Impact 1 and Outcome 3) in FY2023.

Table 3: List of High-Impact Cases in FY2023

< Impact 2 and Impact 1 / large or significant impact cases >

No.	Case title / Impact	Unit name (Upper line: Lead unit / Lower line: collaborator/s
I-1	<p><u>Supported to strengthen capacities to implement the National Action Plan on plastic waste management, 2021-2030, in Sri Lanka</u></p> <p>The implementation of the National Action Plan on Plastic Waste Management in Sri Lanka has proven to be highly impactful, with some significant results in various sectors. The project's</p>	<p>SCP</p> <p>CTY, AW, ISC, KUC, BRC</p>

	<p>achievements underscore its effectiveness in fostering sustainable plastic waste management practices across the country.</p> <p>Key Evidence of Impact:</p> <ul style="list-style-type: none"> ♦ Establishment of the National Plastic Management Inventory and Monitoring Mechanism: This mechanism has provided Sri Lanka with an accurate and comprehensive system to monitor plastic waste, facilitating data-driven decision-making and policy development. Since its inception, there has been a marked improvement in the accuracy and availability of plastic waste data, enabling more targeted and effective waste management strategies. ♦ Development of a Phaseout Plan for Selected Single-Use Plastic Items: The phaseout plan has laid out clear timelines and strategies for eliminating two largely used single-use plastics (lunch sheets and carrying bags). Preliminary assessments show a reduction in the circulation of targeted single-use plastic items, contributing to a decrease in plastic pollution and promoting the use of sustainable alternatives. ♦ Reduction of Plastic Waste from the Hotel Sector: Initiatives within the hotel sector have led to a substantial decrease in plastic waste. Participating hotels have reported up to a 30% reduction in plastic waste through the adoption of recommended practices. In addition, the setup of microfiber filters in the pilot hotels has resulted in a 98% reduction in microplastic release into the environment. This sector-specific approach has demonstrated the potential for significant environmental benefits when targeted interventions are applied. ♦ Creation of a National Education Programme on Plastic Waste Management: The national education programme has successfully raised awareness and educated thousands of students and community members about the importance of reducing plastic waste. Surveys conducted post-programme indicate a significant increase in public awareness and a shift towards more sustainable behaviours among participants. 	
I-2	<p><u>Improved timber legality policy</u></p> <ul style="list-style-type: none"> ♦ IGES recommendations have been incorporated into the revision of the Act on Promotion of Use and Distribution of Legally-harvested Wood and Wood Products (Clean Wood Act) (promulgated on 8 May 2023, to take effect on 1 April 2025) and its implementation. IGES has supported the preparation of the "Due Diligence Guidance for the Legality Confirmation under the Clean Wood Act" (FY2022) by the Forestry Agency and the "Due Diligence Guidelines for the Legality Confirmation of Domestic Log" (FY2023) by the Japan Federation of Wood Industry Associations. ♦ In addition, IGES continues to contribute to discussions on implementing the Clean Wood Act as a member of the Expert Group on the Distribution and Use of Legally Harvested Timber, which was newly established due to the revision of the Clean Wood Act (FY2023). ♦ IGES signed a Memorandum of Understanding with the International Tropical Timber Organization (ITTO) (FY2022). 	BDF

	In FY2023, IGES published several publications as part of the work commissioned by ITTO and the Ministry of Agriculture, Forestry and Fisheries (MAFF) (FY2023).	
I-3	<p><u>Improved water quality governance in WEPA (Water Environment Partnership in Asia) partner countries through the WEPA action programme (AP)</u></p> <ul style="list-style-type: none"> Since FY2020, IGES has been working closely with the Environmental Conservation Department (ECD) of the Ministry of Natural Resources and Environmental Conservation (MONREC) of Myanmar to develop its first Water Quality Standard of Myanmar. On 8 February 2024, the National Standard Council (NSC) approved the National Surface Water Quality Standard (NSWQS) and now the environmental standards are in force in Myanmar. WEPA AP contributed to its environmental policy. 	AW
I-4	<p><u>Applied the State of River Basin (SORB) reporting system for ASEAN countries</u></p> <ul style="list-style-type: none"> The SORB (State of River Basin) reporting system developed by IGES provides a standardised framework for assessing the health and management effectiveness of river basins in ASEAN. This system contributes to improved management practices and more sustainable water resource governance. By promoting a common understanding of river basin health and management across national borders, the project facilitates transboundary cooperation and joint efforts to address common water challenges. The Guidebook and Technical Report developed by IGES provide a clear and consistent framework for ASEAN countries to assess and report on the health of their river basins. In conclusion, the project has demonstrated the significant impact of IGES on improving domestic wastewater management and facilitating the achievement of relevant targets under SDG 6, particularly SDG 6.3, in the ASEAN region. By fostering regional collaboration, providing practical solutions, and supporting capacity building, IGES is contributing to the promotion of cleaner water, healthier ecosystems, and more sustainable development in the ASEAN region. 	AW
I-5	<p><u>Strengthened capacity development for local governments in ASEAN to tackle microplastics and water pollution through decentralised wastewater management approach</u></p> <p>The PoDIWM-2 project facilitated the sharing of knowledge and experience on decentralised wastewater treatment in the ASEAN context, contributing to evidence-based policy making in ASEAN. This is in line with the project's objective to influence policy changes in water management.</p> <p>The project also promoted the adoption of sustainable decentralised wastewater management practices through training modules and</p>	<p>AW</p> <p>BRC</p>

	<p>pilot projects. This directly contributes to changes in practice at the local government level. The Bauang Municipality, the Philippines, has adopted the innovative solutions IGES proposed for sustainable wastewater management at the project site. Thanks to the success of this pilot project, several other municipalities have started contacting IGES and our local partners to replicate the same approach in their communities.</p> <p>In conclusion, the PoDIWM-2 project has successfully contributed to positive changes in policy, planning and practice related to decentralised wastewater management in the ASEAN region. These impacts are evident through:</p> <ul style="list-style-type: none"> ♦ Increased awareness and knowledge of sustainable sanitation practices and microplastic pollution. ♦ Increased capacity of local governments to implement effective wastewater management strategies. ♦ Development of tangible tools and resources to guide policy and practice. <p>In the long term, the project's focus on regional cooperation, knowledge sharing and capacity building has paved the way for a cleaner, healthier and more sustainable water and sanitation future in ASEAN. By fostering collaboration and providing practical solutions, the project has had a lasting impact that will continue to benefit the region in the long term.</p>	
I-6	<p><u>Promoted integrated approaches to support transformative actions at sub-national government and city level</u></p> <ul style="list-style-type: none"> ♦ The West Java VLR (Voluntary Local Review) is the first sub-national (province) level VLR in Indonesia. It will contribute to the 2nd VNR (Voluntary National Review), and the process of developing the VLR will be used as an input to the SDG Secretariat Indonesia (Bappenas: National Development Planning Agency) for recommendation to other provinces in Indonesia. IGES and UCLG-ASPAC will develop a webinar series on the development of VLR at local level in Indonesia and the Philippines. The West Java experience will be used as a reference and resource paper. ♦ The Cement Directorate of the Ministry of Industry in Indonesia is ready to sign a cooperation agreement with the Ministry of the Environment, Japan to exchange knowledge and experience from the development of the decarbonisation roadmap of the cement industry in Japan with the Indonesian counterpart. The development of alternative fuel from municipal solid waste (RDF) is one of the key activities to support the decarbonisation of the cement industry. ♦ IGES's integrated approach is currently being scaled-up in West Sumatra and Padang City, under the joint cooperation programme of UNEP CCET and Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) under the project PCA4 UNEP CCET in FY 2024 and 2025. ♦ IGES received a request from its partner, AMITA Corporation, to apply a similar approach in developing a roadmap for a Net Zero Cement Industry in Malaysia. AMITA Corporation opened their plant in Malaysia about 3-4 years ago and they 	<p>CTY</p> <p>SMO-KC, KUC, BRC</p>

	would like to have similar approach from IGES to support local governments and ministry in Malaysia.	
I-7	<p><u>Developed and launched concrete local actions to accelerate the transition to zero-carbon cities</u></p> <ul style="list-style-type: none"> ♦ The Kitakyushu City Government has launched two new programmes for local companies. One is the "Kitakyushu Sustainable Management Certificate Programme" and the other is the "Kitakyushu GX Executive Business School". It took almost three years from the concept to the launch of the Kitakyushu Sustainable Management Certificate Programme. The process included conducting a needs assessment on SDG practices in local companies and financial institutions (interviews, questionnaire surveys, etc.), designing a certificate programme (interviews, organising committee meetings, etc.), and countless discussions with city government staff, including high-level officials (such as the director of the Policy Management Bureau), to create a budget for its launch and implementation. After a long policy-making process, the programme was launched at the regular press conference of the Mayor of Kitakyushu City on 5 July 2024, which was highly appreciated by the Mayor. ♦ IGES-KUC also developed the curriculum for the Kitakyushu GX Executive Business School, which is the first public initiative of its kind in Japan. IGES-KUC spent almost a year discussing the curriculum with the Kitakyushu City Government, the National Institute of Technology, Kitakyushu College and various experts. The course was designed to learn about GX from a variety of perspectives, enabling participants to talk about their own company's approach to decarbonisation management in their own words. The first course in FY2023, a combination of lectures and workshops, was completed to the great satisfaction of the participants. ♦ Especially for the Kitakyushu Sustainable Management Certificate Programme, the Mayor of Kitakyushu City took the initiative to launch it in July 2024. IGES-KUC took nearly three years to propose and design with the collaboration of FIN team. ♦ Key stakeholders take direct action through their own initiatives in response to IGES proposals. IGES recommendations are embedded in key stakeholder mandates (i.e. key stakeholders have invited IGES to play a key role in the relevant policy process). 	<p>KUC</p> <p>CTY, FIN, KRC</p>
I-8	<p><u>Enabling sustainable change: A blueprint for local, national, and regional circular economy and waste management</u></p> <p>After receiving support from the Alliance to End Plastic Waste (AEPW) to conduct a feasibility study in 2021-2022, IGES Zero Plastic Island project began to transform Samet Island, Thailand, into a model of sustainability through a closed-loop plastic recycling system using URBAN RIG technology.</p> <p>This project aimed to manage plastic waste by converting it into valuable products such as oil and charcoal, in line with local and regional circular economy goals, rather than allowing the waste to</p>	<p>BRC</p> <p>KUC</p>

<p>accumulate in landfills. In 2023-2024, with support from ADB and Google.org, IGES moved into the demonstration phase, successfully running 70 stable operations, refining processes and engaging the community through extensive awareness campaigns and stakeholder meetings. Through this robust engagement, hundreds of local stakeholders, including communities and businesses, expressed strong support for the project.</p> <p>After three years of negotiations, the local government has agreed to formalise future cooperation through a Memorandum of Understanding with the City of Kitakyushu, One World Japan and IGES, which is currently being finalised.</p> <p>As of June 2024, the project has reached significant milestones: total waste collected reached 15,298 kg, oil recovered reached 3,305 ℓ, and carbon reduction reached 41,310 kg CO₂. The success of the project aims not only to significantly reduce plastic waste and pollution on Samet Island, but also to develop a replicable model for other islands/locations, thereby contributing to the broader goals of circular economy and sustainable tourism.</p>	
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< Outcome 3 / medium impact cases >

No.	Case title / Impact	Unit name (Upper line: Lead unit / Lower line: collaborator/s)
O-1	Supported co-design of new ASEAN Haze Free Roadmap, saving 10,000 lives per year	ISC / CE SCP, BDF
O-2	Established and operationalised a regional platform of the Circulating and Ecological Sphere (CES) approach in South-Southeast Asia	ISC CTY, AW, BRC, KRC
O-3	Applied long-term scenario analysis for sustainable development strategies (SSPs for Cities) and promoted multi-level collaborations for realising place-based sustainable development. - Three case studies (Bhutan, Da Nang City, and Mexico City)	ISC BDF, SCP, FIN
O-4	Strengthened synergies between climate and SDGs: through the UNEA resolution and support to the Expert Group	ISC CE, AW, BDF, CTY
O-5	Promoted sustainable lifestyles and livelihoods	SCP
O-6	Supported for global biodiversity processes	BDF
O-7	Promoted socio-ecological production landscapes & seascapes	BDF
O-8	Developed IGES BD expertise in new areas, including the development of the Ecotourism Action Plan for the Mauritius government	BDF
O-9	Advanced locally-led adaptation incorporating traditional, indigenous and local knowledge systems as a Green Climate Fund (GCF) delivery partner	AW ISC, APN

O-10	Facilitated intermediary support organisations for regional decarbonisation in small/medium local governments	CTY
O-11	Japan Climate Leaders' Partnership (JCLP) successfully shared a sense of urgency and fostered positive momentum towards a credible and accountable net-zero transition in Japan	BIZ CE

1.2.2. Outputs

(1) Written publications

ISRP8 established three main targets for written publications. The first target is 150 strategic publications annually for impact generation, and it includes a range of publication types which can support diverse strategies to influence different target audiences. The second target is 100 academic publications. The third target is that 20 academic publications should have an IGES researcher as the first author. All three targets were met in FY2023, and the target for strategic publications was modestly exceeded, while the target for IGES first-authored academic publications was exceeded by 95%. (See Table 4-1. The main publication types covered by each target are indicated in the note to Table 4-1.) The number of peer reviewed articles with Impact Factor over 3 published in CY2023 was 84, about 74% of the total, and 22 articles were published in journals with an impact factor of 7 or above (Table 4-2).

The breakdown of IGES first authored academic publications by publication type is indicated in Table 5. It shows that 22% of peer-reviewed articles had an IGES researcher as first author, while other publication types had a much higher rate of IGES first authors.

Table 4-1: ISRP8 Key Performance Indicators for Strategic Outputs and Academic Publications and Impacts (with target)

Indicator	ISRP7 Target	ISRP8 Target	2021 Results	2022 Results	2023 Results	2024 Results
Number of Strategic publications*	100	150	226	167	160	
Academic publications**	30***	100	104	108	114	
Of which first-authored academic publications	-	20	45	35	39	

* Policy reports, policy briefs, briefing notes, commentary/op-eds, submission to policy processes, non-peer reviewed articles, etc.

** Peer-reviewed articles, books, book chapters, working papers, etc.

***This refers only to peer-reviewed articles.

Table 4-2: ISRP8 Key Performance Indicators for Academic Publications and Impacts (without Target)

Indicator without Target	ISRP7 Target	Indicative Reference	2021 Results	2022 Results	2023 Results	2024 Results
IGES flagship and priority publications	2	4 (FY2020)	5	4	5	

Number of peer reviewed articles with Impact Factor over 3	-	28 (Feb. 2020- Feb. 2021)	66 (CY2021, Scopus)	79 (CY2022, Scopus)	84 (CY2023, Scopus)	
Number of citations received in a calendar year by academic articles published in the past five years	-	714 (CY 2020)	1,433 (CY2021)	2,007 (CY2022)	2,770 (CY2023)	
Annual increase in citations of academic articles from previous year	-	34% (Feb. 2020- Feb. 2021, Web of Science)	34% (CY2021, Scopus)	34% (CY2022, Scopus)	37% (CY2023, Scopus)	

Note: FY results are based on CY data from SCOPUS. SCOPUS includes peer-reviewed articles and other academic publication types.

Table 5: Academic Publications with IGES as First Author

	Target	FY2021 Total	FY2021 First author	FY2021 % First author	FY2022 Total	FY2022 First author	FY2022 % First author	FY2023 Total	FY2023 First author	FY2023 % First author
Academic publications (total)	20	104	45	43%	108	35	32%	114	39	34%
Peer-reviewed articles	NA	71	20	28%	82	16	20%	91	20	22%
Books	NA	5	4	80%	3	3	100%	2	1	50%
Book chapters	NA	15	11	73%	13	9	69%	11	10	91%
Research reports/working papers	NA	13	10	77%	10	7	70%	10	8	80%

Five publications were designated as flagship/priority publications in FY2023. One technical report focused on climate: *IGES 1.5°C Roadmap: An action plan for Japan - more ambitious emissions reduction and a prosperous, vibrant society* (in Japanese with an English summary). One policy report, *Progress Report 2023: Survey Results on the Initiatives of GCNJ Business and Non-Business Participants* and one research report, *State of the Voluntary Local Reviews 2023: Follow-up and Review of the 2030 Agenda at the Local Level* are part of two annual report series on SDGs. IGES contributed to two major policy briefs, one by T7 (Italy) on “Enhancing G7 Leadership in Global Climate Action” and one by UNEP on “Advancing Effectiveness of Climate Adaptation”.

Regarding timely publications, many articles were published in Japanese media including *Toyo Keizai*, *Kankyo Bunmei 21*, *Kankyo Business*, *Nippo Business*, *Chikyū Ningen Kankyo Forum*, *Gendai Riron*, *Shoji Homu*, and *Kankyo Shimbun*. On climate security, an important emerging issue, an issue brief on “Climate Security and Japan’s Development Assistance” (in Japanese) and a briefing note on “Trends in Climate Change and National Security in Selected Countries” (in Japanese) were published. Agrivoltaics, another emerging issue, was addressed in a discussion paper. Commentaries were published on “Empowering youth in SDGs”, “Why we need a transformative circular economy”, and “Unified report on the First Global Stocktake” (in Japanese).

Further notable publications on climate and SDGs included an IGES-led report for the Asia Co-benefits Partnership on *Integrating Co-benefits into Nationally Determined Contributions, Climate Policies and Air Pollution Policies in Asia*, and working papers on “Renewables development for energy transition in

ASEAN” and “Case studies of domestic initiatives that have synergistic impacts on climate change, biodiversity and the SDGs”.

Waste and plastic pollution were highlighted by various publications, including a policy report on *Breaking the Plastic Habit: A Guidance Note and Practical Toolkit Lessons from Single-Use Plastic Behaviour Change Interventions in Indonesia, the Philippines, Thailand, and Viet Nam*, and a research report on National Plastic Action Partnerships. IGES also contributed to the *G20 Report on Actions Against Marine Plastic Litter - Fifth Information Sharing Based on the G20 Implementation Framework*, and the *National Plastic Waste Inventory for Sri Lanka: A Material Flow Approach*.

IGES researchers authored and contributed to 91 peer reviewed articles in FY2023, the largest number in the history of IGES. Several notable articles were published on climate change in *Sustainability Science*, including “Accelerating actions for leveraging a climate-neutral sustainable society”, “Importance of long-term flexibility in a 100% renewable energy scenario for Japan”, “Analysis of past energy transitions of OECD and BRICS countries in the scope of energy interconnection”, “Net-zero transitions for all? Considering applications in Asia”, “Assessment of alternative land resource utilisation towards Net-Zero and regional revitalisation through the circulating and ecological sphere in depopulated city regions in Japan”, “Establishing the use of climate citizens’ assemblies in Japan: their significance and challenges”, and “Lessons from a Climate Citizens’ Assembly Kawasaki, Japan”. An article on “National GHG inventory capacity in developing countries – a global assessment of progress” was published in *Climate Policy*. Systematic review articles were published in *Earth Systems and Environment* on water governance in Asian countries and in *Environmental Science and Policy* on “Advancing sustainable development through planetary health”.

Direct submissions to policy processes in FY2023 focused on the First Global Stocktake and participation in the Kanagawa Citizens’ Climate Assembly in Zushi-Hayama.

IGES made important contributions to four major assessment reports in FY2023 in various capacities. IGES contributed to two IPBES assessments, through one Coordinating Lead Author, one Lead Author, and one Review Editor of the *Thematic Assessment of the Interlinkages Among Biodiversity, Water, Food and Health* (“nexus assessment”), and a Fellow of the *Thematic Assessment of the Underlying Causes of Biodiversity Loss, Determinants of Transformative Change and Options for Achieving the 2050 Vision for Biodiversity*. IGES is contributing to UNEP’s *Global Environment Outlook 7 (GEO-7)*, which is currently ongoing, including two Coordinating Lead Authors and six Lead Authors. IGES coordinated the *Sixth ASEAN State of the Environment Report*, which has been published.

IGES has continued to produce translated outputs. The main focus in FY2023 was on translating into Japanese prominent external publications, especially major UN reports, which are expected to influence policy discourse in Japan. These included UNEP’s *Adaptation Gap Report (Executive Summary)*, *Emissions Gap Report (Executive Summary)*, UNESCAP’s *Asia and the Pacific SDG Progress Report*, and UN’s *Global Sustainable Development Report (Executive Summary)* which was launched at the SDG Summit. Seven of these translations were produced, similar to previous years. Last year’s new series of Japanese webinars to promote these translations was continued in FY2023. Others such as commissioned translations and translations of IGES publications were deprioritized in FY2023 since they are very labour intensive and were considered less relevant for impact generation, so the total number of translations decreased.

Table 6: Translated Outputs

		FY2019	FY2020	FY2021	FY2022	FY2023
By Language	English→Japanese	23	22	23	23	14
	Japanese→English	9	12	5	2	3
	Other language	0	3	10	2	0
By Type of Publication	Non-IGES Publications*	23	18	15	17	12
	IGES Publications	9	19	23	10	5
Total Translations		32	37	38	27	17

(2) Citations of peer-reviewed articles

IGES continues to make good progress in terms of citations to peer-reviewed journal articles as shown in Table 7. IGES has tracked citations for seven years using two different calculation methods, one from the Web of Science (WOS) which tracks citations mainly in academic articles, and one using Google Scholar, which tracks citations in a much wider range of publications including “grey literature” and outputs by international organisations. From FY2021, results from WOS were replaced by the results from SCOPUS, since SCOPUS covers a wider range of publication types, including some books and book chapters. FY2021’s comparison included the figures from both WOS and SCOPUS, but from FY2022, only the figures from SCOPUS will be reported. Citations from Google Scholar are also reported, but only for the articles listed in SCOPUS.

Citations of IGES publications listed in SCOPUS are presented in Table 7. These publications had less than two-thirds as many cumulative citations in SCOPUS (17,370) compared to the number calculated by Google Scholar (27,730). Google Scholar is considered more appropriate for IGES since the target audience for IGES publications is much wider than just the academic community, which is the focus of SCOPUS. Citations in Google Scholar increased by 6,644 between CY2022 and 2023, an increase of 32%, which was similar to SCOPUS citations which increased by 37%, based on 153 additional publications. The continued steady increase in the number of citations may be attributed to the increasing number of peer-reviewed articles as well as the increasing number of articles which are published in higher ranking journals. This year, articles were published in prominent journals such as *Science*; *Resources, Conservation and Recycling*; *Journal of Cleaner Production*; *Journal of Environmental Management*; *Applied Energy*, etc.

Citations of IGES titles published in the previous five years in SCOPUS increased by 38% from 2,007 in CY2022 to 2,770 in CY2023, similar to last year’s increase of 40%. Thus, newer titles published in the previous five years accounted for 59% of all new SCOPUS citations in CY2023, about the same as CY2022, indicating that the newer articles are making a large contribution to the total number of citations.

IGES does not track citations for all publication types because many are not included in SCOPUS and checking one by one on Google Scholar is very time consuming.

Table 7: Citations of IGES Publications

		WOS*	SCOPUS*	Google Scholar (WOS titles)*	Google Scholar (SCOPUS titles)*
Cumulative total articles	CY2020	430	525	(430)	NA
	CY2021	496	629	(496)	(602)
	CY2022		728		(728)
	CY2023		881		(881)
Articles yearly increase	CY2021	66	104		
	CY2022		99		
	CY2023		153		
Articles percent increase	CY2021	15%	20%		
	CY2022		16%		
	CY2023		21%		
Cumulative citations	CY2020	5,800	7,094	10,914	
	CY2021	7,600	9,502		15,930
	CY2022		12,687		21,086
	CY2023		17,370		27,730
Citations yearly increase	CY2021	1,800	2,408		
	CY2022		3,185		5,156
	CY2023		4,683		6,644
Citations percent increase	CY2021	31%	34%		
	CY2022		34%		32%
	CY2023		37%		32%
Citations of titles published in the past 5 years in SCOPUS **	CY2020		714		
	CY2021		1,433		
	CY2022		2,007		
	CY2023		2,770		
Percent increase in citations of titles published in the past 5 years in SCOPUS**	CY2021		101%		
	CY2022		40%		
	CY2023		38%		

Notes:

* For CY2020 and CY2021 results, approximate values were calculated in Feb. 2021, Feb. 2022 (WOS, GS) and July 2022 (SCOPUS). CY2022 approximate values were calculated in Feb.2023 (SCOPUS, GS). CY2023 approximate values were calculated in Jan.2024 (SCOPUS, GS).

**SCOPUS includes peer-reviewed articles and other publication types such as book chapters, etc.

(3) Strategic Research Fund (SRF)

In FY2023, 24 SRF projects were approved. As in FY2022, nearly all the proposals were accepted and most of the projects were conducted on a relatively small scale and within the requested budget.

A review of the FY2022 SRF was conducted in FY2023, and the results were positive, generally similar to the results found in the reviews of previous years. Overall, the 22 projects produced 26 completed publications (including 13 peer-reviewed articles), while there was significant progress (completed draft, submitted for review, or accepted for publication) on another 24 outputs. The number of funding proposals developed was 20, compared to 19 in the previous year, of which seven were accepted, eight rejected, and five were waiting for results at the time of the review. Some projects even achieved a certain level of impact despite the very short timeframe, and most made at least some progress, especially by making presentations at conferences, webinars, funding proposals, and building relations with collaborators, policymakers, and other stakeholders. Some projects were mentioned in the media, or presented at major global and regional events such as the High-Level Political Forum (HLPF). The results of one project helped to develop Da Nang City's Climate Action. Another project supported citizen climate workshops and the formulation of global warming action plans in three cities in Japan (Odate, Kitakyushu, and Kagoshima). Overall, the SRF served as an effective internal mechanism to support IGES's own research activities and provide a basis for impact generation.

(4) Sustainability Science

IGES jointly manages the peer-reviewed journal *Sustainability Science* (published by Springer) with the University of Tokyo, and the editorial office is located at IGES. IGES President Kazuhiko Takeuchi is the Editor-in-Chief. The journal's impact factor decreased slightly from 6.0 in 2022 to 5.1 in 2023, and its 5-year impact factor also decreased slightly from 7.4 to 6.8. However, the journal has become more competitive as its acceptance rate decreased from 18% in 2022 to 14% in 2023. A total of 168 articles were published in six issues (July 2023, September 2023, November 2023, January 2024, March 2024, and May 2024). The Managing Editor is an IGES researcher, and in 2023, 14 IGES researchers served as editors and 27 served as reviewers. IGES researchers published twelve peer-reviewed articles in the journal in 2023.

1.2.3. Strategic Networking and Communications

Along with strategic and academic outputs, strategic networking and communications are indispensable elements for impact generation. IGES defines impact as tangible societal changes, as well as changes in individual behaviour, due to actions taken by IGES and its partners. In other words, the purpose of strategic networking and communications is to plan, coordinate and execute the operations necessary to deliver IGES messages in a way that stimulates people's thinking and behaviour. It is important to promote project planning and implementation with a clear view regarding their objectives and means. To this end, we should firstly clarify what kinds of changes are intended, then we should also deal with the question of 'to whom, when, and how key messages and recommendations derived from IGES research should be delivered' in the course of project planning and implementation.

Strategic networking allows IGES to not only build and maintain relationships with partners who share the same objectives, but also to leverage the strengths of each partner to enhance joint operations and create synergies. Depending on the characteristics of the partner, there are various types of networks, including those that contribute to the co-production of strategic and academic products and those that contribute to the creation and enhancement of opportunities to disseminate IGES messages and recommendations. These networks will form the basis for IGES strategic operations.

The purpose of strategic communications is to use IGES communication channels to deliver key messages and recommendations from its original strategic and academic publications, as well as main findings from important global assessments on the environment and sustainable development. IGES communication channels include but are not limited to online and face-to-face events convened by IGES and its partners, press releases and announcements, websites, newsletters and social media. External media such as newspapers, TV and radio programmes, and magazines are also utilised when considered viable and effective. Strategic communications are essential for impact generation.

In FY2023, IGES maintained and strengthened existing partnerships and networks with international organisations and their units, global and regional initiatives and programmes for impact generation. IGES also maintained and strengthened its strategic communications, aiming to reach target audiences in a timely and effective manner. Table 8 (below) summarises key performance indicators for strategic networking and communications, including annual targets and expected achievements.

Table 8: ISRP8 Key Performance Indicators for Strategic Networking and Communications

Indicator without Target	Baseline (ISRP7)	Indicative Reference	2021 Results	2022 Results	2023 Results	2024 Results
MOU with key international organisations	10	Maintain	12	14	15	
Pageviews of IGES Website	1,080,000 (FY2020)	Annual increase by 20,000	1,404,461	1,140,774	819,402	
Media Coverage	250	300 (2021 target) and annual increase by 10	255	392	260	

In FY2023, the media coverage exceeded the baseline. However, the number of pageviews of website could not reach the baseline. This reduction was largely due to a change in specifications regarding the measurement of the number of pageviews from October 2023, which was conducted along with the update of the IGES privacy policy (cookie use consent confirmation) in order to comply with EU law. Despite the challenges posed by the new data privacy standards, proactive content strategies such as the early release of the Global Stocktake and COP28 feature pages have paid dividends. These pages have successfully served as resources for media coverage, particularly concerning topics related to the Global Stocktake. The amount of media exposures has decreased compared to the previous year. This is thought to be due to a decline in interviews or opportunities to gather direct comments, with a shift towards more interviews aimed at fact-checking, gathering reference material, and confirming detailed information for research purposes.

2. Governance

2.1. Summary of Financial Settlement⁵

Overview

The total revenue and expenditure in FY2023 were JPY 2,962 million and JPY 3,077 million respectively, resulting in a deficit of JPY 115 million. The amount of the deficit was withdrawn from the Deposit for Promoting Strategic Initiatives, and consequently, the substantial balance resulted in a positive balance (Table 9 and 10).

Table 9: Substantial Balance and Unrestricted Net Assets

(JPY million)

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Fiscal Balance	99	26	▲ 72	▲ 19	86	▲ 3	▲ 115
Deposit for Promoting Strategic Initiatives	Withdrawal in total		72	19		3	115
	Reservation		99	26	23		
Substantial Balance	0	0	0	0	63	0	0
(Reference)							
Unrestricted net assets at end of year	971	994	922	903	989	984	868
(included in the above) Deposit for Promoting Strategic Initiatives	352	378	306	287	309	306	192

Breakdown of Revenue and Expenditure

Major items for both revenue and expenditure are summarised in Table 10.

Table 10: Breakdown of FY2023 Financial Results (JPY million)

	FY2022 (Result)	FY2023 (Result)	2023-2022 Difference
【Revenue】			
Contribution from MOEJ	500	500	0
Subsidies from Local Governments	132	132	0
External fund for Projects	2,024	1,976	-48
Others	83	84	1
<Foreign exchange valuation gain>	<30>	<19>	<-11>
Total	2,739	2,692	-47
Support for office rent by Local Government	218	270	52
Grand Total	2,957	2,962	5
【Expenditure】			
Operation Costs for Externally Funded Project	882	919	37
Operation Costs for Own Initiatives	90	113	23
Personnel Costs	1,513	1,532	19
Administrative Costs	257	243	-14
Total	2,742	2,807	65
Office rent supported by Local Government	218	270	52
Grand Total	2,960	3,077	117
Balance	-3	-115	
(Reference)			
Project FVA Ratio (overall average)	63%	60%	

⁵ Excluding APN, IPCC-TSU and JISE.

On the revenue side, the overall volume of raised funds reached about JPY 1,976 million, a reduction of JPY 48 million compared to the previous year, in addition to the contribution from MOEJ (JPY 500 million) as well as subsidies and support from local governments including Kanagawa Prefecture, Hyogo Prefecture and Kitakyushu City (JPY 132 million).

Under external funds, in addition to the domestic projects from MOEJ, MOFA and others, IGES implemented various overseas projects funded by ADB, ClimateWorks Foundation, ERIA, ITTO, International Urban and Regional Cooperation (IURC) of the EU, JAIF, Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), UNFCCC, UNEP, UNU-IAS, Wellcome Trust, We Mean Business Coalition, and others. The trend of sources of external funds (domestic or international) is presented in Figure 1.

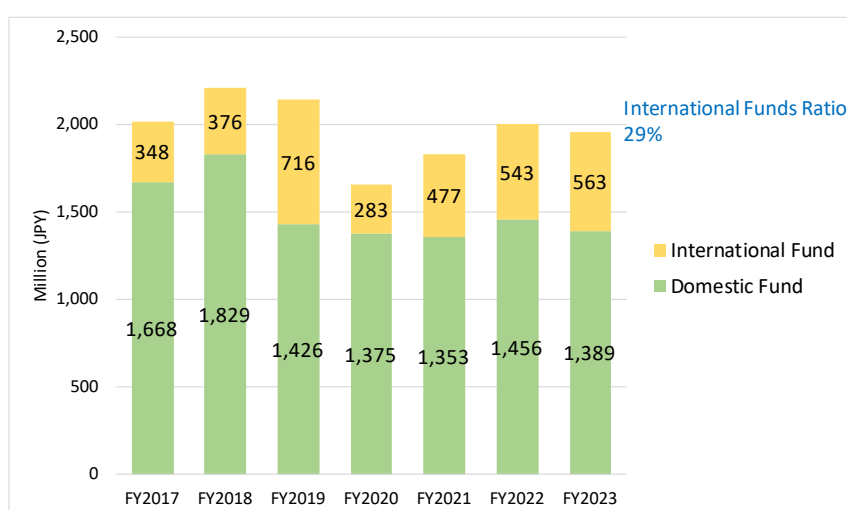


Figure 1: External Funds by Source (FY2017-FY2023)

In FY2023, with an increase in international/domestic conferences, capacity building activities and on-site research activities, face-to-face activities have been gradually recovered and related costs for overseas travel and conferences increased.

Personnel costs⁶ increased along with the rise in the number of staff members and salaries, and administrative costs slightly decreased from the previous year. The ratio of the administrative costs out of the total expenditure was 8.1%.

The project FVA ratio on average decreased to 60% by 3% point at the settlement-base.⁷

As a part of fundraising efforts, meetings were held with selected major existing and potential funding organisations to receive feedback and suggestions, and to introduce IGES's mission and key activities in their fields of interest.

The results of key performance indicators set for governance for ISRP8 are summarised in Table 12.

⁶ In accounting, the incurred personnel costs are logged when the project is completed and corresponding payment is made. Thus, the personnel costs of FY2023 in Table 10 include those incurred for the whole period (including FY2022) in each project completed in FY2023, but it excludes those in the ongoing projects. For these reasons, this personnel costs (Table 10) do not directly reflect the number of staff members (Table 11-1).

⁷ The average ratio of the projects for which revenue was recorded in FY2023. Projects for which FVA is zero by nature (APN projects, UNFCCC projects, grant projects, etc.) are excluded. See Notes to indicators [3] in the Table 12 for the definition of the project FVA.

2.2. Human Resource (HR) Management

SMO-PM continued its recruitment activities to acquire the human resources necessary for strategic research activities in the 8th phase. It also maintained capacity development opportunities for staff members under the secondment arrangement with other institutes, such as ERIA and ICLEI Japan, and hosted interns and visiting researchers from other universities and institutions.

Continuing from last year, PM provided a special training opportunity with an invited lecturer to improve communications skills in which all the staff members are required to participate, and organised other in-house seminars for IGES operations. PM also reviewed the mentoring programmes introduced last year and implemented it to a larger scale to support communications and professional development for staff members, including newly hired members.

IGES DE&I Taskforce, comprised of staff from SMO-PM and ISC, conducted focus group meetings and developed the *DE&I Recommendations for Overarching Recommendations and Action Plan* of the Institute, and handed them over to the Executives.

SMO-PM added an end-year staff performance evaluation process to the cloud-based HR system.

Childcare support certification (so-called *Kurumin*) and women's participation promotion certification (so-called *L-boshi*) were successfully maintained.⁸

Table 11-1: IGES Full-time Staff Members [1]

Categories	FY2022 (2023.6.30)	FY2023 (2024.6.30)	Ratio of Female staff
Professional Staff	161	172	52%
Principal staff	29	31	23%
Senior staff	58	72	49%
Associate staff	44	41	68%
Administrative Specialist	23	21	86%
Dispatched from other organisations	7	7	14%
Assistant Staff [1]	6	6	83%
Total: IGES Staff members (Full-time)	167	178	52%
Number of Administrative Staff [2] (Ratio of administrative staff in total staff)	14.8 (8.8%)	20.0 (11.6%)	65%

[1]: Temporary staff are excluded.

[2]: Number of staff members at SMO Planning and Management after reflecting the actual contribution caused by concurrent appointment, etc.

⁸ *Kurumin* and *L-boshi* are certified by Labour Bureau of the Ministry of Health, Labour and Welfare in Japan.

It should be noted that the total amount of salaries and allowances to staff incurred in FY2023 across IGES increased by 5.1% compared to FY2022.

Table 11-2: Amount of Salaries and allowance for Staff Members across IGES⁹

(JPY)

FY2022	FY2023	Increase ratio
1,131,033,272	1,188,827,100	5.1%

*Salary amount including accrued bonus

The results of key performance indicators set for governance for ISRP8 are summarised in Table 12.

2.3. Internal Management

SMO-PM continued to improve efficiency for internal administrative procedures. For accounting, new features on purchase request and invoice management were added to the cloud-based accounting system. Due to this, more than 90% of paper accounting slips were digitalised (paperless), thereby reducing document management time and improving the accuracy of accounting. For HR management, as mentioned above, a staff performance process was added to the cloud-based HR management system. Upgrading these processes also contributed to paper-less business and reduction of resource use. SMO Technology Solutions Services (SMO-TS) team continued to provide support to maintain and upgrade IGES's website and its integrated databases (publication, projects, mission requests, various request-approval systems, etc.) including update on the privacy policy (use of cookies and consent from users) and cyber security measures (user sign-in). SMO-TS also provided technical support to host various online events and video message recording in collaboration with SMO-KC and IGES research units. The team and the Facility Management team renewed the online conference systems at Hayama Headquarters and at the satellite offices. These cloud-based systems continue to help increasing the efficiency of operations and internal procedures regardless of the staff's location.

IGES Facility Management team maintained the institutional IT systems equipment, including regular replacement of staff personal computers and continued overseeing HQ building and facility management. IGES Eco-Action 21 committee renewed the environment management certificate (*Eco-Action 21* programme administered under MOEJ) continuing since 2012. The committee continued promoting and monitoring the reduction of CO2 emissions from energy use at IGES offices and from overseas mission travels (two major sources of emissions by IGES, see notes under Table 12), including renewing a contract of RE-derived electricity procurement through the group auction programme provided by Kanagawa Prefecture again in FY2023 for HQ building electricity supply.

In FY2023, SMO-PM started developing ISRP9, built on the discussion at the ISRP8 Mid-phase Review Meeting held at the end of FY2022 and in discussion with the IGES management and research units. SMO-PM also conducted a staff satisfaction survey, which was previously conducted in FY2019, to monitor the progress or changes and use as a reference to ISRP9 preparation. SMO-PM continued strengthening institutional governance by updating/revising internal procedures, making them more transparent and in line with international standards and practices. In FY2023, the rules on contract administration and subsidiary business of staff members of IGES were updated, and IGES Human Rights Policy was developed and published by IGES website.

⁹ Including APN, IPCC-TSU and JISE. Before reflecting inventory calculation.

The key achievements in HR and internal management in FY2023 and the results of key performance indicators set for governance for ISRP8 are summarised in Figure 2 and Table 12, respectively.

HR and DE&I

- In-house seminars for capacity development and operations
- Mentorship programme
- DE&I Recommendation for Action Plan handed over to the Executives

Systems and Facility Upgrading

- Digital accounting slips, Staff performance evaluation process
- IGES website/ databases, online conference systems, RE electricity procurement (HQ), etc.

SDGs and HR related certificates

- Eco-Action 21 environment management
- Supporting staff childcare and promoting women's advancement in the workplace

Governance

- Amended rules on contract administration and subsidiary business of staff
- Privacy policy (use of Cookie), Human rights policy

Figure 2: Key Achievements in HR and Internal Management in FY2023

Table 12. ISRP8 Key Performance Indicators for Governance

Indicator with Annual Target	Baseline (ISRP7)	Target for ISRP8	2021 Results	2022 Results	2023 Results	2024 Results
Core fund contribution from Ministry of the Environment	JPY 500 million	JPY 500 million	JPY 500 million	JPY 500 million	JPY 500 million	
Support from the three local governments (subsidies, etc.) [1]	Around JPY 135 million	Around JPY 135 million	JPY132 million	JPY132 million	JPY132 million	
Volume of external funds (other than contribution and subsidies)	USD 20-25 million	USD 22-27 million	JPY1,856 million	JPY2,024 million	JPY1,976 million	
Ratio of international external funds [2]	over 25%	as much as 40%	26%	27%	29%	
Ratio of project financial value-added (FVA) (proposed budget-based) [3]	52% (FY2020 target)	55%	64%	63%	60%	
Ratio of general administrative cost in the total expenditure [4]	9% (FY2020 target)	9%	10.1%	8.8%	8.1%	
Ratio of administrative staff in total (Number)	11% (FY2020)	9%	8.5%	8.8%	10.9%	
Ratio of taken annual leave	57% (FY2019)	80%	59%	58%	58%	
Indicator without Target	Baseline (ISRP7)	Indicative Reference	2021 Results	2022 Results	2023 Results	2024 Results
Number of full time staff members	156 (FY2020)	160+ (plan) [5]	163	167	172	
Ratio of Tenure/Tenure-track staff in total	14% (FY2020)	50% [5]	48%	51%	48.5%	
Ratio of female staff in management positions (Principal staff)	19% (FY2020)	30% [5]	24%	24%	22.5%	
Rate of teleworking [6]	Standard frequency at 40% (FY2020)	Standard frequency at 40% (FY2021-22), approx. 50% (FY2023-)	44.9%	39.3%	35.5%	
Overtime [7]	10.5 hrs (Monthly overtime hours per person in FY2019)	Continue to be reduced	8.4 hrs	8.4 hrs	11.2hrs	
CO2 emissions reduction from energy use and overseas missions [8]	450.7 t-CO2 (Energy use, FY2020)	n/a	340.6 t-CO2 (Energy use)	292.0 t-CO2 (Energy use)	111.4t-CO2 (Energy use)	
Number of web-based systems introduced, replacing paper-based systems	-	No further paper-based systems [9]	4	4	3	
Staff Satisfaction Survey [10]	Conducted in FY2019	Conducted in FY2023				

Note for indicators:

- [1] Excludes support for HQ office rent from Kanagawa Prefecture and for KRC office rent from Hyogo Prefecture.
- [2] The definition is changed from the 8th Phase, and funds provided by institutions located overseas and funds from international organisations are considered as “international external funds”.
- [3] Project FVA is calculated as: revenue less project operating expenditures such as outsourcing and travel costs. This is the amount available for personnel and other expenditures necessary for IGES strategic research and operations.
- [4] Excludes administrative costs for APN, JISE and TSU.
- [5] Largely depends on the recruitment cycle (every four years in general) or promotion during the research phase (unscheduled). The target figure is set for ISRP8.
- [6] IGES reviewed and renewed its guidelines for teleworking in July 2023 in accordance with the change of the legal status of COVID-19 on 8 May 2023 and set the standard level of teleworking at approx. 50% in consideration of staff members’ life-work balance and their work efficiency.
- [7] Overtime by staff members who are not under the discretionary labour system was applied. A flexible work hours system was introduced for staff members who are not under the discretionary labour system in FY2021.
- [8] The volume of CO2 emissions from the use of office energy and flights for overseas missions is monitored and reported to the environmental management certification audit (*EcoAction 21*). In FY2023 the CO2 emissions from energy use at IGES offices (both electricity and gas at HQ, KRC, KUC, TSF, APN and JISE) were estimated at a total of 111.4t-CO2, reduced from the previous year by about 62%. Reduction came mostly from switching the electricity source to renewable energy (RE) derived electricity at the headquarters, which accounts for about 64% of total energy use in FY2022, and continuous efforts to reduce energy use at satellite offices. IGES managed to re-procure RE electricity through the group auction programme provided by Kanagawa Prefecture started from August 2023. The CO2 emissions from overseas travel (use of airplane, the other major source of emissions at IGES) was estimated at 318.5 t-CO2 (from 224 overseas missions), reduced about 20% decreased from FY2022.
- [9] Except for systems that are paper-based due to regulatory requirements.
In FY2023, new functions were added to cloud-based systems introduced for accounting and HR management. By the former, more than 90% of paper accounting slips were replaced by digital forms. For the latter the staff evaluation process was added to the cloud-based HR management system. In addition, applications for IGES accommodation use also became online.
- [10] Administered by Japan Productivity Center (JPC).

3. Summary of Achievement in FY2023

The overall achievement (self-evaluation) for FY2023 is considered to be successful.

In terms of impact generation, steady progress has been made with a total of 35 impact cases, meeting the target of 30. Out of the 35 cases, seven cases brought about institutional changes in the form of policies and plans with IGES's intervention, and one case was thought to bring changes in the wider society.

Regarding outputs, the three targets (the number of Strategic Outputs, Academic Outputs and academic publications by IGES staff as first author) were met at the similar level as the previous year. The number of peer-reviewed articles published in FY2023, which is part of Academic Outputs above, was recorded 91. IGES continued to publish quality peer-reviewed journal articles shown in the number of articles published with an impact factor of 7 or above.

IGES continued strengthening strategic communications to deliver key messages and recommendations through various communication channels, but the numbers of pageviews of website and media coverage dipped from the previous year. The former is largely due to a change in specifications regarding the measurement of the number of pageviews from October 2023, which was conducted along with the update of the IGES privacy policy (cookie use consent confirmation) in order to comply with EU law; and the latter is due to a change to an increasing number of interviews aimed at fact-checking and confirming detailed information for research purposes. IGES will carry out necessary dissemination of information to better respond to public interest.

As for governance, the efficiency of internal office procedures was improved through the enhancement of cloud-based systems in accounting and human resources management. As a result of continued efforts by staff members, IGES launched several new projects funded by existing and new partner organisations, and maintained approximately 30% of the ratio of international funding. In addition, networks and human resources for the future were developed and strengthened through the establishment and full-scale operation of the Secretariat of the 'Paris Agreement Article 6 Implementation Partnership Center' and the acceptance of hosting a new IPBES technical support unit.

In FY2023, revenue from projects decreased due to the preparatory period for full-scale operation of new projects, delays in the start of contracts for some large-scale projects and the completion of some large projects. In the next year and beyond, IGES will improve revenue through the start and full-scale operation of these projects and the commencement of other new projects.

Next year, while IGES will continue to secure resources and diversify its funding sources to ensure the successful implementation of the final year of the ISRP8 and beyond, it will continue to carefully assess the situation and develop the next-phase plan (ISRP9) and strategy, including how to fulfill the Institute's renewed mission as a sustainability think-tank for long-term global goals.

ANNEX 1. SUMMARY OF KEY ACHIEVEMENTS BY UNIT

1. Integrated Sustainability Centre and Four Issue Areas

1.1. Integrated Sustainability Centre (ISC)

Integration of climate change, circular economy, biodiversity and disaster risk reduction should be fully explored under the overarching framework provided by the SDGs. In this respect, ISC has been collaborating with UNDESA and the UNFCCC to promote synergies between sustainable energy and the SDGs. This is in line with international efforts to achieve socio-economic transformation towards decarbonisation. At the Asia Pacific Forum on Sustainable Development (APFSD) in 2019, ISC presented a set of key messages corresponding to the six entry points of the Global Sustainable Development Report. In addition, ISC has started to pay more attention to the concept of “just transition.”

(1) Focus for Impact Generation in ISRP8 by Unit

ISC will work with stakeholders in Asia and the Pacific to accelerate progress on the SDGs and formulate an ambitious post-2030 agenda. ISC will work toward this objective by strengthening the science-policy-society interface. ISC's research and programming will combine science-based tools and methods (interlinkages analysis, scenario analysis and machine learning); socially-response governance models and strategies (polycentrism and metagovernance); and cutting-edge policy frameworks and solutions (e.g. Regional-CES, Triple-R framework, green recovery, just transition, co-benefits integrated NDC/VNR/National Biodiversity Strategies and Action Plans (NBSAPs), integrated local climate action/VLR/Local Biodiversity Strategies and Action Plans (LBSAPs)). This unique combination of tools and perspectives will be employed in concrete case studies and shared during key policymaking processes Asia Pacific Forum for Sustainable Development (APFSD)/ HLPF/UN General Assembly (UNGA), UN Environment Assembly (UNEA), and G7/G20), solidifying our position as a change agent on sustainability in Asia-Pacific and beyond.

(2) Major activities in FY2023

(a) The Governance, Inclusivity and Sustainability (ISC-GIS) team

ISC-GIS team promoted governance that accelerates progress and raises ambitions on the Sustainable Development Goals (SDGs). Because of the inherently interlinked nature of the SDGs, much of the work of the GIS team concentrated on governance that enables integration across different sectors or includes various segments of society in decision-making. Some of ISC's research explored how this can be achieved at the national level across Asia, while another stream looked at how Japanese businesses are making connections to SDGs in their planning. A third area of work focused on governance that can promote the co-benefits between climate change and other development priorities. A final set of activities examined forms of governance needed for a just transition in Asia. In addition to the items below, IGES also provided support for drafting, negotiating and adoption of the synergy resolution (UNEP/EA.6/L.7) at UNEA (United Nations Environment Assembly).

Helping Japanese Business on the Sustainable Development Goals (SDGs)

In 2023, ISC continued its engagement with the Global Compact Network Japan (GCNJ) by contributing to the development of guidelines that will help Japanese companies integrate the sustainability issues including SDGs into value chains. The work that ISC does with GCNJ continues to be valued and appreciated by the business community.

Promoting Just and Inclusive Transitions in Asia

In 2023, ISC and other IGES teams published a special feature of *Sustainability Science* on just transitions in Asia. The special feature includes several articles that suggest a need to focus on how just transitions in the Asian context deviate from where the concept originated. This new set of articles might set the stage for creating a platform for promoting just transitions in Asia.

Strengthening the SDGs in Asia

In 2023, ISC was awarded a contract from the Asian Development Bank (ADB) to assist with the development of the *Asia-Pacific SDG Partnership Report 2025* that is produced by ADB, UNESCAP and UNDP. The project is also helping the ADB promote SDGs in its strategic and project-based work, such as country partnership strategies (strategies that outline financing priorities for ADB financial and technical support).

Enhancing Governance and Follow-Up and Review of the SDGs in Japan

In 2023, ISC continued to work a multi-year project that will build on recommendations offered to the Ministry of Foreign Affairs of Japan in 2020 on what Japan can learn from Europe and other regions in governing the SDGs. The project will focus on establishing an effective methodology for the follow-up and review process at the national and local levels. The recommendations are likely to focus on a need for making follow-up and review more responsive, embedded and interactive. It will also complement previous suggestions on how Japan can enhance its multi-stakeholder engagement process and feed into Japan's SDG guidelines, upcoming VNR and other SDG plans. This work is also creating opportunities to recommend reforms to countries outside Japan such as Denmark.

Advancing Co-benefits in Southeast Asia and Japan

In 2023, ISC worked with the International Institute for Applied Systems Analysis (IIASA), ADB, Clean Air Asia, Stockholm Environment Institute, the National Institute for Environmental Studies, and United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) to promote policies and projects with co-benefits. Those activities contributed to the development of New Haze-free Roadmap in Southeast Asia that has the potential to save at least 10,000 lives per year. ISC is also providing substantive inputs into a co-benefits action plan in the Philippines. In addition, ISC is working with three Japanese cities—Kawasaki, Niigata and Hachinohe—to incorporate health co-benefits in climate planning.

(b) The Quantitative Analysis (ISC-QA) team

ISC-QA has been at the centre of efforts to strengthen the science-policy interface in ways that contribute to a sustainable future. It uses strategic research, quantitative policy assessments, and practical policy recommendations to support sustainable planning in Asia-Pacific and beyond. Much of its work has focused on using IGES's SDG Interlinkages Tool to enhance integrated planning by illustrating the synergies and trade-offs among the SDGs and their targets. Additionally, ISC-QA utilises scenario analysis, particularly Shared Socioeconomic Pathways (SSPs), to help cities achieve sustainable urban planning.

Integrated Policymaking Using IGES' SDG Interlinkages Analysis and Tool

ISC-QA developed the SDG Interlinkages Tool (<https://sdginterlinkages.iges.jp/visualisationtool.html>) to facilitate integrated policymaking by illustrating and visualising SDG interlinkages. Covering 27 countries in Asia and Africa the tool has been accessed from more than 190 countries and has supported integrated policymaking in several Asian countries (e.g. the development of the national action plan on sustainable consumption and production in Viet Nam). ISC-QA developed a methodology using a systematic literature review approach, supported by Natural Language Processing techniques, to automatically map SDG interlinkages. This methodology has been used to study the interlinkages between climate action and other SDGs, between biodiversity conservation SDGs and other SDGs, and among the water, energy and food nexus. These studies advance knowledge and contribute to capacity building, such as through the 2024 executive training course for policymakers on aligning the 2030 Agenda and the Paris Agreement

organised by the United Nations Office for Sustainable Development. The climate and health linkages analysis is used to develop a climate-health integrated planning tool that facilitates cities in G7 countries in integrating health into climate planning.

Promoting Carbon Pricing and Industrial Decarbonisation in Asia

In FY2023, ISC-QA started new research to assess the impacts of European Union's Carbon Border Adjustment Mechanisms (CBAM). By assessing the effects of CBAM on trade and industrial competitiveness, this research aims to recommend carbon pricing policies and promote industrial decarbonisation to policymakers in ASEAN and other Asian countries.

Contribution to the (G7

ISC-QA, together with an Italian climate change think tank, jointly conducted development of a T7 Italy 2024 policy brief on enhancing G7 leadership in global climate action. The policy brief, one of seven T7 policy briefs from Task Force 2 on Energy, Climate and Sustainable Development, was included in the Annex of the T7 Italy Communiqué to support discussions at the G7 Summit.

Long-term Scenario Analysis for Cities

ISC-QA developed socioeconomic pathways for cities by downscaling the global shared Socioeconomic Pathways (SSPs). One application of this approach involved supporting a climate action plan for Da Nang City with assistance from the MOEJ. The development process engaged local stakeholders from city departments. The results were presented at the global high-level scientific consortium, the Integrated Assessment Modelling Consortium (IAMC), along with a case study of Bhutan. A new case study has been launched on Mexico City, focusing on comprehensive climate strategies in the Latin American region. These case studies were also presented at the MOEJ-IIASA collaboration symposium, which aimed to provide key findings for the IPCC Special Report on 'Climate Change and Cities'.

(c) The Circulating and Ecological Sphere (ISC-CES) team

ISC-CES team led projects and programmes for advancing an integrated approach to the Circulating and Ecological Sphere approach, Water-Energy-Food Nexus approach and Integrated Environment and Disaster Management (CES concept, WEF nexus) as practical approaches for localisation of global and national goals through collaborative research, knowledge generation, multi-stakeholder engagement and capacity development.

Advancing the Circulating and Ecological Sphere (CES) approach in Asia and Pacific

In FY2023, IGES co-organised a Regional Workshop in Bangkok, Thailand (17-19 January 2024) on "Traversing interconnected local-to-global action spheres to advance the Post-2030 agenda: Leveraging co-benefits of Circulating and Ecological Sphere (CES) approach towards the integration of Climate and Sustainable Development Actions in Asian city-regions". The workshop brought CES-Asia Consortium partners together with national governments, local governments and donor agencies, and provided a platform of co-development of CES action-based pathways for Asian city-regions. On this occasion, the Asian Institute of Technology (AIT) Bangkok also joined the CES-Asia consortium, by signing an agreement of cooperation. The comprehensive discussions and results of the regional workshop have been compiled as a synthesis report. In order to apply the CES approach towards a healthy net-zero transition in the Hachinohe region, IGES and Hachinohe City also signed an MOU on 14 December, 2023. In collaboration with the CES-Asia consortium and other partners, ISC-CES team has implemented projects in a number of city-regions including Hachinohe in Japan, and Nagpur and Rajasthan in India to facilitate the co-development process of the CES Action Program. Research results have been published as journal papers and discussion paper, as well as ISAP posters. The CES Book has been finalised, and will be published with the series on Science for Sustainable Societies by Springer.

Contribution to the Policy Processes

The ISC-CES team significantly contributed to the policy processes. ISC-CES promoted the CES concept by organising events at ISAP2023, co-organising a regional workshop on CES and holding multiple co-development workshops at the local level. ISC-CES team also contributed to the UNDESA report on “Seeking Synergy Solutions: How Cities can Act on Both Climate and the SDGs” as co-authors and introduced CES as a framework of synergistic localisation on SDGs and climate actions.

Promoting the Water-Energy-Food Nexus

ISC-CES has been implementing an international collaborative project with partner institutes in Japan, India and Bangladesh. The project has been successfully implemented in FY2023 and results of the research have been published in renowned journals.

(d) The Policy and Integration (ISC-PI) team

The ISC-PI team supported to organize ICEBA (International Conference for Enhancing the Biodiversity in Agriculture) 2023 and shared the results at UNFCCC/COP28 Japan Pavilion side event on 1 December, 2023 in Dubai by introducing the Mayor of Sado’s video message.

Contribution to the First UN Global Synergy Report 2023

IGES researchers joined the discussions by “Expert Group Members” (2 co-leads plus 12 members including Prof. Takeuchi, co-convened by UNDESA and UNFCCC) and contributed to the first “UN Global Synergy Report 2023” that was discussed at “the 4th Global Synergy Conference” in conjunction with HLPF2023 in New York (the 3rd conference was held in Tokyo, 2022) and launched at the UN SDG Summit 2023 held in September 2023 in New York. More IGES researchers contributed to and were recognised as authors of “Four Thematic Synergy Reports” that were launched at SB60 in June 2024.

Continued work on “Decarbonization Leading Areas (脱炭素先行地域)” in Kuala Lumpur (KL) and Japan

Since April 2019, ISC-PI continued to work on achieving Zero Carbon Kuala Lumpur at the city-level as well as in the district “Wangsa Maju” with Kuala Lumpur City in collaboration with CTY team, University Technology Malaysia (UTM), Tokyo Metropolitan Government (TMG), and Saitama City (since April 2022). ISC-PI team organized high-level talk seminar at IGES/TSF by inviting the Mayor of Kuala Lumpur City, Penang Island City, North Kuching City in October 2023. An ISC researcher has served as acting chair of the MOEJ’s “Evaluation Committee (評価委員会)” on “Decarbonization Leading Areas” in Japan since January 2022.

(3) Selected publications

Book/Book chapter

- Book: ゼロカーボンシティ：脱炭素を地域発展につなげる」（学芸出版社）
- Book chapter: “An Integrated and Inclusive SLCP Strategy for Asia: Recommended Policy and Institutional Reforms” (Chapter 10, *Reducing Emissions of Short-Lived Climate Pollutants Perspectives on Law and Governance*)

Peer-reviewed Article

- “Examining the Unsustainable Relationship between SDG Performance, Ecological Footprint and International Spillovers”, *Scientific Reports*
- “Comparing Clubs: Analyzing Ambitions in the G7 and the G20”, *Earth System Governance*

- “Assessment of Alternative Land Resource Utilisation towards Net-Zero and Regional Revitalisation through the CES in Depopulated City Regions in Japan: A Case Study of Hachinohe City Region”, *Sustainability Science*

Policy report

- “Integrating Co-benefits into Nationally Determined Contributions, Climate Policies and Air Pollution Policies in Asia”
- “The Effects of COVID-19 on Clean Air and a Healthy Climate in Asia's Cities”
- “Seeking Synergy Solutions: Four Thematic Reports (Knowledge and Data, Policy, Finance, Cities)”

Commentary

- “Engaging Youth in SDGs Through Representation, Inclusivity, Empowerment”

Discussion paper

- “Unlocking Clean Energy, GHG Reduction and Better Livelihood Potentials in Rural Areas of Bangladesh: Exploring Agrivoltaics as a Potential Game Changer”

Proceedings

- “Synthesis Report of the CES Regional Workshop 2024: Leveraging Co-benefits of Circulating and Ecological Sphere (CES) Approach towards the Integration of Climate and Sustainable Development Actions in Asian City-Regions,”

Translations

- UNESCAP「アジア太平洋 SDG 進捗報告書 2023：逆境においても推進される持続可能性」（“Asia and the Pacific SDG progress report 2023: championing sustainability despite adversities”）

1.2. Climate and Energy (CE)

With particular focus on the Asia-Pacific region, the Climate and Energy team (CE) is carrying out initiatives to facilitate the transition to decarbonised societies at the national and local levels. Specifically, CE looks towards strengthening climate and energy-related strategies and policies, and engages in international climate negotiations, bilateral and multilateral cooperation, carbon pricing initiatives, market-based mechanisms, and the development and maintenance of databases.

(1) Focus for Impact Generation in ISRP8 by Unit

CE will strive to generate impacts on (1) implementation of the Paris Agreement, in particular, the implementation, evaluation and updating of NDCs, the submission of biennial transparency report under the Transparency Framework, and contribution to Global Stocktake; (2) formulation of long-term zero emissions strategies and the implementation of short-term measures consistent with the long-term goals in Japan, and other Asian countries, including the practices of state and non-state actors toward the smooth and just transition, and (3) implementation of carbon pricing, JCM and other offset mechanisms to achieve net zero emissions.

(2) Major activities in FY2023

Operationalisation of the Paris Agreement

CE contributed to the implementation of the Article 6 mechanism, as well as the first Global Stocktake (GST) under the Paris Agreement by participating in COP28 as members of Japanese delegation. IGES took on the role of the secretariat of the ‘Paris Agreement Article 6 Implementation Partnership Center,’ which promotes the activities of the ‘Paris Agreement Article 6 Implementation Partnership’, launched at COP27 to support capacity building with regard to Article 6 of the Paris Agreement. Utilising the knowledge and expertise gained through its support for international negotiations, CE continued to conduct a mutual learning programme for enhanced transparency in cooperation with the governments of Asian developing countries, focusing on reporting for Articles 6 and 13. In addition, CE organised several knowledge-sharing workshops, including a side event at COP28, for enhanced transparency in collaboration with major international partners, such as the Capacity-building Initiative for Transparency - Global Support Programme implemented by the UN Environment Programme Copenhagen Climate Center (UNEP-CCC). Besides, IGES conducted capacity building for Article 6 implementation and capacity building for submitting initial report under Article 6, and organised workshops on promoting the implementation of JCM consistent with Article 6. Furthermore, CE cooperated with the Japan Aerospace Exploration Agency (JAXA) to promote inputs from the Japanese satellite community into the Paris Agreement’s processes including the GST. CE also played a key role in bridging science and international policy discussions, by co-implementing a regional independent Global Stocktake (iGST) hub in Southeast Asia. As the iGST regional hub, IGES made policy recommendations and submissions of views to the UNFCCC during the GST process.

Materialisation of GHG Emission Reductions and Contribution to SDGs through Implementation of the JCM

CE contributed to implement the Joint Crediting Mechanism (JCM) which appropriately evaluates contributions to GHG emission reductions or removals by Japan, and applies them to achieving the national emissions reduction target. CE supported the development of eight MRV (monitoring, reporting and verification) methodologies. In addition, CE published the JCM-SDG best practices.

Impacts on Political and Social Debates on Carbon Pricing in Asia

Carbon pricing policy is taking shape in Asia, such as the implementation of national emissions trading schemes in China and the Republic of Korea. CE served as Japan’s focal point for jointly implementing the eighth Forum of Carbon Pricing Mechanisms in Japan, Korea and China, and contributed to discussions on trilateral cooperation. CE conducted a timely overview and analysis of the design features and implementation progress of emissions trading schemes in China and the Republic of Korea. The latest movement on carbon pricing for the transition toward net-zero in Asia was summarised and disseminated, thereby stimulating the mutual learning of policy development.

Climate Policy Promotion by Visualisation of Current Status

CE engages in analysis and visualisation of climate policies around the world in order to facilitate the further development of such policies. IGES published the technical report of the 1.5°C Roadmap for Japan through consultation with business stakeholders such as Japan Climate Leaders’ Partnership (JCLP), and launched the 1.5°C Roadmap Homepage. Based on the 1.5°C roadmap, IGES also summarised five “changes” and 20 “opportunities” in the social economy, and presented concrete actions that companies can take in an easy-to-understand manner. Briefings to relevant ministries and council members, mass media events, and webinars were conducted in an effort to shape impact. For Asia, CE conducted research on the risk of coal-fired power plants, publicly supported by Japan, to be stranded; research on managed phase-out of coal-fired power plants in Japan in collaboration with IGES Finance Taskforce and the Glasgow Finance Alliance for Net Zero (GFANZ) Japan Chapter; research on technology co-innovation, to identify and propose alternative ways for strengthening technology collaboration among countries; research on critical minerals and the impact of supply and environmental spillover challenges on net-zero goals and, research on hydrogen economy in Asia and opportunities and challenges. Domestically, CE further carried out the simulation analysis of power grid system to achieve a zero-emission power system in Japan. Based on the analysis, CE further developed IGES 1.5°C Roadmap that make Japan’s cumulative

emissions as small as possible, thereby contributing to the global goal of limiting the average temperature increase to below 1.5°C compared to the pre-industrial levels. In this fiscal year, CE actively supported several international policy processes by contributing to the preparation of the ‘7th Global Environment Outlook’ (Coordinated by UNEP), ‘10 New Insights in Climate Science’ (Coordinated by Earth League, Future Earth and World Climate Research Programme) and ‘Policy Briefs for G20 Brazil’. CE contributed to the UNEP Emissions Gap Report 2023, as well as representing Japan in Climate Transparency, a Germany-based research network for G20 countries. Likewise, CE provides the most up-to-date information through regular updating of the IGES Climate Databases on various topics.

To communicate national and international trends toward decarbonisation, CE continued to conduct the IGES Climate Change Webinar Series, which started in April 2021.

(3) Selected publications

Book/book chapter

- Book chapter: “How Can Japan Help Create a Sustainable Hydrogen Society in Asia?”, in *Hydrogen in Decarbonization Strategies in Asia and the Pacific*.

Peer-reviewed papers

- “Quantifying the Climate Co-Benefits of Hybrid Renewable Power Generation in Indonesia: A Multi-Regional and Technological Assessment”, *Climate*
- “Importance of long-term flexibility in a 100% renewable energy scenario for Japan”, *Sustainability Science*.

Working paper

- “Renewables development for energy transition in ASEAN: Status quo, gaps and the prospect”.

Policy report

- “The Effects of COVID-19 on Clean Air and a Healthy Climate in Asia’s Cities”, United Nations Environment Programme.

Policy brief

- “Strengthening engagement with non-state actors to bridge the climate governance gap”, IGES led policy brief for G20.
- “Brazil Presidency Must Lead G20 to Mitigate Environmental and Social Spillovers of the Energy Transition”, IGES led policy brief for G20.

Technical report

- 「IGES 1.5°Cロードマップ：日本の排出削減目標の野心度引き上げと 豊かな社会を両立するためのアクションプラン」

Discussion paper

- 「デジタル化の進展による電力消費量の変化と 1.5°C目標実現への示唆」
- “The Role of Sub-National Governments in India’s Green Hydrogen Transition: A multilevel perspective”.

Report chapter

- “Climate Change and Air Pollution”, Chapter 3, *Sixth ASEAN State of the Environment Report*.

Submission to policy processes

- Energy System Pathways Chapter, submission to the 7th Global Environment Outlook, UNEP (In progress).

- Pathway on Critical Minerals, submission to 10 New Insights in Climate Science (Coordinated by Earth League, Future Earth and World Climate Research Programme).

Data/Tool

- Database “IGES Biennial Update Report (BUR) Database”

1.3. Sustainable Consumption and Production (SCP)

IGES conducts policy analysis from the perspective of sustainable consumption and production (SCP) including environmentally-sound waste management in cities, formation of effective recycling systems with a view of Asia as a whole, and improvement in resource productivity. Likewise, IGES makes policy recommendations to stimulate lifestyle changes.

(1) Focus for Impact Generation in ISRP8 by Unit

SCP will boost IGES's standing as a vital and indispensable policy think-tank and development partner for ASEAN and ASEAN member states for circular economy, sustainable lifestyles and marine plastic issues. We want to be associated as having a publicly-recognised functional role in policy harmonisation and regional integration of Asia and the Pacific region. CCET will be a strategic partner of UNEP and other UN agencies operating in the Asia-Pacific region, as an instrumental arm for capacity development of national and local governments in emerging countries.

(2) Major activities in FY2023

Sustainable lifestyles

In FY2023, IGES made significant contributions to climate action and sustainability initiatives across Japan. IGES played an essential role in planning and organising Climate Citizen Assembly Meetings in three areas in Kanagawa, using its 1.5°C Programme to facilitate citizen's discussions on mitigation actions. IGES also developed guidance and tools to support citizen-led local climate actions in various prefectures. Additionally, IGES completed the first phase of a Behaviour Insights for Plastic Reduction project with partners including ERIA, applying behavioural insights (BIs) in educational settings to reduce plastic use, and released a Guidance Note on the application of BIs for plastic reduction. Based on the result, IGES and ERIA launched the 2nd phase of the project, aiming at developing training programmes for designing and implementing BI-informed interventions in more cities in Asia. Furthermore, IGES initiated on-site surveys in Minami-Sanriku and Osaka under the *Suishinhi S21* project, focusing on food systems transitions and sustainable food consumption and production.

Mainstreaming Circular Economy

IGES continued to be involved in key international processes on circular economy and resource efficiency, including G7 Resource Efficiency Alliance, G20 Resource Efficiency Dialogue, International Resource Panel (IRP), and Organisation for Economic Cooperation and Development (OECD). For instance, SCP helped organise the G7-B7 joint workshop and a COP27 side event to mainstream G7 Circular Economy and Resource Efficiency Principles (CEREP). IGES also contributed to the process of mainstreaming the circular economy in Asia-Pacific countries, particularly ASEAN countries. IGES also made a keynote presentation at a session on the circular economy at the Ho Chi Minh Economic Forum in Viet Nam.

IGES continued to act as the leading institute to compile country-relevant information for G20 MPL report, G20 RE dialogue portal site development, and relevant webinars.

SCP is involved in several governmental committees in Japan to discuss policy measures, Circular Economy indicators, and industrial standards on circular economy. IGES continued to serve as the

secretariat of Japan Partnership for Circular Economy (J4CE) and organised four public-private dialogue to increase motivation in the private sector to take up circular business models.

Marine Plastics and Circular Economy

IGES continued its support to ASEAN and ASEAN member states' policy initiatives. IGES contributed to the development of evidence-based policies for plastic pollution control in Cambodia and Myanmar, and assisted in drafting and submission of National Plastic Action Plans for formal approval in both countries. SCP also organised a regional training programme in Bangkok on National Action Plans for plastic pollution control and data monitoring for policy makers on marine plastic issues in ASEAN member countries.

In addition, IGES continued to organise Technical Expert Working Group of the ERIA's Regional Knowledge Centre on Marine Plastic Debris (RKC-MPD) and continues to support the OECD's flagship project on policy assessment "Regional Plastic Outlook in Asia". IGES also published a report on "Building Data on the Plastic Value Chains in ASEAN Member States. In addition, IGES worked with ERIA to develop a programme proposal for a knowledge platform for the World Bank's Southeast Asia Regional Marine Plastic Litter Control Program (SEA-MAP) to improve ASEAN's capacity to implement regional actions to combat marine plastic litter.

IGES engaged in the International Negotiation Committee for Legally-binding Instruments for Plastic Pollution (INC) by highlighting key roles to be played by ASEAN+3 countries at the pre-meeting webinar and official side events of INC3 and organising an informal side-event at the INC4 in collaboration with ERIA.

Centre Collaborating with UNEP on Environmental Technologies (CCET)

IGES Centre Collaborating with UNEP on Environmental Technologies (CCET) engaged in evidence-based policy research and provided technical support to national and local governments to improve waste management. CCET's focus included countries like Sri Lanka, Indonesia (Padang City), Pakistan, Bhutan and Cambodia, assisting in the formulation of action plans for managing municipal waste, including plastic waste, marine litter, e-waste and healthcare waste. These initiatives aimed to enhance waste management systems, reduce environmental impact, and promote sustainable practices, zero waste, and a circular economy.

In partnership with the Climate and Clean Air Coalition (CCAC) and others, CCET supported Asian countries, including Cambodia and the Federal State of Micronesia, in reducing methane emissions and developing a regional roadmap to reduce open waste burning. These efforts aimed to keep the goal of limiting warming to 1.5°C within reach while yielding co-benefits such as improved public health and agricultural productivity. CCET also contributed to the Assessment Report of Climate Impact of Black Carbon Emissions from Open Burning of Solid Waste, and studies on Gender/Informal Sector Involvement in Waste Management, and Training Needs Assessment Towards Plastic Waste Management in the Tourist Sector.

Additionally, CCET conducted numerous training sessions and capacity-building activities and engaged in global policy dialogues, including the Global Methane and Short-lived Climate Pollutants (SLCPs) Dialogue by CCAC and IPCC, and dialogues on zero waste, plastics, and chemical pollution by IETC, the Basel, Rotterdam, and Stockholm Convention Secretariat, and SAICM. These engagements facilitated knowledge exchange and foster international cooperation and policy development.

CCET aimed to strengthen partnerships with organisations like JICA, ADB and the World Bank to enable financing for national and city waste management plans and innovative actions, supporting sustainable development and environmental protection.

(3) Selected publications

Book/book chapter

- Book chapter: “Policies and Practice of Sound Material-Cycle Society in Japan: Transition Towards the Circular Economy”, *Circular Economy Adoption: Catalysing Decarbonisation Through Policy Instruments*

Peer-reviewed article

- 「プラスチック汚染に関する国際合意の国内実施に向けたステークホルダー協働-ガーナ, インドネシア, ベトナムにおけるマルチステークホルダーパートナーシップの分析-」 (環境経済・政策研究)
- “Bridging Local Governments and Residents for Household Waste Source Separation Using a Business-Driven, Multi-Stakeholder Cooperative Partnership Model—A Case Study of HUGE Recycling in Yuhang, Hangzhou, China”, *Sustainability*.
- “Policy Recommendations for Reducing Food Waste: A Survey and Analysis of Urban and Rural Household Food Waste in Harbin, China”, *Sustainability*.
- “Exploring Household Food Waste Reduction for Carbon Footprint Mitigation: A Case Study in Shanghai, China”, *Foods*.
- “Challenges in Achieving 1.5-Degree Lifestyle Mitigation Options—Insights from a Citizen-Participatory Household Experiment in Japan”, *Sustainability*.

Research report

- G20 Report on Actions Against Marine Plastic Litter - Fifth Information Sharing Based on the G20 Implementation Framework
- National Plastic Action Partnerships (NPAP): A Multistakeholder Approach to Addressing Plastic Pollution in Developing Countries

Policy report

- Breaking the Plastic Habit: A Guidance Note and Practical Toolkit Lessons from Single-Use Plastic Behaviour Change Interventions in Indonesia, the Philippines, Thailand, and Viet Nam

Report chapter

- “Circular Economy”, Chapter 10, *Sixth ASEAN State of the Environment Report*
- “Chemicals and Waste”, Chapter 7, *Sixth ASEAN State of the Environment Report*

Submission to policy processes

- 「かながわ気候市民会議 in 逗子・葉山からの提案」

Training materials

- 「1.5°C ライフスタイルプロジェクト オプション・カタログ (全国版)」

Non peer-reviewed article

- 「持続可能なライフスタイル—消費行動の変革から暮らしを取り巻くシステムの再想像へ」 (環境情報科学)
- 「日常の行動を変える 魅力的な脱炭素ライフスタイルのヒント」 (月刊事業構想)

<CCET>

Book/book chapter

- Book chapter: “Shifting Toward Resource Management in Remote Area: A Case Study of Lake Toba, Indonesia”, in *Circular Economy Adoption: Catalysing Decarbonisation Through Policy Instruments*

Policy report

- “National Plastic Waste Inventory for Sri Lanka: A Material Flow Approach”

Briefing note

- “Towards Plastic Free Hospitality: A Guide to Manage Plastic Waste at Small and Medium Hotels in Sri Lanka”

Proceedings

- “Mitigating Microfiber Pollution in Laundry Wastewater: A Case Analysis (1st International Conference on Plastics & Environmental Sustainability, 7-8 March 2024, Battaramulla, Sri Lanka)

Fact sheet

- “Plastics Alternatives and Substitutes 101”

Commissioned report

- “Country Report: Status of Municipal Solid Waste Management (MSWM) in Sri Lanka”
- “Country Report: Status of Municipal Solid Waste Management (MSWM) in Cambodia”
- “An Analytical Study of the ADB’s Support to Municipal Solid Waste Management, 2000 - 2020”

1.4. Biodiversity and Forests (BDF)

Biodiversity and Forests team conducts problem-solving research and implementation in the Asia-Pacific region. BDF also aligns with and supports global biodiversity processes such as the Convention on Biological Diversity (CBD), the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), and the New York Declaration on Forests.

(1) Focus for Impact Generation in ISRP8 by Unit

BDF will formalise our contribution to international policy processes, including those of the CBD and the IPBES, through their official meetings and assessments. The post-2020 global biodiversity framework¹⁰ and New York Declaration on Forests will be key processes with which to align. BDF will also contribute to promoting sustainable forest management with guiding key legislation at the national level, as well as frameworks for assessing biodiversity and implementing subsequent measures. We will contribute to an improved understanding of how to promote sustainable socio-ecological production landscapes and seascapes (SEPLS), and to an understanding of how communities can be assisted in responding to degradation of key habitats.

(2) Major activities in FY2023

Responsible Timber Trading

IGES has been contributing to the operation and revision of Japan's Clean Wood Act (Law Concerning the Promotion of the Distribution and Use of Legally Logged Timber, etc.). In FY2023, IGES supported the Japan Federation of Wood Industry Associations to develop the due-diligence manual for domestically

¹⁰ In December 2022, a new global biodiversity framework, “the Kunming-Montreal Biodiversity Framework (GBF)”, was adopted.

harvested timber and contributed to the enforcement of the revised Clean Wood Act as a member of the Clean Wood Act committee member.

Supply chain of forest risk commodities

IGES conducted a study and analysis of supply chain structure and sustainability issues in cacao production in Ghana and coffee production in Viet Nam. Supply chain-based approach is gaining attention as a new tool for climate change mitigation and nature-positive realisation especially in the business sector. IGES is preparing policy recommendations based on the survey results. IGES was invited by the Ministry of Agriculture, Forestry and Fisheries to be a member of the committee for the research project as an expert on EU deforestation regulations.

Contribution to the international process on forests

The Forest Declaration Assessment Partners, of which IGES is a member, has published the 2023 Assessment Report, which reports on progress toward meeting global forestry goals. IGES also made a Japanese summary of the Assessment Report available to enhance understanding of the current status of the global deforestation problem in Japan.

JCM REDD+¹¹

IGES was invited by the Forestry Agency to be a committee member to discuss JCM guidelines for afforestation and reforestation and provided our knowledge

Contribution to International Biodiversity Processes

IGES staff continued working as experts on the IPBES nexus assessment and transformative change assessment. IGES also contributed to the external review of peer-reviewed documents for IPBES, TNFD and CBD. Some of these reviews provided the opportunity to suggest relevant IGES publications, which were subsequently cited in the reports. IGES supported the Japanese delegation to the IPBES Plenary at its 10th meeting, and conducted analysis and data collection to provide the basis for the negotiations. Furthermore, IGES contributed to disseminating information on the IPBES and CBD processes and outcomes to Japanese audiences, including through the publication of a Japanese translations of the summary for policymakers of an IPBES thematic assessment report on invasive alien species and their management, and through an online public symposium on biodiversity. IGES has been entrusted by the Government of Japan to host the Technical Support Unit (TSU-SCM) for the IPBES Task Force on Scenarios and Models. The TSU-SCM will be providing technical support for the work of the task force on scenarios and models over a period of three years from 2024 to 2027. IGES also hosted “the Annual meeting of the IPBES task force on scenarios and models” and “IPBES fellows annual training workshop of the IPBES task force on capacity-building” in June 2024. IGES staff supported Japan’s participation in the meeting of the G20 and Japan’s hosting of the G7 meeting, as well as a set of three workshops on invasive alien species that stemmed from the G7 meeting. IGES staff also organised and facilitated a session at the 15th International Forum for Sustainable Asia and the Pacific (ISAP). Finally, IGES staff authored the biodiversity chapter in *The Sixth ASEAN State of Environment Report*.

JICA Technical Cooperation Project: Development of Integrated Coastal Ecosystem Management System in the Republic of Mauritius in Mauritius

¹¹ Reduction of Emission from Deforestation and forest Degradation, and Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks

An IGES staff member continued to work in Mauritius as part of a JICA team responding to a heavy oil spill from the bulk carrier vessel, MV Wakashio. Based on the data collection survey conducted at that time, the team launched the JICA Technical Cooperation Project in January 2022, to support Mauritius in building an integrated coastal ecosystem management system to contribute to restoring the ecosystem in a resilient manner. IGES formerly evaluated and visualised the area's coastal ecosystem services to improve conservation and monitoring plans and practices. More recent work intends to improve sustainability in the tourism sector by establishing a model village as a sustainable destination and introducing sustainable tours (e.g. coral plantation diving tours and mangrove kayaking). By doing so, it aims to prevent some "ecotourism" businesses from harming the coastal ecosystems, and attract sustainability-minded tourists. During FY2023, the IGES staff visited Mauritius three times and prepared the Ecotourism Action Plan to mobilise the necessary resources from the Mauritius Government and encourage them to implement required activities. Therefore, several important meetings were organised involving the public, private and civil sectors, to put the action plan into practice.

Mainstreaming Biodiversity Conservation and Sustainable Management in SEPLS

IGES and partners supported five more projects to demonstrate the value and potential of socio-ecological production landscapes and seascapes (SEPLS) around the world. The total number of such projects since 2013 has now grown to 64. In addition, the SDM project results were publicised at ISAP2023 as one of the thematic track sessions. Aside from IGES support for the SDM, IGES staff led the process and publication of a guide for policymakers on how to apply landscape approaches to national biodiversity strategies and action plans and the global biodiversity framework and presented the publication to policymakers from East and South Asia among others.

Contribution to the development of a new ISO standard on biodiversity

The International Organization for Standardization (ISO) set up a technical committee (TC331) on biodiversity in 2020 and the Government of Japan decided to actively participate in the process. IGES took on the role of secretariat for a domestic mirror committee, in collaboration with Japan Standard Association (JSA). The work involved an analysis of concerned documents, a compilation of inputs from concerned organisations and experts in Japan and submission to the ISO technical committee, as well as knowledge-sharing among concerned stakeholders and the public. Japan's responses to the three working groups on terminology, and measurement and monitoring, and strategic sustainable use have already been established in cooperation with relevant organisations, and IGES prepared to lead the national response to a remaining working group on protection and conservation that are scheduled to be established in the future.

Business and biodiversity

IGES became a Forum member of the Taskforce on Nature-related Financial Disclosures (TNFD). Relating to this, IGES worked with MOEJ and others, to promote business engagement in this process. IGES also worked with Keidanren (Japanese Business Federation) Nature Conservation Council (KNCC) to conduct a survey of Keidanren member companies on their efforts in contributing to the new GBF and TNFD. The survey clarified potential contributions of businesses in different sectors to the new GBF targets and the progress of their responses to the emerging TNFD framework.

Integration of Traditional and Modern Bioproduction System for a Sustainable and Resilient Future under Climate and Ecosystem Changes (ITMoB)

The ITMoB project, a 3-year cooperative research project, aims to explore scenarios/pathways for a sustainable and resilient future under climate and ecosystem changes by assessing various ecosystem services provided by bioproduction systems under multiple future scenarios. The project focuses on integration of traditional and modern bioproduction systems such as home gardens, agroforestry, plantation, aquaculture and urban agriculture in Japan, the Philippines and Indonesia. In FY2023, the

project organised international conferences and workshops, training seminars, stakeholder meetings, and field surveys.

Abandonment and rebound: Societal views on landscape and land-use change and their impacts on water and soils (ABRESO)

The overarching goal of the ABRESO project is to develop a global transdisciplinary platform. It is envisioned as a network of people, sites, tools and ideas, to better understand the impacts of land abandonment on sustainability of soil and water resources in USA, France, Italy, Taiwan and Japan. Land abandonment and subsequent land use or land cover change can have profound implications for water resources, as the changing fabric of the Critical Zone (CZ) dictates changes in infiltration, runoff and the delivery of sediment and nitrogen to groundwater and surface waters. In FY2023, the project organised a workshop, stakeholder meetings, field surveys and online survey. A two week-summer school was also organised in Japan with more than 50 graduate students and early career researchers from five partner countries.

Designing sustainable future scenarios through multiple value criteria

This project aims to develop a new system for local evaluation and build local future scenarios to explore local sustainability at three research sites in Japan. In FY2023, IGES conducted preliminary field surveys to design future scenarios and quantify the value of subsistence food production (self-production and gifts from others) that is exchanged without market transaction.

Development of an Integrated Assessment Model linking Biodiversity and Socio-Economic Drivers, and its Social Application (S-21)

The objective of this study is to develop an integrated assessment model integrating biodiversity, climate change and other socioeconomic factors for future scenario analysis, and quantitatively estimate the impacts of response options for climate change mitigation and adaptation, and biodiversity conservation and restoration under different future scenarios. In addition, this integrated assessment model will be applied at the national and local scales. In FY2023, IGES led the organisation of a kick-off meeting, domestic and international advisory board meetings, field surveys and online questionnaire survey.

(3) Selected publications

Book/book chapter

- “Policies and Practice of Sound Material-Cycle Society in Japan: Transition Towards the Circular Economy”, in *Circular Economy Adoption: Catalysing Decarbonisation Through Policy Instruments*.
- Book: “Using Landscape Approaches in National Biodiversity Strategy and Action Planning”

Peer-reviewed article

- “Spatial exploration of rural capital contributing to quality of life and urban-to-rural migration decisions: a case study of Hokuto City, Japan”, *Sustainability Science*
- “Developing biodiversity-based solutions for sustainable food systems through Transdisciplinary Sustainable Development Goals Labs (SDG-Labs)”, *Frontiers in Sustainable Food Systems*.
- “Longitudinal analysis of home food production and food sharing behavior in Japan: Multiple benefits of community-based food systems and the recent impact of the COVID-19 pandemic”, *Sustainability Science*.

Report chapter

- “Biodiversity Conservation”, Chapter 4, *6th ASEAN State of the Environment Report*.

Non peer-reviewed article

- “Identifying high-risk timber exports from Viet Nam to Japan”, *Tropical Forest Update*.

Commissioned report

- Commissioned reports: A set of 12 English and Japanese reports on a series of workshops hosted by the Ministry of the Environment, Japan on invasive alien species with a focus on G7 countries

Translation

- “IPBES 侵略的外来種とその管理に関するテーマ別評価報告書 政策決定者向け要約” (IPBES, “Summary for Policymakers of Thematic Assessment of Invasive Alien Species and their Control”)

1.5. Adaptation and Water Area (AW)

To contribute to the realisation of a resilient and sustainable society, particularly in the Asia-Pacific region, AW will promote initiatives focusing on climate change adaptation and water environment measures. For climate change adaptation, AW will actively participate in international negotiations and policy processes and make policy proposals. AW will keep abreast of global efforts on adaptation and identifying international policy needs. Based on the findings, AW will work on priority issues on adaptation, including promotion of AP-PLAT, research on the integration of adaptation measures with disaster prevention, climate mitigation measures, and biodiversity conservation, and work on locally-led adaptation (LLA), indigenous and local knowledge (ILK) systems, and transboundary adaptation. Regarding measures to conserve water environment, AW will actively promote WEPA's efforts as its secretariat to improve water environment governance in the Asia-Pacific region. In addition, AW will promote the deployment and proper management of decentralised wastewater treatment systems in the ASEAN region through a project funded by the Japan-ASEAN Integration Fund and address the issue of microplastics in rivers.

(1) Focus for Impact Generation in ISRP8 by Unit

AW will work closely with BRC for the successful full-fledged operation of AP-PLAT's capacity-building programme. For that purpose, we will keep strengthening the partnership with capacity building institutions and international initiatives in Asia and identifying the opportunities of collaborative works, promoting basic studies and developing adaptation tools and materials to lay down the foundation of the programme, and engaging in concrete capacity-building efforts, among others. AW will keep working on critical research and projects on adaptation, including monitoring and evaluation, ILK, Ecosystem-based Adaptation (EbA), transboundary adaptation, PWLM/PCLM, socio-hydrology, DRR-CCA integration, and compound risks. In addition, we will continue to contribute to international efforts on adaptation, including UNFCCC, IPCC, Paris Committee on Capacity-building (PCCB), PEMSEA, The Himalayan University Consortium (HUC), APAN Forum, and the Adaptation Without Borders Initiative (AWBI). AW will maintain its secretariat service for WEPA to achieve better water environmental governance in Asia. We also plan to work closely with ASEAN Secretariat and international partners to further promote a decentralised wastewater management approach in ASEAN countries and utilise this approach to address the challenge of emerging pollutants such as microplastics. It is expected that CES will become an institution-wide programme building on efforts for Nexus among others.

(2) Major activities in FY2023

AP-PLAT Partnership

AW, with relevant organisations, led the Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT) partnership. AW led in developing the “AP-PLAT Three-Year Action Plan 2024-2026” and “AP-PLAT Activity Plan FY2024.” AW conducted an online workshop for developing countries on adaptation M&E using the tool JAMES. AW also provided training in Bangladesh to prepare climate finance proposals that integrate disaster management and climate change adaptation. Under SRF, IGES is editing a book on compounding and cascading disasters in a changing climate.

Contribution to global assessments

A researcher of AW worked as a lead author of the IPBES Nexus assessment report. In FY2023, the Third Order Draft of the assessment was prepared. AW is contributing as lead and/or coordinating lead authors for different chapters of UNEP's Global Environment Outlook 7 (GEO-7). A researcher has now started heading the Technical Support Unit on Scenarios and Models from the IPBES Secretariat.

Contribution to International Processes

AW participated in negotiations at the UNFCCC meetings as a member of the Japanese delegation and supported the Ministry of the Environment, Japan. Through following international discussions and activities on adaptation, AW made policy recommendations to the Ministry of the Environment. AW researchers are engaged with the Adaptation Without Boundaries initiative, World Adaptation Science Program (WASP), and UNEP Global Adaptation Gap Report 2023.

Synergy between mitigation and adaptation towards a resilient net-zero ASEAN

Under the project on Synergies between Mitigation and Adaptation, AW led the sub-theme on adaptation. The research focuses on transition strategies for adaptation that harmonise with carbon neutrality, centred on renewable energy, in ASEAN countries. This year's research included assessing potential climate risks to renewable energy systems and analysing the adaptation co-benefits from renewable energy systems and their impact on building resilience.

Socio-hydrological perspective in large riverine islands in India, Bangladesh and Viet Nam

Using a socio-hydrological approach, AW explored how the nexus of human well-being and water relations can be applied to improve adaptive measures to maintain hydrological cycles and manage local water needs. In FY2023, AW published 16 peer-reviewed journal articles, three book chapters, and one conference proceedings under this project. Based on these outputs and experience, AW is writing a new proposal to scale up this research.

Locally Led Adaptation (LLA)

AW and APN are jointly implementing a project on Locally Led Adaptation (LLA) in Nepal, Viet Nam, and Fiji and co-organised a session at the 4th Gobeshona Global Conference. IGES, as a regional member of HUC, has established a Thematic Working Group on TILK (Traditional, Indigenous, and local knowledge system)-LLA, which aims to facilitate the co-development of LLA solutions. AW is also working with partners to submit a new JAIF project on LLA and discussing the idea with ASEAN Working Group on Climate Change (AWGCC).

Addressing transboundary climate change risks

AW's work on transboundary climate change risks (TBRs) has been carried out under NIES-IGES *Suishinhi* project, JSPS-ICSSR project, and IGES SRF projects mainly in collaboration with the Adaptation Without Boundaries (AWB) initiative, and several national partners in South and Southeast

Asia. A survey of 10 ODA recipient and donor countries was conducted to ascertain how the transboundary risks are addressed in the ODA and additional measures required to address transboundary risks through ODA.

Climate security in the Asia-Pacific

IGES started a research project on climate security in the Asia-Pacific, with support from the Ministry of Foreign Affairs of Japan. With collaborating researchers, IGES is conducting policy-relevant research on climate security. Five sectoral research areas have been established: energy security, climate-induced mobilities, food security, climate change adaptation and maritime security. In the project's first year, an international symposium was held to launch the project internationally.

Water Environmental Management in Asia

AW has been the Secretariat for the Water Environment Partnership in Asia (WEPA) for two decades. In FY2023, the WEPA annual meeting and the International Workshop were held in Hayama, Japan with a business match session to promote Japanese technologies for water environmental conservation. AW continuously supported WEPA Action Programs in Lao PDR to promote concrete actions for improving water governance, in addition to following up Myanmar's AP ended in FY2022. FY2023 was the end of the WEPA 4th Phase, and all activities implemented were summarised in a phase report.

Integrated River Basin Management in ASEAN

IGES has been collaborating with the Partnerships in Environmental Management for the Seas of East Asia in implementing a GEF/UNDP/ASEAN Project on IRBM. AW has supported the preparation of the Technical Report on Governance and Management Indicators for the State of River Basin (SORB) Reporting System. AW also developed a guidebook, providing a standardised framework for promoting improved management practices and more sustainable water resource governance.

Tackling Microplastics and Water Pollution through Decentralised Domestic Wastewater

AW led an initiative on decentralised wastewater management through the Japan-ASEAN Integration Fund (JAIF) to address microplastic and water pollution. A practical guide to decentralised wastewater management has been developed. Technical capacity-building workshops have been conducted in ASEAN cities/municipalities. The project also facilitated the development of a harmonised protocol for monitoring microplastics in sewage treatment plants and receiving water bodies.

(3) Selected publications

Books/Book chapters

- Book chapter: "Loss and Damage", *Adaptation Gap Report 2023*.
- Book chapter: "Equity and Fairness in Community-Based Adaptation and Disaster Risk Reduction", *Disaster Risk and Management under Climate Change*

Peer-reviewed articles

- "Better monitoring of forests according to FAO's definitions through map integration: Significance and limitations in the context of global environmental goals", *International Journal of Applied Earth Observation and Geoinformation*.
- "Variations in water storage of Bosten Lake, China, over the last two decades based on multi-source satellite data", *Journal of Hydrology: Regional Studies*.
- "Systematizing ecosystem changes in coastal social-ecological systems: Perspectives from a multi-stakeholder approach in Nakatsu mudflat, Japan", *Journal of Ocean and Coastal Management*.
- "Socio-hydrological approach for water resource management and human well-being in Pinglin

- district, Taiwan”, *Water*.
- “Climate driven runoff variability in semi-mountainous reservoirs of the Vietnamese Mekong Delta: Insights for sustainable water management”, *Irrigation and Drainage*.
- “Assessment of climate change related loss and damage on mangrove ecosystem: a case study in Ca Mau, Vietnam” *Journal of Coastal Conservation*.
- “Riverine Microplastic Pollution in Vietnam: A Review of Current Scientific Knowledge and Legal Policies”, *Applied Environmental Research Journal*.

Policy briefs

- “Advancing Effectiveness of Climate Adaptation” (WASP-UNEP Policy Brief)

Technical report

- “Climate Vulnerability of East Asia: Adaptation in the Region Can Provide Global Benefits”
- “Technical Report on Governance and Management Indicators for the State of River Basin (SORB) reporting system”

Proceedings

- “International Symposium on Climate Security in Asia-Pacific”
- Compound and Cascading Disaster Risk Management in Nepal: A Guide to Policymakers (draft developed as a part of co-production with inputs from leading disaster experts and key line agencies in Nepal)

Report chapter

- “Climate Change and Air Pollution”, Chapter 3, *Sixth ASEAN State of the Environment Report*.
- “Water Resources Management”, Chapter 5, *Sixth ASEAN State of the Environment Report*.

Tools/learning materials etc.

- AP-PLAT Three-Year Action Plan 2024-2026
- WEPA Fourth Phase Final Report 2024
- Guidebook on the State of River Basin Reporting for Local Governments and River Basin Organisations in ASEAN Countries
- Training Modules for Proper Operation and Maintenance of Domestic Decentralised Wastewater Treatment Facilities in Lao PDR [in Lao/English]
- ASEAN's Journey Towards Sustainable Sanitation: A Practical Guide to Decentralised Wastewater Management
- Decentralised Wastewater Management in ASEAN – Training Modules for the Realisation of SDG6
- Recommended Harmonised Protocol for Microplastics Monitoring in Sewage Treatment Plants and Riverine Environments in ASEAN Countries

2. Three Taskforces

2.1. Business Taskforce (BIZ)

BIZ has continued its activities to generate outcomes and impacts by supporting highly motivated businesses in Japan, specifically targeting the promotion of climate change and decarbonisation policies in businesses in Japan.

(1) Focus for Impact Generation in ISRP8 by Unit

BIZ will continue activities to exert influence on Japan’s Energy Mix Policy, more ambitious NDC for UNFCCC Conference of the Parties (COP), and to support adaption of carbon pricing in Japan. To create

impact through the business sector, we will continue to work on increasing progressive companies as the Japan Climate Leaders' Partnership (JCLP) members and to expand the needs of renewable energy through growing the size of RE100¹²/RE Action¹³ membership. In addition, we will support companies in its decarbonisation in areas beyond renewable energy towards achieving net zero by 2050.

(2) Major activities in FY2023

BIZ has been appointed as the Secretariat of Japan Climate Leaders' Partnership (JCLP), a coalition of business in Japan, and has supported progressive companies to lead a positive momentum towards net zero in business and to contribute to the progress of climate policies in Japan¹⁴.

Empowering business coalition

JCLP carried out a reform of its membership programme and created an associate membership category. As of the end of FY2023, JCLP had 37 executive members, 27 associate members, and 180 supporting members, for a total of 244 members.

Decarbonisation of business practices

JCLP cooperated with Climate Group to support the participation of Japanese companies in RE100, EV100¹⁵, and EP100¹⁶. 88 companies are committed to achieving RE100. The total volume of electricity use¹⁷ is about 6.69% of total electricity demand in Japan.

JCLP sent a delegation to the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in FY2023, following on from FY2022. JCLP organised a launch event for the IGES 1.5°C Roadmap at the COP28 Japan Pavilion in collaboration with IGES. The discussion on Japan's net-zero approach with experts from the International Energy Agency (IEA) and other organisations attracted the interest of a large audience at the local venue and online. In addition, the key messages of the IGES 1.5°C Roadmap were disseminated through the holding of an inspection debriefing session and speaking at an ISAP side event, thus contributing to building momentum for policy progress.

JCLP and IGES, together with ICLEI, Green Purchasing Network (GPN) and Japan Network for Climate Change Actions (JNCCA), have been running the steering committee of RE Action¹⁸, an initiative for SMEs, municipalities, educational institutions and medical institutions, to declare their commitment to 100% renewable electricity by 2050. JCLP and IGES supported RE Action to complete its transition to be a legal entity for stable organisational foundation. In FY2023, RE Action expanded its membership from 328 to 384 (net increase of 56 organisations).

Policy engagement

JCLP has been committed to active policy engagement with the support of BIZ, which is the Secretariat of JCLP.

¹² International business initiative committed to 100% renewable power, working to massively increase corporate demand for and delivery of renewable energy

¹³ A new initiative in Japan for small and medium enterprises (SMEs), educational institutions, medical institutions, and local governments to declare switching to 100% renewable electricity by 2050.

¹⁴ Since 2012, IGES has been appointed by JCLP as its Secretariat.

¹⁵ International business initiative aims to drive the transition to electro-mobility.

¹⁶ International business initiative pledged to double the energy productivity of businesses.

¹⁷ Reference figures including overseas offices.

Specifically, BIZ supported the decision and dissemination of recommendations by JCLP. Examples of JCLP statements include: “Recommendations for Accelerating Decarbonisation through GX (20 November 2023)” and “Public Comment on the Joint renewable electricity supply scheme (17 May 2024)”.

Furthermore, JCLP participated in the following meetings and committees to encourage progress in climate policy.

- ・ “中央環境審議会 総合政策部会” at MOEJ
- ・ “再エネ実装専門家ボードコアメンバー” at Tokyo Metropolitan Government

2.2. City Taskforce (CTY)

CTY co-creates solutions and promotes policies and strategies for low-carbon/carbon neutral, resilient and sustainable societies with stakeholders in Asian cities, including those in Japan. In collaboration with other regional and international organisations and networks, IGES facilitates the sharing of solutions and strategies among like-minded cities, and contributes to enhancing implementation capacity at the city level.

(1) Focus for Impact Generation in ISRP8 by Unit

Aiming to encourage more cities to become carbon-neutral, resilient and sustainable, and to ensure credible policy planning and implementation of cities, we will continue to work closely with local and regional governments in Japan and overseas. CTY aims to provide necessary knowledge support, including methodologies in policymaking and implementation developed through scientific interpretation on the good practices of cities, especially those of Japanese local governments. To this end, CTY will work in close partnership with international organisations and city networks such as UNESCAP, UN-Habitat, ICLEI, and United Cities and Local Governments (UCLG). City-to-city collaboration and mutual learning is one of the core approaches CTY will take. Cross-unit collaboration within IGES will be strengthened more in the 8th Phase to address diverse and complex sustainability challenges of cities.

CTY will keep two main topics of its activities/research from the 7th Phase, namely climate change and the SDGs. Since more cities are now aiming for carbon neutrality by 2050, we will conduct research and activities that aims to provide policy support and capacity of local governments to address climate issues. SDG localisation also continues to be a priority topic. Through promoting mutual learning on localisation mainly through VLR, we will provide necessary capacity development support with our analysis of good practices on the integration of the SDGs in existing policy frameworks and governance, partnership building, and monitoring and evaluation systems. Specific SDGs will be addressed based on the needs of cities and the availability of external funds (e.g. waste, mobility, urban planning, etc.).

(2) Major activities in FY2023

Supporting SDG Localisation through Voluntary Local Reviews (VLRs)

Since FY2018, CTY has been contributing to the global movement of Voluntary Local Reviews (VLRs). The “VLR Lab,” an online platform of VLR launched in March 2019 includes 114 VLR reports. IGES contributed to the VLR of West Java Province, Indonesia in collaboration with UNESCAP and UCLG-ASPAC.

Under a study on follow-up and review (FUR) of the SDGs at subnational level under the Environment Research and Technology Development Fund (ERTDF) started in FY2022, CTY explored opportunities and challenges of SDG localisation through the lens of FUR. The intermediate findings of the study shared

at events organised during the 2023 High Level Political Forum (HLPF) and a session at the Asia-Pacific Urban Forum. The State of VLR 2024 was published on the occasion of the 2024 HLPF.

Sharing Lessons and Providing Support towards Zero-carbon Cities

CTY has been supporting city-to-city collaboration projects (C3P) by Kuala Lumpur, Tokyo and Saitama, in collaboration with ISC. CTY also conducted a study of the functions of the intermediary organisations to support policy planning/implementation of local decarbonisation, especially targeted at the small and medium local governments under a commission project of MOEJ, in collaboration with other units at IGES, such as KUC and KRC. IGES also made a contribution to the Sugunami Citizens Assembly as a part of the secretariat. CTY is also serving as the secretariat of the G7 Subnational Roundtable on Climate Action and compiled a summary report with relevant policies of G7 countries to facilitate local climate actions.

(3) Selected publications

- Research report: State of the Voluntary Local Review 2023
- Conference paper: “Decarbonization of Road Transport in Sub-National level in Indonesia, case study Jakarta city, West Java Province and Semarang City, Indonesia.” Transportation Research Procedia (2024) – World Conference on Transport Research – WCTR 2023 Montreal.
- Proceedings: Summary Report of the G7 Roundtable on Subnational Climate Actions
- Report chapter: Chapter 4: Institutional Settings and Governance of The Climate Technology Progress Report 2023, Speed and Scale for Urban Systems Transformation.

2.3. Finance Taskforce (FIN)

Delivering on the SDGs and commitments under the Paris Agreement requires mobilising and shifting large amounts of public and private capital. To achieve low-carbon and climate resilient sustainable development, FIN is engaged in policy research and recommendations as well as capacity building. Specific areas of focus are sustainable finance (e.g. ESG investment), financial disclosure on sustainability, responses to business opportunities, and positive impact.

(1) Focus for Impact Generation in ISRP8 by Unit

FIN intends to provide practical solutions to generate impacts in the following three areas: (1) actual environmental benefits or impacts by green and sustainable finance, (2) shifting financial flows to decarbonised efforts in Japan, and (3) mobilising finance contributing to the SDGs at the local and regional level (implemented, for example, through Regional-CES) in both Japan and the wider Asia Pacific region.

(2) Major activities in FY2023

Research and environmental improvement for practices of ESG finance

FIN has been engaged in commissioned work on green bonds from the Ministry of the Environment, Japan (MOEJ) since April 2017. In FY2023, FIN carried out the following activities related to MOEJ's policies on green financial products.

(1) Contribution to the revision of the Guidelines for Green Bonds, etc.: MOEJ has been considering revision to the "Green Bond and Sustainability-Linked Bond Guidelines" and "Green Loan and Sustainability-Linked Loan Guidelines" and established the Study Group on Green Finance to discuss

revision of the Guidelines. FIN supported the MOEJ in preparing materials for the Study Group and translation of related international principles which will be incorporated into the revised guidelines.

(2) Dissemination of information through the website "Green Finance Portal": Since 2018, FIN has served as part of the secretariat of the MOEJ website "Green Finance Portal" and has disseminated information on international market trends, new principles or guidelines of the International Capital Market Association and the Loan Market Association, and good practices of overseas green financial products. In FY2023, FIN worked to enhance this information and introduce overseas examples of green financial products in areas (e.g. biodiversity) where proceeds have not been allocated in Japan, in an effort to broaden the sector of green financial products in the domestic market.

Shifting financial flows to decarbonisation efforts in Japan

In order to mobilise the huge amount of funding required to deliver on the climate goals and to implement the SDGs, it is essential to build sustainable financial systems in which the financial sector, including banks, investors and other service providers, will shift finance and investments to greener and more sustainable options. In FY2023, FIN focused on mainly two activities for this purpose:

(1) Stakeholder engagement through a partnership with the Climate Bonds Initiative: FIN entered into a strategic partnership in 2022 signing an MOU with the Climate Bonds Initiative (CBI) for the purposes of delivering engagement activities in Japan. As part of this initiative, IGES agreed on a part-time secondment of an IGES-FIN staff to CBI to manage CBI engagement activities in Japan. The engagement strategy has a three-pronged approach. The first pillar focuses on policy influence through engagement with policymakers. Transition finance industry roadmap reviews under the Ministry of Economy, Trade and Industry (METI) and the design of the GX economic transition bond by the Japanese government have been identified as priority areas. The second pillar focuses on technical assistance to industry financing practices, working in cooperation with underwriters and verifiers. The third pillar focuses on support and engagement with investors to increase their visibility and influence toward the mobilisation of credible climate finance. In FY2023, key activities include a focused engagement with targeting the aforementioned stakeholders when CBI CEO Sean Kidney visited Japan, and preparation for the joint launch of an online transition planning toolkit.

(2) Regional ESG finance: FIN continued its work on initiatives and activities aimed to promote ESG regional finance, focusing on how to integrate ESG finance into the SDGs certification system in Kitakyushu, which promotes ESG finance for local environmental conservation and decarbonisation efforts by companies.

Green & Low carbon technology transfer between Middle East & North Africa and Japan

Since FY2021, FIN has been exploring the need and feasibility through IGES Strategic Research Fund (SRF) to foster Japan-Middle East and North Africa (MENA) cooperation toward green economies. This research work was initiated in a partnership with the Islamic Development Bank (IsDB -Multilateral Development Bank) and the Gulf Research Center (GRC: Think Tank). FIN then agreed to continue its collaboration and proceeded with practical steps toward establishing a Japan-MENA Business Matching Platform to facilitate green and low-carbon technology transfer. In FY2023, FIN extended the partnership to include the Gulf Organisation for Research & Development (GORD) /The new Climate Action Center of Excellence (CACE), a Qatari-based semi-government entity. Boosting J-MENA GREEN activities by leveraging synergy with A6IP and JCM projects is also considered. IGES and IsDB co-organised side events at COP28 among key stakeholders to discuss the necessity and feasibility of the Platform. In June 2024, the website of the Platform was developed and is publicly available on a trial basis. Country Working Groups under the Platform is under preparation. A couple of Japanese companies showed interests in the Platform and asked IGES to find right business partners and FIN introduced suitable partners in the region to start business discussion.

Financing for Decarbonisation at the City Level

In May 2021, the EU and Japan announced a Green Alliance to accelerate the transition toward a climate-neutral, circular and resource efficient economy over the next decade. Under this Alliance, IGES co-hosted with the Delegation of the EU to Japan the "EU-Japan Subnational Climate Action Workshop: Exchanges between Cities in Europe and Japan – Opportunities for a Resilient Future" event in May 2024. In the event, as one of the sessions, best practices and solutions were shared on financing city-level decarbonisation projects and activities inviting the European Investment Bank and Development Bank of Japan as a speaker. As part of MOEJ's commissioned work, IGES coordinated in the organisation of a business matching seminar on green and low-carbon technology between companies from Da Nang city and Japan, in cooperation with JPRSI and Yokohama city which has had a city-to-city cooperation framework since 2013.

(3) Selected publications

- Commissioned Report: “Research on promoting ESG finance in Japan”
- Commission Report: “Research on cooperation with OECD in the field of environment and sustainable development”
- Presentation material at COP28 side event and UNFCCC Climate Week: “How to Foster Japan-MENA Countries’ Partnership towards NetZero Economies? “

3. Five Satellite Offices

3.1. Kansai Research Centre (KRC)

The Kansai Research Centre (KRC) carries out research focusing on actions taken by the private sector, including businesses that promote environmental and energy-conservation measures, under the theme of "Business and the Environment". Specifically, KRC conducts analysis on corporate environmental behaviours in cooperation with case study countries and local governments, and develops policy recommendations for specific strategies to promote sustainable business practices in Asia by promoting the application of low-carbon and co-benefit technologies to developing countries through research on environmental and energy-saving technologies of businesses.

(1) Focus for Impact Generation in ISRP8 by Unit

KRC will continue promoting technology transfer in India, Thailand and other countries where opportunities arise. Activities in India are expanding to the areas of pollution management focusing on air pollution caused by thermal power plants and energy-intensive industries, whereas the focus in Thailand is on energy saving of industries and buildings in association with the Japan Platform for Redesign: Sustainable Infrastructure (JPRSI). Collaboration with Hyogo Prefecture is expanding as well, ranging from designing a woody biomass utilisation business model in Hokusetsu region, supporting cities pledged to be carbon neutral by 2050, to designing a decarbonising road map, matching private companies with service providers of renewable energy power purchase agreement (PPA), and promoting decarbonised society development among university and high school students.

(2) Major activities in FY2023

Low-carbon/Environmental Technology Transfer in India

KRC has been promoting technology transfer of Japanese low-carbon technologies (LCTs) to Indian companies through the Japan-India Technology Matchmaking Platform (JITMAP), which was launched in 2016 with The Energy and Resources Institute (TERI) with support from MOEJ. From FY2021, activities have been extended to environmental technologies such as air pollution management. In January 2024, a technology feasibility study (FS) on vapour management systems was conducted in a tyre manufacturing company in Kancheapuram, Tamil Nadu, and follow-up activities were conducted in four companies in Pune, Maharashtra, where a technology feasibility study (FS) on compressed air systems has been conducted. The follow-up activities included a follow-up visit by experts in compressed air system technology to the companies to ascertain the current situation, check the implementation status and results of the improvement proposals made in the FS, and propose measures for further decarbonisation and energy efficiency. Through TERI, the outcomes of these activities were published in the newsletter of SAMEEEKSHA, a platform for small and medium enterprises in India.

Japan Platform for Redesign: Sustainable Infrastructure (JPRSI) works

MOEJ has launched the Japan Platform for Redesign: Sustainable Infrastructure (JPRSI) to promote the overseas expansion of high-quality environmental infrastructure. In FY2023, with the full cooperation of TERI, KRC contributed to the planning of a JICA technical cooperation project in the field of air pollution, which is being prepared under the initiative of the Embassy of Japan in India.

Regional Circulating and Ecological Sphere (Regional-CES) Projects

The KRC has promoted Regional Circulating and Ecological Sphere (Regional-CES) approach in cooperation with the Hyogo Prefectural Government by implementing the Hokusetsu Satoyama Regional-CES Project as an initiative to make effective use of regional resources and revitalise the local economy in the Hokusetsu region of Hyogo Prefecture (Takarazuka City, Kawanishi City, Inagawa Town and Sanda City). In FY2023, a survey was conducted on a case study of the use of livestock biomass by a farm in Kobe City. In addition, as an activity to spread the concept of Regional-CES to other countries, the results of national workshops in three Asian countries held with the support of the Asia-Pacific Network for Global Change Research (APN) were presented at ISAP in December 2023 and submitted as a peer reviewed article to the APN Science Bulletin.

Contribution to Environmental Policy of Hyogo Prefecture and Local Municipalities

The active participation of local governments and non-governmental actors is essential to realising a long-term decarbonised society, which requires coordinated governance at various levels. In FY2023, as a contribution to Hyogo Prefecture's efforts to promote carbon footprint to engage citizens and businesses for decarbonising society, estimates of the carbon footprint reduction effects of environmentally friendly agricultural practices in Hyogo Prefecture were made, and workshops for citizens on decarbonised lifestyles were organised.

Next Generation Capacity Development projects

KRC planned, drafted and moderated the six-day 'Hyogo High School Environmental and Future Leaders Development Project' organised by Hyogo Prefecture and the Hyogo Environmental Advancement Association. A total of 26 participants from high schools in the prefecture took part in the programme, which included lectures by experts, group discussions and site visits to renewable energy projects. In the final session, each group presented its message to society on a wide range of themes, including solar sharing, Satoyama in the near future, high-tech countryside and environmental taxation. In addition, KRC collaborated with the Kobe University's Econo-Legal Studies (ELS) programme to a series of lectures with 12 sessions on the theme of a decarbonised society in the first semester of FY2023.

(3) Selected publications

- Commissioned report: 「兵庫県 PPA 方式（第三者所有型モデル）による 太陽光発電設備導入手引き」
- Presentation material: “Fostering the Regional Circulating and Ecological Sphere Approach to Translate Global Goals into Local Actions – Lessons from National Scoping Workshops in ASEAN Countries –”
- Data/Tool 「これからの事業存続のために知っておきたい再生可能エネルギー活用のためのキーワード (Ver4)」

3.2. Kitakyushu Urban Centre (KUC)

The Kitakyushu Office was established in 1999 in the City of Kitakyushu, which made the transition from a city known for pollution to an environmentally-advanced city, aiming to become the world's environmental capital. In 2010, the office was renamed as the Kitakyushu Urban Centre (KUC) and currently conducts practical research activities with Asian cities to promote local governmental initiatives to realise sustainable cities in the areas of low-carbon and resilient cities, sound waste management, and green growth and sound urban environmental management.

(1) Focus for Impact Generation in ISRP8 by Unit

KUC continues to bolster local actions in the area of zero-carbon, circular economy, green growth and the SDGs. KUC will further explore ways to contribute to the institutionalisation of a sustainability concept in city policies and practices in Asia-Pacific cities; the dissemination of information on the global trend of environmental agenda to local stakeholders in Kitakyushu and Kyushu region; as well as the local coordination in transition to zero-carbon cities, circular cities, localising the SDGs as a local hub in Kitakyushu and Kyushu region in this area.

(2) Major activities in FY2023

Mainstreaming Low-carbon and Resilient Policies into Urban Planning and Implementation

Kitakyushu City, recognising the intensified trend for GX (green transformation), has established the Kitakyushu GX Promotion Consortium to attract investment from the public and private sector. KUC, as members of this consortium, organised the 1st Kitakyushu GX Executive Business School for local company executives learning GX management and practices. Furthermore, KUC conducted basic research to design an intermediate support organisation for supporting small size local governments to effectively develop and implement action plan on decarbonisation in the respective municipal boundaries. In addition, considering the fact that residents must make lifestyle changes to transition to a zero-carbon city, KUC conducted awareness-raising activities for youth in Kitakyushu by holding a "1.5°C Lifestyle Workshop", with a view to creating a template of the workshop that can be deployed in other municipalities. KUC also participated in individual projects (i.e. collaboration projects between Hai Phong City – Kitakyushu City; West Java Province – Kitakyushu) as part of MOEJ's "City-to-City Collaboration Project for a Zero Carbon Society". This project aims to take zero/low-carbon technologies and know-how accumulated in Japanese cities and deploy them overseas under the framework of city-to-city collaboration. Zero-carbon scenario development using the Asia-Pacific Integrated Model (AIM) was also conducted regarding the Hai Phong City- Kitakyushu City collaboration. KUC has been playing a role of this project platform continuously since FY2013, and has contributed to maintaining momentum toward the realisation of a zero-carbon society at the city level in Japan and internationally.

Evolving Sustainable Waste Management Practices

With the aim of building a resource-circulating society at the city level, KUC provided various activities. KUC supported the development of a national action plan for reducing marine plastic litter in Cambodia as part of the Japan-ASEAN Integration Fund (JAIF). KUC assisted a project in charge of conducting waste surveys and capacity building in three cities in Cambodia. In addition, a demonstration project on the establishment of a resource-circulating model targeting plastic waste in Samet Island, Thailand was initiated under funding from ADB. Lastly, KUC is participating in the JICA Grassroots Programme in Davao City to properly implement a waste disposal process in collaboration with the city and local residents in a coastal area where municipal solid waste collection, transportation and recovery are not properly carried out. In Japan, as a member of Kitakyushu Circular Economy Vision Promotion Committee, KUC participated the biomass utilization subcommittee and explored the potential for commercialising the use of biomass resources in Wakamatsu Ward of Kitakyushu.

Promoting Green Growth and Localising the Sustainable Development Goals (SDGs)

KUC has been organising the SDGs Training programme, which is an English-speaking programme to learn and observe actual SDGs good practices on the local ground, since 2019. For FY2023, the 5th SDGs Training Programme was organised for 15 university students in March 2024, in Kitakyushu City to learn about the offshore wind power in Kitakyushu. KUC has been engaging in the OECD's SDGs localisation programme, "A Territorial Approach to the SDGs," with Kitakyushu City acting as one of the pilot cities. KUC has been co-implementing a SDGs Business Verification Survey with Private Sector of the Japan International Cooperation Agency (JICA), "Disseminating Japanese Technologies to Extinguish Forest and Peatland Fire using Environment Friendly Soap-based Fire Fighting Foam" in Central Kalimantan Province, Indonesia" with Shabondama Soap Ltd. As a new initiative, KUC led a discussion with the City of Kitakyushu to design a newly establish Sustainable Management Certificate Programme, which promotes SX management at local SMEs in a connection with sustainable finance provided by local financial institutes. KUC also served as a local member of several local committee meetings and provided lectures and workshops for an increasing number of schools, universities, civic organisations, and private companies across a wide range of stakeholders in Kyushu.

(3) Selected publications

- Commentary: "Why We Need a Transformative Circular Economy" (IISD)
- Discussion paper: 「アジアの脱炭素化に貢献する北九州市～「150%削減目標」の捉え方～」 ("Kitakyushu's contribution to the decarbonisation of Asia - How to understand the 150% reduction target")
- Training material: "How to Use the Soap-based Fire Fighting Foam" (IGES)
- Brochure: "City-to-City Collaboration for Zero-Carbon Society 2023" (MOEJ)

3.3. Regional Centre in Bangkok (BRC)

IGES Regional Centre in Bangkok (BRC) has served as a hub for networks and partnerships in the Asia-Pacific region since its establishment in 2011. It focuses on priority issues including climate change mitigation, adaptation, environmental safeguards and sustainable cities, and manages relevant networks for knowledge sharing, as well as implements relevant projects in close collaboration with various supporting organisations and national and sub-national governments

(1) Focus for Impact Generation in ISRP8 by Unit

BRC intends to create the following impacts: (1) increase the capacities of ASEAN governments to develop and implement climate change adaptation policies and projects through ASEAN project on disaster risk

reduction by integrating climate change projection into flood and landslide (2nd phase) and AP-PLAT, (2) adopt know-how driving clean development and mobilise resources for regional engagement in climate change activities by implementing several projects of the UNFCCC-IGES Regional Collaboration Centre (RCC), (3) improve environmental compliance and enforcement of pollution control practices in 18 Asian member countries of Asian Environmental Compliance and Enforcement Network (AECEN), and (4) improve environmental quality in ASEAN cities through better long-term city planning and higher capacity to implement transformative local actions, closely linked to the SDGs by proposing and conducting ASEAN SDGs Frontrunner Cities Programme (2nd phase).

(2) Major activities in FY2023

Climate Change Mitigation

The UNFCCC-IGES Regional Collaboration Centre (RCC) provides multifaceted support to facilitate the implementation of the Paris Agreement. RCC covers 36 countries in Asia and the Pacific and organised/co-organised 17 workshops, webinars and events in 2023. On carbon pricing and market mechanisms, RCC has been supporting Mongolia and Lao PDR to solidify the countries' MRV and regulatory foundations for the introduction of domestic carbon markets. On transparency, RCC organised a hands-on training workshop on transitioning to the ETF and tracking of progress in implementing and achieving NDCs for the Pacific region. On Article 6, adaptation, NDC, climate finance, youth engagement and many other topics, RCC organised 23 out of 210 sessions at the Asia and Pacific Climate Week 2023. In 2023, RCC established 26 new partnerships, provided engagement support to four divisions in the UNFCCC secretariat, and produced six knowledge products.

In 2023, BRC implemented research activities on: (1) policy and regulatory analysis on photovoltaics (PV) and electric vehicles (EV) in Indonesia (Policy Advice for COVID-19 Economic Recovery in Southeast Asia) with ADB, (2) opportunities and challenges for Article 6 in agrifood systems in Asia with FAO, (3) contributions and collaboration on AIM model-related analysis with the Bangkok Metropolitan Administration, the Circulating and Ecological Sphere (CES) approach in Asia and the Pacific, the *Suishinhi* research project on ASEAN climate change, and the Paris Agreement Article 6 Implementation Partnership Centre.

Climate Change Adaptation

In FY2023, BRC focused mainly on (1) facilitating coordination of mutual cooperation among AMS and pilot host countries for ASEAN project on disaster risk reduction by integrating climate change projection into risk assessment (Phase-2), (2) facilitating the review and appraisal of Phase-2 to ensure link with the new ASEAN Work Programme, (3) supporting joint efforts and collaboration to help broaden partnership and knowledge sharing for climate change adaptation, mainly through AP-PLAT and on-going regional efforts: a) ASEAN Disaster Management Week (ADDW) 2023, b) AP-PLAT mid-term review, c) 3rd International Symposium on Disaster Resilience and Sustainable Development, d) AP-PLAT Annual Meeting and M&E Workshop and e) ISAP Thematic Session: Utilising of satellite data for observing global and national methane emission reduction targets.

BRC continues to contribute to the capacity development leg of the Asia-Pacific Adaptation Information Platform (AP-PLAT), exploring new opportunities for collaboration and promoting bottom-up climate change adaptation actions together with AW. Under MOEJ commissioned work, series of e-learning courses on emerging adaptation issues: locally led adaptation and flood forecasting tools; AP-PLAT Three Year Action Plan (2024-2026) were developed and launched this year.

Localising the SDGs in ASEAN Cities

In FY2023, the ASEAN SDGs Frontrunner Cities Phase 2 (SDGs-FC 2) funded by the Japan-ASEAN Integration Fund (JAIF) has progressed to the implementation and Monitoring & Evaluation (M&E) stage. The project team has finalised full-fledged Project Action Plans for implementation for 11 participating cities: i) Kampot, Cambodia; ii) Kep, Cambodia; iii) Banda Aceh, Indonesia; iv) Surakarta, Indonesia; v) Xay, Lao PDR; vi) Redang Island, Malaysia; vii) Seberang Perai, Malaysia; viii) Yangon, Myanmar; ix) Paranaque, Philippines; x) Prik, Thailand; and xi) Saensuk, Thailand. These 11 cities have implemented innovative pilot projects based on the two core themes of reducing land-based marine plastics and urban resilience, including peer-to-peer learning activities with other ASEAN Frontrunner cities. During M&E activities, the project team has captured video footage to produce showcase videos and visibility materials to promote the cities' good practices and policies to a wider audience. The project team has also initiated preparations for the programme's 2nd Regional (Closing) Workshop, which is tentatively planned to be organised in November 2024 in Bangkok, Thailand. The Workshop will be held back-to-back with the East Asia Summit (EAS) High-Level Seminar on Sustainable Cities funded by the Ministry of Environment, Japan, with the objective of presenting the programme's final outputs, achievements and results.

Environmental Compliance and Enforcement and Circular Economy and Resource Efficiency

BRC successfully led Phase 1 of the Closed Island Plastic Recycling System in Rayong, Thailand, reducing plastic leakage into the marine environment and promoting circular economy principles. This involved collaboration with local governments and stakeholders to enhance waste management and community engagement in sustainability practices, establishing a model for waste processing and resource recovery. Strategic partnerships with the Asia-Pacific Sustainability Seed Fund supported by ADB and Google.org through AVPN were crucial for the project's initial success and planning for Phase 2.

BRC also actively participated in INC conferences, addressed environmental compliance and enforcement issues, and conducted capacity building. At INC-3, BRC presented updates on National Action Plans in ASEAN Member States and co-organised a side event on monitoring plastic pollution. At INC-4, BRC highlighted Extended Producer Responsibility (EPR) and led events on plastic initiatives and global plastic pollution mitigation. Additionally, BRC played a significant role at the Fifth Montevideo Environmental Law Programme Regional Meeting and the Third ASEAN Environmental Law Conference, contributing talks on local solutions to plastic pollution and public litigation in Southeast Asia. BRC also secured IGES's presence at the 13th International Conference on Sustainable Waste Management & Circular Economy and the IPLA Global Forum 2023, organising a session on marine plastic litter. Furthermore, BRC extended a project to enhance water quality management in the Mekong River Basin through the organisation of a relevant workshop and educational curriculum for a selected secondary school in Thailand.

Enhancing Relations with Stakeholders and Promoting Green Business

In 2023, BRC organised events to strengthen collaboration with stakeholders and share best practices in sustainability. These events included the official opening of the new office for IGES Bangkok Regional Centre, and the Indonesia-Japan Environmental Talks 2024 with the Embassy of Indonesia in Tokyo, attended by IGES President, Prof. Takeuchi. In addition, BRC conducted supporting activities to promote the overseas expansion of high-quality environmental infrastructure under the Japan Platform for Redesign: Sustainable Infrastructure (JPRSI), including seminars on climate change mitigation and business.

(3) Selected publications

- Peer-reviewed article: "Equitable, affordable, and deep decarbonization pathways for low-latitude developing cities by rooftop photovoltaics integrated with electric vehicles" (*Applied Energy*).

- Submission to policy processes: AP-PLAT Framework for Action 2023-2025
- AP-PLAT E-learning materials: LLA and Flood Forecasting
- Commission Report: “Partnership for Market Implementation Readiness Support Plan for the Government of Pakistan”

3.4. Tokyo Sustainability Forum (TSF)

The Tokyo Sustainability Forum (TSF) aims to facilitate impact generation with various stakeholders, particularly those based in Tokyo. It hosts the IPBES Technical Support Units and is co-located with the ICLEI Japan office. The Forum also works in collaboration with the Biodiversity and Forests Area and the City Taskforce.

(1) Focus for Impact Generation in ISRP8 by Unit

TSF will continue to contribute to the impact generation of IGES by providing a comfortable and safe office environment for IGES staff. In particular, TSF will strengthen its support for online meetings and remote work, which are rapidly increasing at TSF in the era of “new normal.” TSF will also support IGES Management in attending online international conferences to showcase the latest findings of IGES.

TSF will strive to improve its operations with regular feedback from IGES staff. In addition, TSF will hold seminars and workshops to enhance the collaboration between IGES and national agencies such as MOEJ, as well as non-national stakeholders including the private sector and local governments. TSF will provide necessary assistance to IPBES-TSU-IAS and ICLEI-JAPAN and conduct activities to strengthen the collaboration with them.

Furthermore, TSF will work on projects in cooperation with relevant IGES teams on Biodiversity and emerging issues that do not fall under the scope of other units. In particular, with regard to Environmental Impact Assessments, TSF will actively work on necessary surveys, development of information platform, and bilateral support to strengthen the Environmental Impact Assessment systems and implementation in Asian countries in support of the overseas business expansion of Japanese companies.

(2) Major activities in FY2023

IPBES Technical Support Units

TSF continued to host the IPBES-TSU-IAS, and supported its work, including the development of a thematic assessment report on invasive alien species. TSF also began hosting the IPBES technical support unit for the task force on scenarios and models (IPBES-TSU-SCM) since March 2024, and supported its work.

Contribution to the development of a new ISO standard on biodiversity

In cooperation with the Japanese Standards Association (JSA), IGES managed the National Mirror Committee, whose operation was a prerequisite for Japan's participation as a voting country in the Technical Committee on Biodiversity (TC 331) run by the ISO. The TSF, together with the BDF, analysed ISO documents, liaised with related organisations, supported discussions at ISO plenary meetings, and assisted with voting and decision-making to support the discussions of National Mirror Committee and ensure effective voting.

Maintenance and Improvement of the Office Environment

Efforts were made to maintain and improve the office environment to facilitate the activities of Tokyo-based IGES Management, Senior fellows and Fellows, adapting to changing conditions with the COVID-19 pandemic.

3.4.1. IPBES-TSU-IAS hosted at Tokyo Sustainability Forum

IGES has been hosting the technical support unit for the IPBES assessment of invasive alien species and their control (IPBES-TSU-IAS) since February 2019 at TSF. The TSU has functioned as an extension of the IPBES secretariat that is headquartered in Bonn, Germany. The purpose of the TSU has been to support and assist in the coordination of the IPBES invasive alien species assessment, including drafting the assessment report.

(1) Major activities in FY2023

The IPBES assessment of invasive alien species was launched in May 2019. In this project, around 90 experts selected from more than 40 countries worked on the scientific assessment of the status and trends of invasive alien species, their impacts to biodiversity and socio-economy, and policies or measures for their prevention and management. The summary for policymakers (SPM) of the final report was approved at the 10th session of the IPBES Plenary (IPBES-10) in September 2023.

IPBES-TSU-IAS provided support to the overall coordination for drafting work on the assessment report including the planning of the assessment timeline, organisation of author meetings, and managing references and data. In FY2023, the TSU supported the negotiation and approval of the SPM by the member states at IPBES-10 (August-September 2023, Bonn, Germany). Additionally, it provided support to the publication of the final full report, as well as support to the production of the online learning tool and factsheets on the key messages.

Funding for TSU operations is provided by the UNEP Trust Fund, matched by contributions from the Ministry of the Environment, Japan.

3.4.2. IPBES-TSU-SCM hosted at Tokyo Sustainability Forum

IGES has been hosting the IPBES technical support unit for the task force on scenarios and models (IPBES-TSU-SCM) at TSF since March 2024. The TSU functions as an extension of the IPBES secretariat that is headquartered at Bonn, Germany. The TSU is responsible for supporting the task force, a group of experts that undertakes programmes and provides advice on scenarios and models related to biodiversity and ecosystem services.

(1) Main achievements in FY2023

The scenarios and model task force consists of 17 experts selected from the five UN regions. The task force facilitates development and use of scenarios and models for biodiversity and ecosystem services, and provides advice and support for various IPBES assessments. In particular, the task force is focusing on promoting the use of the Nature Futures Framework, a tool for developing future scenarios for biodiversity.

IPBES-TSU-SCM is responsible for overall coordination of the activities of the task force, providing technical support including planning of the timeline, organising task force meetings, collecting and managing relevant literature and data. Since its establishment in March 2024, the TSU organised the annual

task force meeting at IGES Headquarters (17-20 June 2024) and provided support for the development of future workplan for the task force. In addition, it organised regular task force calls and facilitated submission of comments to ongoing IPBES assessments.

Funding for TSU operations is provided by the UNEP Trust Fund, matched by contributions from the Ministry of the Environment, Japan.

3.5. Beijing Office (BJG)

Since its establishment in 2006, the Beijing Office (BJG) has been serving as a bridge and platform for environmental cooperation between Japan and China that is trusted by both countries, and has developed its activities with the objective and goal of promoting bilateral cooperation between Japan and China in the environmental field.

(1) Focus for Impact Generation in ISRP8 by Unit

As the Integrated Coordination Platform between the governments/cities/companies of Japan and China, BJG will conduct the model projects introducing air pollution control technologies etc. with co-benefits effect, whose outcomes will be disseminated and promoted on the markets in the Asian region including China. By doing so, BJG will contribute to materialising a decarbonised society, and will support environmental business between Japanese and Chinese companies.

(2) Major activities in FY2023

Promoting joint implementation of Japan-China model base project for environmental cooperation

In September 2023, IGES and the Sino-Japan Friendship Centre for Environmental Protection signed a “MoU for the implementation of Japan-China model base project for environmental cooperation” and IGES decided to implement the project in collaboration with the Sino-Japan Friendship Centre for Environmental Protection, which started in October of the same year. This project is funded by the Ministry of Science and Technology of China, and is an unprecedented Japan-China cooperation project in the environmental field, with a completely different funding source from previous projects funded by Official Development Assistance (ODA) and/or the Ministry of the Environment, Japan.

The overall implementation period of the project is planned to be five years from FY2023 to FY2027. The following four major areas to be addressed by the project have been applied to the Ministry of Science and Technology of China and have been initiated. The Sino-Japan Friendship Centre for Environmental Protection submitted a report for the first year to the Ministry of Science and Technology of China.

- (1) Ozon-depleting substances and new pollutants
- (2) Construction of beautiful villages (rural environmental measures)
- (3) Construction of an environmental technology platform and environmental technology exchange with the private sector, etc.
- (4) Green low-carbon development

Support for study tour in Japan in the environmental field through Japan-China international solidarity project for afforestation and tree planting

With the complete end of ODA to China, exchanges between Japan and China using public funds in various fields, including the environmental field, are shrinking. At the suggestion of the Embassy of Japan

in China, and through lobbying the Ministry of Ecology and Environment of China, a youth exchange programme in the environmental field was implemented by utilising the fund from the Japan-China international solidarity project for afforestation and tree planting¹⁸, which was under the jurisdiction of the Ministry of Foreign Affairs.

In FY2023, the Sino-Japan Friendship Centre for Environmental Protection was appointed to be the focal point in China for coordination, and 30 young governmental officers and researchers from the Ministry of Ecology and Environment of China and Sino-Japan Friendship Center for Environmental Protection were invited to Japan. IGES was in charge of substantial planning, and Japan-China Friendship Center was in charge of logistics including fund management.

Prior to the invitation, IGES considered the content of the programme, which was appropriate for the qualities of these young people and at the same time would be beneficial to Japan from a macro perspective, and decided to focus on Japan's latest efforts to cope with climate change. Particular attention was given to introducing Japan's latest decarbonisation efforts to achieve its 2030 target (46-50% GHG reduction) and 2050 target (carbon neutrality), so that the programme would serve as reference for the formulation and implementation of policies and measures to achieve China's "double carbon target" (peak out by 2030 and carbon neutrality by 2060).

After the study tour, a debriefing session was held at the Embassy of Japan in China with the Ambassador, Chief of Mission and others in attendance. The Embassy of Japan in China highly appreciated the results of the FY2023 programme and proposed its continuation in FY2024.

Support for youth exchange in the environmental field (Support for dispatching Japanese youth to China)

At the suggestion of the Embassy of Japan in China and through lobbying the Ministry of Ecology and Environment of China, and in response to the above-mentioned "Japan-China international solidarity project for afforestation and tree planting," Sino-Japan Friendship Centre for Environmental Protection provided funds to invite 10 Japanese youth engaged in environmental work (Ministry of the Environment, Ministry of Foreign Affairs and local government officials in environmental department, etc.) to China. IGES provided full support for the implementation of this exchange programme in terms of both substantial planning and logistics. The exchange programmes were held in Beijing and Wuxi city (Yixing city) in Jiangsu province. The exchange meeting held in Beijing was attended by the Ambassador and Chief of Mission of the Embassy of Japan in China.

(3) Selected publications

- Serial columns in "Kankyo Shimbun" (every month) issued by Kankyoshimbunsha, Co., Ltd.
- Serial columns in "Global Net" magazine (every two months) issued by Global Environmental Forum

¹⁸ The Japan-China international solidarity project for afforestation and tree planting refers to a project in which the Ministry of Foreign Affairs allocated nine billion yen in FY2015 supplementary budget to implement (1) afforestation and tree planting projects in China, (2) youth exchange programme combined with tree planting in Japan, and (3) afforestation and tree planting projects in third countries through Japan-China Friendship Center. This project was implemented under the framework of (2).

4. Strategic Management Office (SMO)

As a mechanism to effectively promote strategic research and the impact generation of outputs in the Integrative Strategic Research Programme for the 7th Phase (from FY2017), the former Programme Management Office (PMO) and Secretariat were merged to create the Strategic Management Office (SMO). The SMO is charged with three functions: Knowledge and Communications (KC); Research and Publications (RP) and Planning and Management (PM).

4.1. Knowledge and Communications (KC)

(1) Major activities in FY2023

Strengthening the institutional impact generation capacity

In the ISRP8 which began in FY2021, an institutional target was set to make 30 intended impact cases each year. It was also deemed that the scale of impacts will become larger than before. SMO-KC works to promote the strengthening of the institutional impact generation capacity by focusing on the following points.

- Institutional operations at selected international processes (UNGA/HLPF/APFSD, UNFCCC-COP, CBD-COP, UNEA, G7/G20, T7/T20, etc.)
- Institutional strategic publications (IGES messages, submissions to international/domestic processes, commentaries, knowledge brokering products, Japanese translation of selected sustainability / environmental assessment reports, etc.)
- Institutional strategic networking (Serving as a Secretariat amongst research institutes, strengthening institutional linkage incl. MOUs with UN and selected international organisations.)
- Institutional campaigns and events (ISAP, post COP seminar, etc.)
- Facilitation of planning/planned impact generations (Monthly meetings for cross-unit operations, President awards, SOF, etc.)
- Public Relations (Press release, media seminars, webinars, IGES owned media (web, newsletter, SNS), etc.)
- Strategic Communications (Communication Planning, Op-Ed., special webpage, commercial publication, etc.)

Main achievements are provided in Section 1.

4.2. Research and Publications (RP)

(1) Major activities in FY2023

Direct contribution to research and research outputs

- To directly produce and contribute to publications, RP conducted research on issues related to SDGs, climate, biodiversity, and sustainability science. Main publications included the Sixth ASEAN State of the Environment Report and a commentary on “Why We Need a Transformative Circular Economy.” RP contributed to 15 peer reviewed articles on biodiversity and SDGs as a co-author.
- RP coordinated the book project on Integrated Approaches for a Sustainable Society to be published by Maruzen in July 2024 (in Japanese) and co-authored five chapters.

- RP coordinated the following externally funded projects:
 - Sixth ASEAN State of the Environment Report (JAIF)
 - ASEAN Climate Change Strategic Action Plan (JAIF)
 - Suishinhi S-21 (with BDF, SCP, AW)
 - e-Asia (with BDF)
 - MOEJ project on sustainability assessment indicators
 - Keidanren project on biodiversity (with BDF)
 - Belmont Forum “ABRESO” (with BDF)
 - Suishinhi ICN-2006 (with BDF, CE, AW)
 - Kakenhi on urban green space (with BDF)
 - WorldFish (with BDF)
 - JICA capacity building project
 - *Sustainability Science* editorial office (Springer)
- RP contributed to UNEP’s GEO-7 (Global Environmental Outlook 7) as a CLA.
- RP contributed to the IPBES Nexus assessment as a CLA.
- RP contributed to UNFCCC reviews of Thailand’s and Micronesia’s Biennial Report.
- RP contributed to the Japan Biodiversity Outlook (JBO-4) as a scientific committee member.
- RP coordinated and/or contributed to several translations (Japanese/English) of major reports such as UNEP’s Adaptation Gap Report (Executive Summary), Emissions Gap Report (Executive Summary), UNESCAP’s Asia and the Pacific SDG Progress Report, and UN’s Global Sustainable Development Report (Executive Summary).

Institute-wide research management

- RP managed the SRF application process. RP also conducted a review of the achievements of the FY2022 SRF projects and is in the process of reviewing the FY2023 projects.
- RP compiled the institute-wide publication plan with the list of planned outputs, and coordinated reporting on actual outputs. RP also compiled the citation statistics for peer reviewed journal articles and analysed the impact factors of journals in which IGES researchers publish articles.
- The Publication Policy was maintained, and RP also continued to manage the publication approval process.
- RP managed the editorial office of the peer reviewed journal *Sustainability Science*.
- RP supported the process for selecting the IGES President’s Award for Best Publication.

Research-related support

- RP managed the Library including maintenance of database subscriptions.
- RP provided editing services, including both English and Japanese, not only for research outputs but also for communications and management-related documents.
- RP coordinated translation services.

Institute-wide achievements regarding outputs are indicated in Section 3.

4.3. Planning and Management (PM)

Major activities in FY2023

Planning and Management streamlined the procedures in planning and decision-making simultaneously taking consideration of appropriate resources management (financial and human) and provided corporate management services to maintain the organisational status and interest, and to support research activities through five functions: (i) Planning and Evaluation, (ii) Information and Communication Technology (ICT) Systems, (iii) Financial Management, (iv) HR Management, and (v) General Administration.

Main achievements are provided in Section 4.

ANNEX 2: KEY ACHIEVEMENT BY OTHER PROJECTS FOR PUBLIC-INTEREST PURPOSES

1. Technical Support Unit (TSU) for the Intergovernmental Panel on Climate Change (IPCC)

- Task Force on National Greenhouse Gas Inventories (TFI)

The TSU for IPCC TFI provides scientific, technical and organisational support to the TFI under the supervision of the TFI Bureau (TFB) to fulfil the following two objectives.

- To develop and refine an internationally-agreed methodology and software for the calculation and reporting of national greenhouse gas (GHG) emissions and removals;
- To encourage the widespread use of this methodology by countries participating in the IPCC and by signatories of the United Nations Framework Convention on Climate Change (UNFCCC).

In FY2023, the total revenue was JPY 208 million (including JPY 150 million from the Government of Japan, JPY 12 million from Temporary restricted IPCC Japanese special funds), while the total expenditure was JPY 208 million, resulting in a balanced status.

(1) Support for the IPCC TFI Co-chair

The IPCC TFI Co-Chairs for the IPCC Seventh Assessment Cycle are Takeshi Enoki and Mazar Hayat of Pakistan. The TSU role is to support the work of the Co-Chairs.

(2) Production of Reports to Supplement or Refine the IPCC Inventory Guidelines

Unlike typical AR cycles where one Methodology Report is produced during the cycle, the TFI has been commissioned to produce two IPCC Methodology Reports by the end of 2027: one on Short-Lived Climate Forcers and one on Carbon Dioxide Removal Technologies, Carbon Capture Utilization and Storage. This second Methodology Report was commissioned by the IPCC at its 60th Session on 16-19 January 2024 in Istanbul, Türkiye.

Work on the Short-Lived Climate Forcers Methodology Report commenced with a Scoping Meeting on 26-28 February 2024 in Brisbane, Australia. (The outputs of that meeting are to be considered by the IPCC Panel at its 61st session in Sofia, Bulgaria on 27 July-2 August 2024.)

Work on the Carbon Dioxide Removal Technologies, Carbon Capture Utilization and Storage Methodology Report commenced with preparations for an expert meeting to be held on 1-3 July 2024. In addition, preparations commenced for an Expert Meeting on Reconciling Land Emissions to be held on 9-11 July 2024, with the aim of encouraging climate modellers to produce more policy-relevant outputs.

(3) Governance of the IPCC Inventory Software

The IPCC Inventory Software¹⁹ helps inventory compilers to estimate emissions and removals of GHGs according to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (2006 IPCC Guidelines). The IPCC TFI TFB accepted at its TFB meeting in March 2024 a greater role in the governance of the IPCC Inventory Software. The TSU committed to support the TFB with a greater level of reporting on

¹⁹ <https://www.ipcc-nggip.iges.or.jp/software/index.html>

software developments. The TSU has been tasked with considering the development of a business case for future investment in the software, for consideration by the IPCC TFB in late 2024.

(4) Development, Maintenance and Improvement of IPCC Inventory Software

The TSU worked extensively to develop software to make it more flexible for use in most country circumstances and to link the IPCC Inventory Software to the UNFCCC Reporting Tool. This linkage will be critical for assisting developing countries to meet their reporting commitments under the Paris Agreement. TSU has also conducted a number of demonstration events to present the software in order to disseminate IPCC products to a broader set of users.

(5) Management of IPCC Emission Factor Database (EFDB)

The IPCC EFDB²⁰ is a database of emission factors and other parameters. By using this database, national experts can find nationally appropriate values to develop national GHG inventories in accordance with the IPCC inventory guidelines. In FY2023, the programme has been a lower priority until a review may be completed at the end of 2024 for the future conduct of the EFDB.

(6) Inventory Internship Programme

In FY2023, this programme was not implemented.

(7) Collaboration with Other Organisations

In FY2023, TSU continued cooperation with other organisations on inventory-related matters such as the Committee for Earth Observations (CEOS); the National Institute for Environmental Studies (NIES) of Japan and the Global Forest Observation Initiative (GFOI). TSU also collaborated with other projects in IGES, where possible, on matters relating to estimation of GHGs emissions and removals.

2. Asia-Pacific Network for Global Change Research (APN)

APN is an intergovernmental network that aims to promote collaborative research and to develop the capacity of scientists, practitioners and others, especially in developing countries, in the following areas: climate; biodiversity and ecosystems; air, land, coasts and oceans; food, water and energy; risk and resilience; and human dimensions. Through research, capacity development, science-policy interactions and stakeholder engagement, APN contributes towards a dynamic and responsive Asia-Pacific community effectively addressing global change and sustainability through innovative and transdisciplinary research and capacity development activities.

As a summary of its financial status, the total revenue in FY2023 was JPY275 million, and the expenditure was JPY 269 million, resulted in a surplus of approximately JPY 6 million. The surplus was mainly caused by the foreign exchange profit due to the depreciation of the yen during the fiscal year. The amount of the surplus was reserved in the Deposit for Promoting APN Projects for the costs of projects for multiple fiscal years which are ongoing or will start in FY2024, and consequently, the substantial balance was balanced.

APN conducted the following activities in FY2023.

²⁰ <https://www.ipcc-nggip.iges.or.jp/EFDB/main.php>

(1) Collaborative Regional Research Programme (CRRP)

To contribute to the development of policy options that respond to global change from the scientific perspective in the Asia-Pacific region, the 52nd Steering Committee Meeting of APN approved funding to support 10 regional research proposals under the Collaborative Regional Research Programme (CRRP). These were selected from the APN FY2022 Call for Proposals for support in FY2023.

(2) Scientific Capacity Development Programme (CAPaBLE)

To build the scientific capacity in research on global change and sustainability in developing countries, the 52nd Steering Committee Meeting of APN approved funding to support seven proposals under the Scientific Capacity Development Programme (CAPaBLE). These were selected from the APN FY2022 Call for Proposals for support in FY2023.

(3) Direction and Activities of APN

i. Subregional Committee Meetings and Proposal Development Training Workshops

Subregional committees (Temperate East Asia, Southeast Asia, South Asia and the Pacific) have been established to discuss challenges, as well as research and capacity development needs common to the subregion. In March 2024, APN, in collaboration with the University of the South Pacific (USP), planned to organise the First Pacific Subregional Committee Meeting in conjunction with the Pacific Proposal Development Training Workshop. Subsequently, these events have been postponed to August 2024.

ii. Enhancing strategic relationships with relevant organisations

To enhance strategic relationships with global change and sustainability organisations, two Memoranda of Understanding (MOU) were signed in February 2024 with the Asian Institute of Technology (AIT) and USP. These were formerly recognised at a ceremonial signing of the MOUs held at the 26th Intergovernmental Meeting held in Jakarta, Indonesia from 11-14 June 2024.

iii. Collaborative Projects with IGES

With APN funding, a joint APN-IGES project on locally-led adaptation is continuing into its second year with activities being conducted in Nepal, Viet Nam and Fiji. This activity is now engaging AP-PLAT to see how its ClimoCAST tool can be incorporated into the local activities in each of the study countries. Additionally in FY2023, the outputs of the joint APN-IGES Regional-CES project were presented at ISAP2023 as a parallel session, and a poster on the project that was also presented won a prize for best poster.

iv. Strengthening strategic relationships with member countries

APN is working on strengthening its membership and is in the process of creating engagement portfolios for each of its 22 member countries. In the latter half of FY2023, five Portfolios of APN Engagement were produced for the governments of Australia, Japan, New Zealand, the Republic of Korea and the United States of America.

(4) Contribution at Environmental Forums

i. Contribution at International Science-Policy Forums

In FY2023, APN collaborated with numerous institutions, including SLYCAN Trust, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), IGES, AP-PLAT, National Institute for Environmental Studies (NIES), International Center for Climate Change and Development (ICCCAD), South Asian forum for Environment (SAFE), Global Biodiversity Information Facility (GBIF), the World Climate Research Programme (WCRP), Future Earth, the Sustainable Mekong Research Network (SUMERNET), International Centre for Integrated Mountain Development (ICIMOD), AIT, the University of the Philippines Los Baños (UPLB), and the IGES Kansai Research Centre. These collaborations focused on strategic activities such as climate adaptation, biodiversity data promotion, early career professional support, and integrated resource management.

In August 2023 in the Republic of Korea, APN organised a session at the 8th Asia-Pacific Climate Change Adaptation (APAN) Forum and attended and presented at a UNFCCC Adaptation Committee event where it presented its extensive adaptation projects. In June 2024, APN participated in the 60th session of the Subsidiary Body for Scientific and Technological Advice (SBSTA60), discussing resilient mountain ecosystems. With Future Earth, APN engaged early career professionals and discussed potential collaboration on numerous activities, including with its TERRA (Transdisciplinarity for Early Career Researchers in Asia) school. APN sponsored 13 professionals for the WCRP Open Science Conference in Rwanda, October 2023, and presented initiatives such as the Asia-Pacific Network of Early Career Professionals for Global Change Research and the project on locally-led adaptation in the Asia-Pacific region, which is being implemented jointly with IGES at the WCRP Joint Steering Committee Meeting in May 2024. In the Mekong region, APN promoted research proposals through a training seminar on its call for proposals.

ii. Joint Activities with the Hyogo Prefectural Government

APN and the Hyogo Prefectural Government, which hosts the Secretariat and provides operational support to APN, jointly organise annual forums to raise awareness of environmental issues among the residents of Hyogo Prefecture. In FY2023, APN and the Hyogo Prefectural Government jointly organised a hybrid-style seminar on "SDGs International Forum for Biodiversity" in Kobe in October 2023. In addition, APN and the Graduate School of Disaster Resilience and Governance, University of Hyogo, jointly organised a hybrid-style session on "Climate Change and Disaster Reduction" in HAT Kobe in March 2024.

3. Japanese Center for International Studies in Ecology (JISE)

JISE primarily carries out field surveys and practical research to restore and reconstruct ecosystems and biodiversity from local to global levels aiming to realise societies based on sustainable development from the perspective of plant ecology. In FY2023, JISE implemented the following activities, including training and information collection and provision on forests, nature regeneration and ecology.

As a summary of its financial status, total revenue in FY2023 was JPY 80.4 million and the expenditure was also JPY 80.4 million, resulting in a balanced status. The revenue includes JPY49,105,488 due to a reversal of the JISE Operating Funds.

(1) Research Projects

JISE analysed the growth behaviour of regenerating forests based on post-planting measurement data of pot seedlings grown from local potential natural vegetation component tree species, as revealed by ongoing vegetation surveys and forest conservation research.

On the international research front, JISE analysed the growth behaviour of regenerated forests based on post-planting measurement data of the pot seedlings grown from the local potential natural vegetation component species, as identified through ongoing vegetation surveys and forest conservation research mainly in Malaysia and Kenya. JISE presented the results in the investigation of the vegetation survey data at the Society of Vegetation of Japan and the Ecological Society of Japan. In Lao PDR, JISE has proposed strengthening the seedling production system and human resource development for biodiversity, aiming to achieve steady greening and reforestation while considering biodiversity conservation, and exchanged a Memorandum of Understanding (MOU) with the Vientiane Capital Provincial Agriculture and Forestry Office (VC PAFO). JISE also developed and implemented an analytical method for the status of nature experiences and relationships with living organisms suggested from outputs (LDM paintings) of primary school children in Japan and Lao PDR, and some of the results were presented at the seminar as a preliminary report.

On the domestic front, JISE carried out research on environmental conservation forests, which included comparative studies of natural vegetation and secondary vegetation, as well as studies to develop quantitative evaluation methods for the disaster mitigation functions of vegetation resources, particularly fire protection functions. Some outputs of the above-mentioned research were presented at various domestic academic meetings as well as being published in the “JISE REPORT.” In a satoyama in a park green area in Kawasaki, JISE worked with citizens on a biological survey, a vegetation survey and a biodiversity benefit assessment, and published some of the results in national journals and at academic conferences.

In addition to the above, JISE conducted other projects commissioned by private companies, local governments and non-profit organisations. These included vegetation surveys and planning for forest and nature restoration, technical instruction in tree planting as well as vegetation monitoring surveys in forest and nature restoration areas in several prefectures including Nagano, Akita and Gunma.

(2) Capacity Building

JISE organised face-to-face learning sessions where children and adults could learn together, aiming to encourage the experience of new awareness of natural elements that we are rarely aware of, surprise at the diversity of ecology, uses and species, and the fun of learning, through observation of familiar outdoor organisms (plants, pollen, seeds/fruits, insects, etc.) and minerals (grains of sand). In addition, research staff members participated as instructors in hands-on classes at elementary schools in Yokohama City, workshops at Yokohama National University and others.

(3) Interaction

JISE annual Open Forum was held in June 2024 under the title " Biodiversity education for a sustainable wellbeing society - how to communicate, protect and pass on the richness" with speakers of IGES researchers and external experts. The open workshop was held under the theme of “Street trees around us” with an exchange of views and discussions based on the reports from JISE researchers. In both cases, online presentations were used to attract participants from a wide range of fields, including students, business representatives, and residents of remote areas.

(4) Dissemination and Public Awareness

The annual research bulletin, ECOHABITAT: JISE Research (combined Volumes 29 and 30), was published.

To disseminate news of JISE’s activities and for public relations purposes, JISE distributed newsletters (two issues a year) highlighting its own activities as well as the efforts of various organisations in environmental conservation. JISE also published its annual bulletin “Eco-Habitat: JISE Research” and the

occasional publication “JISE REPORT” (two issues), which reports field surveys and practical activities for ecosystem conservation.

Annexed Detailed Statements

As there are no "Important Matters Supplementing Business Description" as stipulated in Article 34, Paragraph 3 of the Enforcement Regulations of the Law Concerning General Incorporated Associations and General Incorporated Foundations, no annexed detailed statements are included.