

Integrative Strategic Research Programme for the 7th Phase (ISRP7)

FY2019 (Year 3)

Business Report

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Institute for Global Environmental Strategies

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1. About ISRP7

The Integrative Strategic Research Programme for the 7th Phase (ISRP7) of the Institute for Global Environmental Strategies (IGES) launches in July 2017 for a four-year implementation period. ISRP7 is built upon IGES's Medium-to-Long Term Strategy 2016-2025 (MLS), which was approved by the Eighth Board of Trustees (BOT) meeting in February 2016.

IGES intends to be a leading agent of change in Asia and the Pacific through intellectual inputs, mainly based upon its strategic research. Given the two important international agreements that have been agreed in 2015, namely the 2030 Agenda for Sustainable Development including Sustainable Development Goals (SDGs) and the Paris Agreement, strategic research in the coming years is likely to focus upon effective implementation. Quantitative analysis and data management with partner research institutes, and new models of governance based upon the concept of “global partnership” at all levels could be important areas for the institute.

In this connection, IGES recognises it is critical to strategically use the core fund to invest, select and conduct identified activities that can run throughout the phase to develop key expertise within IGES for in-depth policy analysis and to send out influential messages. Utilising the core fund, a more programmatic approach should be explored where pooled resources can leverage collaborating partners' resources for larger impacts, and most effective forms of knowledge products or activities can be identified, where IGES has advantages over other organisations, to induce impacts. IGES will implement its strategic research programme with multiple groups at its head office and satellite offices, namely:

- **Three Issue Areas:** Climate and Energy (CE), Natural Resources and Ecosystem Services (NRE), and Sustainable Consumption and Production (SCP)
- **Two Functional Centres:** Centre for Strategic and Quantitative Analysis (QAC), and Centre for Sustainability Governance (SGC)
- **Three Taskforces:** City (CTY), Finance (FIN), and Business (BIZ)
- **Five Satellite Offices:** Kansai Research Centre (KRC), Kitakyushu Urban Centre (KUC), Regional Centre in Bangkok (BRC), Beijing Office (BJG), and Tokyo Sustainability Forum (TSF)

At the same time, IGES renews its operation and management mode that enables more efficient and effective support for the implementation of the programme. From 1 July 2017, the former Secretariat and the Programme Management Office (PMO) will be merged to create a Strategic Management Office (SMO) not only to provide institute-wide planning and management functions but also to shape and lead strategic research and policy analysis, development of business opportunities and effective communications through strategic engagement with stakeholders. SMO consists of three sections:

- Knowledge and Communications (KC)
- Research and Publications (RP)
- Planning and Management (PM)

These three sections will report to the Board of Directors and Board of Trustees (BOD/BOT) of IGES with the following responsibilities: KC will be responsible to ensure impact generation; RP for ensuring research/policy papers and other outputs planned every year, and PM for strategy development as well as sound management of finance and other key resources of the institute. The annual business report will be therefore organised in these three main sections. The report will also provide the summary of key achievements made by each unit of IGES, as well as by other projects for public-interest purposes in FY2019, i.e. the Technical Support Unit (TSU) for the

Intergovernmental Panel on Climate Change (IPCC), the Asia-Pacific Network for Global Change Research (APN), and the Japanese Center for International Studies in Ecology (JISE) and other information in the Annexes.

2. Impact Generation

2.1. Highlights of impact generation

In close collaboration with diverse stakeholders, IGES aims to generate “impact” that facilitates the transition towards realising sustainable societies. In its ISRP7, which began in FY2017, we set our target to have 25 successful cases annually. We have attained the target in FY2017-2019 with 25, 36 and 35 cases, respectively. Below is a list of selected high-level impacts in FY2019.

Table 1: List of High-level Impacts in FY2019

Unit	Title
CE	CE's contribution to the deliberation process on Article 6 by providing expertise as members of Japanese government's negotiation team at the 25th Conference of the Parties (COP25) to the United Nations Framework Convention on Climate Change (UNFCCC)
NRE	Strengthened community resilience through development of local institutions, capacities and services
SCP	Becoming a key regional knowledge player on circular economy and plastics (including issues associated with marine and river plastics) by being a key regional think-tank on the topic
SCP	Catalysing knowledge & actions for promoting SCP/sustainable lifestyles in Asia-Pacific region
SCP (CCET ¹)	Promotion of sustainable waste management in Asia and the Pacific with the concept of the 3Rs through the development of national and city-level waste management strategies and the sub-regional network
SGC	IGES key messages promoting integrated and inclusive approaches influence goal policies and chairs summary at the Asia-Pacific Forum on Sustainable Development (APFSD)
SGC	IGES influenced the Japan's SDGs implementation guiding principles, which will determine the course of Japan's SDGs implementation over the next few years
BIZ	Newly established initiative “RE Action”, mobilising demand-side signals for renewable energy
CTY	Mainstreaming the concept of “Voluntary Local Reviews” globally
KRC	Formation of the Hokusetsu Satoyama regional circulating and ecological sphere (CES)
KUC	Enabling introduction of appropriate waste management technologies in Asian cities
BRC	Improved environmental quality in Association of Southeast Asian Nations (ASEAN) cities through better long-term city planning and higher capacity to implement transformative local actions, closely linked to the SDGs
BRC	Increased capacities of ASEAN governments to develop and implement climate change adaptation policies and projects
SMO-KC	Contributing to the promotion of IPCC's Special Reports to a Japanese audience through IGES's strategic communications and network

¹ CCET: IGES Centre Collaborating with UNEP on Environmental Technologies

In FY2018, IGES set up the “Mountain View Award,” awarded by IGES President to the team with the “best impact” case. The Award promotes impact generation and celebrates good impact cases to be shared within the institute. Four cases are highlighted as FY2019 impact generation below that are selected as finalists for the FY2019 award:

1. Introduction of the National Action Plan on Sustainable Consumption and Production for the period 2021 – 2030 in Viet Nam

Since early 2019, IGES has worked closely with the Government of Vietnam (GoV) through the Ministry of Industry and Trade of Vietnam (MOIT), and took a lead to guide GoV in the process of developing and drafting the National Action Plan on SCP for the period of 2021 – 2030. The National Action Plan is the key guiding policy document on SCP policies and activities, and the plan was approved by the Prime Minister of Vietnam on 24 June 2020. Based on the National Action Plan, multiple ministries, including MOIT, the Ministry of Natural Resources and Environment, the Ministry of Planning and Investment, and the Ministry of Finance will coordinate with other stakeholders such as provincial governments, companies and civil society for implementation.

2. Supporting the Development of National and Sub-national Waste Management Strategies Provided Policy Directions towards Improving Sustainable Waste Management and Resource Efficiency in Asia and the Pacific

Waste management is a crosscutting issue that affects many aspects of the environment, economy and society in Asia and the Pacific. CCET has been assisting national and sub-national governments in the region in developing waste management strategies and action plans, and enhancing technical and institutional capacities for moving from end-of-pipe solutions to integrated resource management.

- Myanmar National Waste Management Strategy and Master Plan was officially adopted by the Cabinet and promulgated as a Presidential Decree in Jan 2020. This Strategy was developed with the full support of CCET starting from a gap analysis to strategy development with the participation of key stakeholders in the country.
- “Ecology Note – Towards a Clean, Green and Beautiful Bhutan -” an environmental education tool - was developed by the National Environment Commission (NEC) with technical support from CCET. The contents of the Ecology Note have been integrated into the official science curriculum at primary schools in Bhutan, in collaboration with the Royal Education Council (REC).

3. Newly establishing “RE Action” initiative, mobilising demand side signal for renewable energy

RE Action is a new initiative to promote 100% renewable energy use, encouraging organisations such as businesses, local governments, schools and universities, and hospitals which express their intentions and take action to convert their current energy use to 100% renewables.

IGES became one of the consortium members of the RE Action, together with the Japan Climate Leaders’ Partnership (JCLP) for which IGES is serving as Secretariat, the Green Procurement Network (GPN), and ICLEI Japan. The initiative was launched in October 2019, endorsed by the Climate Group (TCG), a founder and organiser of RE100.² As of April 2020, more than 60 organisations, including the Ministry of the Environment (MOEJ) and the Ministry of Foreign Affairs (MOFA), as well as six local governments, are participating in the initiative.

² International business initiative committed to 100% renewable power, working to massively increase corporate demand for and delivery of renewable energy

4. Contributing to the promotion of IPCC's Special Reports to Japanese audience through IGES's strategic communications and network

IGES organised a panel session at the IGES COP25 debriefing seminar on IPCC's three special reports, namely, the Special Report on 1.5 degrees (SR1.5), the Special Report on Climate Change and Land (SRCCL) and the Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC), released in 2018-2019, inviting a couple of Japanese Lead Authors (LAs) as panelists. Also, in time for the COP25 debriefing seminar, IGES released two handbooks on SRCCL and SROCC, composed of interviews to LAs on key messages of the Special Reports, briefing notes by IGES researchers, and FAQs for Japanese audience. In addition, IGES facilitated collaboration of research units with the Japan Broadcasting Corporation (NHK) in the creation of NHK BS1 Special programme "The Climate Crisis ~ Warnings from the IPCC Special Reports" (broadcast in January 2020), becoming a major information source for the programme. For this TV programme, IGES was acknowledged alongside the IPCC at the top of the end credits.

2.2. Digital Outreach

The official IGES Twitter account and Facebook page were launched in June 2018 and continued to disseminate information in FY2019. The number of followers on Twitter reached 1,826 on the Japanese account and 988 on the English account, achieving the primary goal of attracting new audiences. In FY2019 we focused on expanding the English-language content, and as a result we succeeded in increasing the number of posts from 360 in the previous year to 653.

Table 2: Key Numbers of Social Media Activities (FY2019)

Twitter Followers

	FY2018	FY2019
Japanese Account	931	1826
English Account	611	988

Facebook Page Likes

FY2018	FY2019
262	369

Due to efforts to support and encourage each Unit, information on the website is being more frequently updated. The number of website page views (PV) has shown an increasing trend since FY2016. Compared to the monthly average of 68,039 PV in FY2018, the monthly average in FY2019 was 69,507 PV (Figure 1). In August 2019, the website was fully renovated, creating more landing pages for each type of information and improving the search functionality within pages.

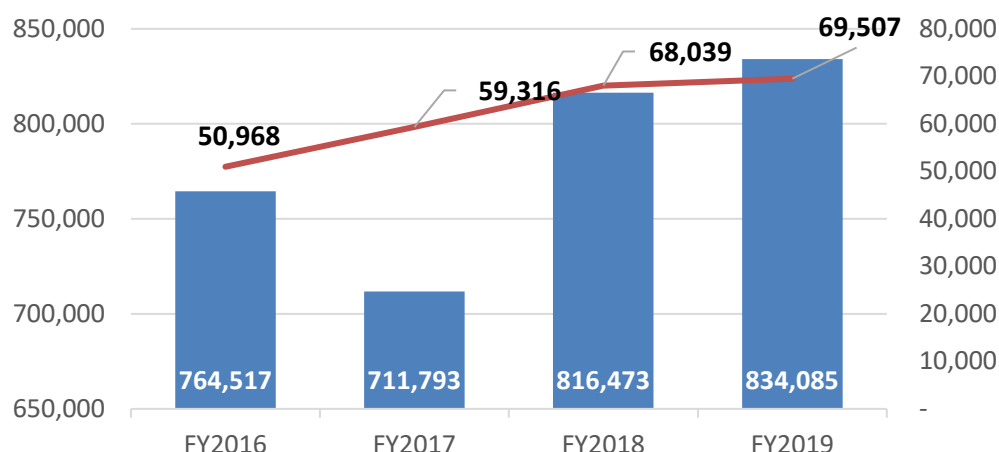


Figure 1: IGES Website Viewership (FY2016-2019³)

IGES FY2016 was reported for April 2016-June 2017 (15 months)

The bar shows the total annual PV (left axis) and the line shows the average monthly PV (right axis).

The number of publication downloads in FY2019 increased considerably. While there was an increase in the number of visits via search engines, there was also a decrease in the exit rate, showing that the desired page can be found more easily. The increase in the number of organic visits⁴ is thought to be due to external contributing factors such as the presence of activist Greta Thunberg and the appointment of Shinjiro Koizumi as Environment Minister of Japan, as well as IGES activities, including information dissemination (through the e-Newsletter, social media, IGES-organised seminars, etc.) and media exposure. In FY2019, outputs translated into Japanese were very popular, accounting for 6 of the top 25 downloaded outputs. The percentage of downloads coming from Japan increased from 23% to 52%, indicating that IGES is doing a better job of reaching a domestic audience. While a significant portion of our download numbers seem to be attributed to automated traffic which is out of our control, the above points also seem to be significant factors in the increase. (Figure 2).

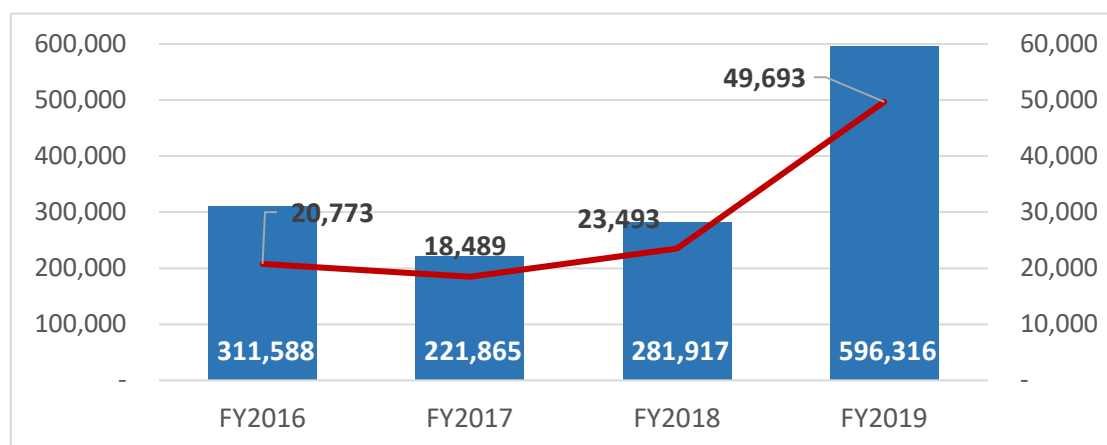


Figure 2: Downloads of IGES Publications (FY2016-FY2019)

IGES FY2016 was reported for April 2016-June 2017 (15 months)

The bar shows the total annual download (left axis) and the line shows the average monthly download (right axis).

³ From FY2019 we adjusted settings to remove automated traffic from our web analytics data. This will make the information more actionable. Using the previous methodology would have resulted in a count of 933,795 pageviews for FY2019.

⁴ Organic visits: Visits to a website coming from a search engine's organic results and not paid advertisements.

Table 3 is the list of top 10 downloaded publications. Joint research publications with the Global Compact Network Japan (GCNJ) on Business and the SDGs ranked high in the list, indicating that the high demand from the business sector for information on those topics continues since last year. This year saw the publication of the Japanese version of “1.5-Degree Lifestyles: Targets and options for reducing lifestyle carbon footprints” which was originally published last year and earned a lot of attention. The report ranked third within five months of its publication, indicating the tremendous response to the report after its release. The summary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report for Policymakers was ranked 10th, indicating the growing interest in biodiversity and the high demand for Japanese translations of these important assessment reports. It will continue to be important to publish these global assessment reports in a timely manner in light of these trends and demands.

Table 3: Top 10 publication downloads in FY2019 (Published in last two years)

Rank	Title	Type	Published Date
1	主流化に向かう SDGs とビジネス ～日本における企業・団体の取り組み現場から～ (Mainstreaming the SDGs in Business: Actions by Companies and Organisations in Japan)	Policy Report	Feb-19
2	Sustainable Lifestyles Policy and Practice: Challenges and Way Forward	Discussion Paper	Nov-19
3	欧州連合域内排出量取引制度の解説 (Commentary on EU ETS: European Union Emissions Trading System)	Working Paper	Mar-19
4	1.5°C ライフスタイル - 脱炭素型の暮らしを実現する選択肢 日本語要約版(Japanese summary of “1.5-Degree Lifestyles: Targets and options for reducing lifestyle carbon footprints”)	Technical Report	Jan-20
5	IGES List of Grid Emission Factors	Data or Tool	Mar-20
6	自治体による再生可能エネルギーの地産地消の取組 -これまでの成果・課題と取組の拡大のために- (Involvement of the Local Government in the Local Production for Local Consumption of Energy)	Issue Brief	Sep-18
7	CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation)設立の経緯と制度の概要 (Background of establishment and overview of CORSIA)	Working Paper	Apr-19
8	Society and Lifestyles in 2050: Insights from a Global Survey of Experts	Discussion Paper	Jun-19
9	エネルギーシステムを変革する:そして、地球の気温上昇を抑制する (日本語翻訳版) (Japanese translation of “Transforming the Energy System: And Holding the Line on Rising Global Temperatures” by International Renewable Energy Agency (IRENA))	Policy Report	Jan-20
10	IPBES 生物多様性と生態系サービスに関する地球規模評価報告書 政策決定者向け要約 (Japanese summary for policymakers of the Global Assessment Report on Biodiversity and Ecosystem Services of the IPBES)	Translation of non-IGES Material	Mar-20

2.3. Media coverage

Whereas we were able to obtain a large amount of media coverage in the previous year, the number of items covered by the media decreased in FY2019 (Table 4). FY2018 saw a significant increase in media coverage, due to the fact that the report on “Proposals to Strengthen Japan’s Domestic Measures and Regional Cooperation on Stable and Environmentally Sound Plastic Scrap Recycling: Response to China’s Ban on Imports of Plastic Scrap” was picked up by Kyodo News Wire and distributed worldwide. This led to a number of media articles both domestically and internationally, especially in China. Although there was no such single, large number-earning media coverage item

in FY2019, IGES was able to gain exposure in influential media and programmes, such as the Nikkei newspaper's "Keizai Kyoshitsu" and the NHK BS1 Special Programme. In addition, press seminars, a study group for the media, continued in FY2019, and this functioned as an opportunity to provide additional interviews and materials, contributing to indirect media coverage. The results of the indicators of impact generation set for the ISRP7 are summarised in Table 5.

Table 4: Total Number of Media Coverage (FY2016-FY2019)

	FY2016	FY2017	FY2018	FY2019
Japanese	240	223	367	253
Other languages	45	34	87	58
Total	285	257	454	311
Monthly Average	19.0	21.4	37.8	25.9

IGES FY2016 was reported for April 2016-June 2017 (15 months)

Table 5: Key Targets of Impact Generation and Their Results in FY2019

Indicator	FY2019 target	FY2019 results
Cases of high level of influence	25	35
IGES publication downloads	250,000	596,316
IGES website viewership	730,000	834,085
Media coverage (newspapers, magazines, TV/radio broadcasts, web-media)	250	311

The position of IGES in the University of Pennsylvania think tank survey rose slightly last year by one rank to number 39 globally among environment-related think tanks. The concrete implementation of the survey's criteria is not very clear, but IGES has regularly participated in one of the survey's think tank "summits" each year for the past few years in an effort to maintain visibility with the institute which conducts the survey.

Table 6: IGES in Rankings (FY2013-FY2019)

	2013	2014	2015	2016	2017	2018	2019
GLOBAL GO TO THINK TANK by University of Pennsylvania (category: environment policy) (Published in January of the same fiscal year)	48	38	38	38	40	40	39

3. Outputs

3.1. Written publications

In FY2019 the target for peer reviewed journal articles was exceeded by over 100%, but the target for “written and policy and research outputs” fell short. Nevertheless, the overall combined total number of outputs in these two categories (130, target) was exceeded (138). There are a few reasons for this situation. First, there was a major shift towards peer reviewed articles. Second, there was a major shift towards more substantial and higher quality outputs with more rigorous review processes. A large majority of the “written policy and research outputs” were policy reports (many produced jointly with other organisations) and book chapters (published by academic and commercial publishers). Discussion papers, which have a much easier review and approval process, are the output type which declined the most. Third, these targets do not include other types of outputs which contribute to impact generation such as submissions to policy processes, articles/ commentaries in non-peer reviewed journals or newspapers, and translations. IGES has been increasing its efforts on these types of outputs.

The emphasis on translated outputs has especially increased. Last year 32 translations were produced (E=>J: 23, J=>E: 9). Most were produced using internal funds and IGES staff, although a few were externally funded. Translated outputs were also very popular, accounting for 6 of the top 25 downloaded outputs (all E=>J). This indicates that translations may be having some impact in Japan. Major translations included prominent reports by UN organisations such as United Nations Environment Programme (UNEP), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), and IRENA; summaries of major assessment reports such as the UN’s Global Sustainable Development Report and the Global Assessment Report on Biodiversity and Ecosystem Services produced by IPBES (Summary for Policymakers); the European Green Deal; and reports from business stakeholders such as RE100 and the World Business Council on Sustainable Development.

The targets for flagship/ priority and timely outputs were met in FY2019. The flagship/priority output on climate was a research report on “Net Zero World 2050 Japan” (in Japanese, currently being translated into English). For SDGs, two policy reports were jointly produced with GCNJ, one on “Mainstreaming the SDGs in Business: Actions by Companies and Organisations in Japan” (English version of last year’s report) and “SDGs and Business in the ESG⁵ Era: Actions by Companies and Organisations in Japan” (in Japanese, to be translated into English in due course). A timely output on climate was a discussion paper on “Sustainable Lifestyles Policy and practice.” Timely outputs on SDGs were a policy report on “Assessment of the G20⁶ Countries’ Concrete SDG Implementation Efforts: Policies and Budgets Reported in Their 2016-2018 Voluntary National Reviews” and a working paper on “State of the Local Voluntary Reviews 2020.” All of these outputs achieved a substantial number of downloads (over 1000) during the fiscal year.

The focus of priority outputs expanded beyond climate and SDGs to include the new coronavirus (COVID-19) crisis and waste issues. In May 2020, IGES published a position paper on ‘Implications of COVID-19 for the Environment and Sustainability.’ A policy report on “Strategies to Reduce Marine Plastic Pollution from Land-based Sources in Low and Middle-Income Countries” was published jointly with UNEP. IGES and UNEP also helped to develop new waste-related national strategies of Indonesia (National Plastic Waste Reduction Strategic Actions) and Myanmar

⁵ ESG: Environmental, social and governance

⁶ G20: Group of Twenty

(National Waste Management Strategy and Master Plan) which were published jointly with the two governments.

IGES made important contributions to four major assessment reports in FY2019 as authors. IGES contributed to the IPCC Sixth Assessment Report (Working Group (WG) 1 and WG3), the IPBES Thematic Assessment on Sustainable Use of Wild Species, and the Global Report on Disaster Risk Reduction. In addition, IGES participated in UNEP's Steering Committee on the Future of Global Environment Outlook (GEO) and the Scoping Report for the IPBES Nexus Assessment.

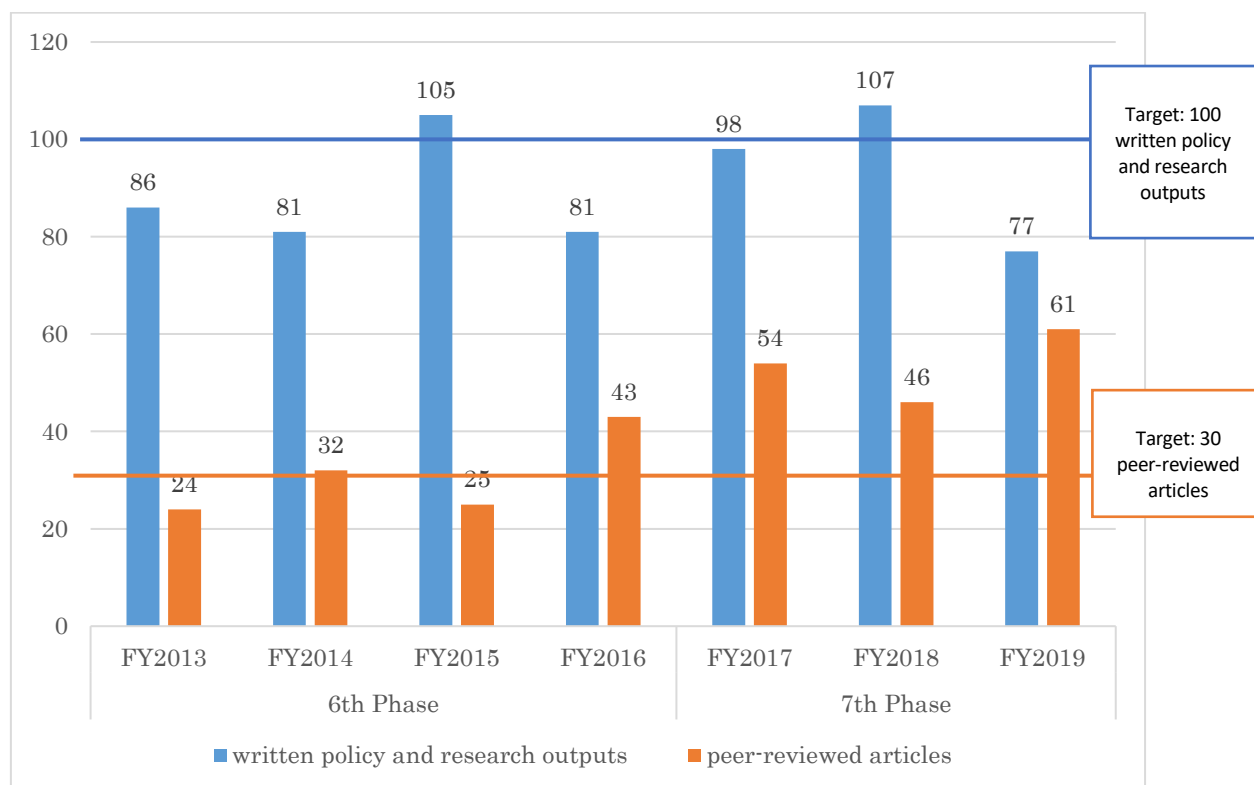


Figure 3: Written Policy and Research Outputs Compared to 7th Phase Targets

3.2. 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 five 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. IGES has over 2.5 times as many citations in Google Scholar compared to the Web of Science, and Google Scholar is considered more appropriate for IGES since the target audience for IGES outputs is much wider than just the academic community, which is the focus of Web of Science. Citations in the Web of Science increased by 857 between February 2018 and February 2019, and by 1,077 between February 2019 and February 2020, increases of 36% and 33%, respectively, for a total of 4,343. In comparison, citations from Google Scholar increased by 1,756 and 2,182 during these periods, increases of 23% in both years, totalling 11,580. The 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 such as Sustainability Science, Journal of Cleaner Production, Energy Policy, Applied Energy, Climate Policy, etc. It is also interesting that articles from the journal International Review of Environmental Strategies, which IGES stopped publishing in 2007, are still getting citations; this was facilitated when IGES published those articles directly on its website.

IGES does not track citations for other publication types because they are not included in Web of Science and checking one by one on Google Scholar is very time consuming. However, it was observed that Web of Science is now including some edited book chapters, though not consistently. Edited book chapters which are picked up by Web of Science are also included in the calculation of Google Scholar citations in Table 7. The results of the output-related indicators set for the ISRP7 are summarised in Table 8.

Table 7: Citations of IGES Publications (as of February 2020)

	Number of Articles					Number of Citations (WOS)					Number of Citations (Google Scholar)				
	Feb. '16	Feb. '17	Feb. '18	Feb. '19	Feb. '20	Feb. '16	Feb. '17	Feb. '18	Feb. '19	Feb. '20	Feb. '16	Feb. '17	Feb. '18	Feb. '19	Feb. '20
WOS	157	187	214	281	358	1,264	1,700	2,409	3,266	4,343	2,958	3,824	5,050	6,541	8,381
Articles from Pub. DB / not in WOS	68	97	108	111	124	NA	NA	NA	NA	NA	650	778	1,022	1,092	1,310
Sub Total	225	284	322	392	482	1,264	1,700	2,409	3,266	4,343	3,608	4,602	6,072	7,633	9,691
IRES*	141	141	141	141	141	NA	NA	NA	NA	NA	1,058	1,228	1,570	1,765	1,889
TOTAL	366	425	463	533	623	1,264	1,700	2,409	3,266	4,343	4,666	5,830	7,642	9,398	11,580
Yearly Increase		+59	+38	+70	+90		+436	+709	+857	+1,077		+1,164	+1,812	+1,756	+2,182
% of Increase		+16%	+9%	+15%	+17%		+34%	+42%	+36%	+33%		+25%	+31%	+23%	+23%

Table 8: Outputs Targets and Achievements

		FY2019 target	FY2019 achievement
Priority outputs	Flagship/priority outputs focusing on climate and SDGs	2	3
	Timely output on climate	1	1
	Timely output on SDGs	1	2
Written policy and research outputs		100	77
Peer reviewed journal articles		30	61
Contribution to global/regional assessments*		2	4

*: Number of ongoing and completed major global/regional assessment reports that IGES has contributed to.

3.3. Strategic Research Fund (SRF)

In FY2019, 15 SRF projects were approved. As in FY2018, nearly all the proposals were accepted, although some proposals were merged, and most did not receive the full requested budget. Therefore, most of the projects were on a relatively small scale.

A review of the FY2018 SRF was conducted in FY2019, and the results were positive, similar to the review of the previous year. Overall, 22 completed outputs were produced (slightly more than 21 from the previous year's review), while another 16 outputs made significant progress (completed draft, submitted for review, or accepted for publication) (compared to 25 in the previous year). The number of funding proposals developed was 22, of which 11 were accepted, four rejected, and seven were waiting for results at the time of the review. Some projects even achieved a certain level of impact despite the very short timeframe. Three T20 (Think20) policy briefs were published and contributed to the T20 outcome presented to the G20 in 2019. The SDG interlinkages tool contributed to SDG planning in Bangladesh, Indonesia, Philippines and Viet Nam, and was cited in GEO6. Outputs from two projects were presented at the 2019 High-Level Political Forum (HLPF), and one project presented at a side event at COP24. The reports on Japanese business and SDGs (E and J) received prominent media coverage and were among the top downloaded reports. An IGES researcher became a member of MOEJ's study group on environmental industry. One project's output, a policy report on "1.5 Degree Lifestyles: Targets and Options for Reducing Lifestyle Carbon Footprints," received the IGES President's Award for best output. Overall, the SRF served as an effective internal mechanism to support IGES's own research activities. The review found that significant underspending continued to be a challenge in FY2018, as only 56% of the funds were spent, slightly more than the previous year (54%). All projects underspent their budgets. The most common reasons were efficient management, including some substitution of external funds or other budgets, good negotiation with subcontractors, and reduction of travel expenses, especially travel to HLPF and COP24. A few projects had delayed progress. Nevertheless, despite substantial underspending, many outputs and successful external funding proposals were produced, and good progress was made on impact generation.

In addition the FY2017 projects were surveyed again to check the longer term effectiveness of the SRF. It was found that in FY2019, the FY2017 projects produced 12 additional outputs and four additional funding proposals (two accepted and two rejected).

4. Management

4.1. Operations and Human Resources

SMO-PM made continued efforts in improving institute-wide management with three focus areas: (i) securing a sound financial base, (ii) improving operational efficiency and transparent corporate governance, and (iii) developing institutional human resource capacity and work environment (Figure 4). The COVID-19 pandemic also affected IGES management in diverse areas, prompting a shift towards online-based communications and workstyles.

For (i), SMO-PM continued to improve financial value-added (project FVA)⁷ through facilitating a quicker consultation with the senior management and approvals on project proposals of funding opportunities and cost-saving during the project implementation and operation. IGES introduced an overseas travel expense self-claim online form which also contributed to improving operational efficiency.

For (ii), SMO-PM continued updating and upgrading various administrative procedures and provided legal review and advice on various contracts by in-house legal expert. SMO-PM continued monitoring the operational efficiency with the same metrics used in the previous years (Table 10). IGES introduced communication tool *Slack* and online meeting tools (*Zoom*) to support teleworking and meetings/communications with remote staff members and counterparts. In the wake of the COVID-19 pandemic, online meeting tools not only supported a number of international conferences and meetings replacing their original face-to-face meetings, but also ensured that close communications were maintained among staff members during the state of emergency (April-May in Japan and Thailand) as well as boosting opportunities to work from home. ICT team led the introduction of the above tools, providing technical support and promoting adoption of the tools, as well as ensuring in staff capacity building. IGES also introduced an electronic bidding system provided by the Government of Japan for public procurement and further promoted paper/stamp-less internal procedures by putting them online so that all staff members can access and process such procedures using an internet connection regardless their locations. IGES also continued improving its environmental footprint and renewed its environmental management certification (Eco-Action 21 certification which is administered under Ministry of the Environment of Japan).

For (iii), IGES recruited several staff members to timely respond to expanded activities and needs in emerging areas, but the number of administrative staff members was kept at the same level due to the combined efforts on improving operation efficiency mentioned below (Table 9). In FY2019, IGES has successfully obtained two certificates (childcare support certification and women's participation promotion). One major step in FY2019 was prompted by COVID-19, with IGES introducing a system for teleworking to all staff members from April 2020 as a measure to reduce the risk of infections in responding to the requests by the governments. In June 2020, IGES conducted a survey on teleworking targeting all staff members and developed the FY2020 Teleworking Guidelines. IGES rapidly learned that teleworking should be understood not as a necessity but as an opportunity to improve productivity. Teleworking is also useful to improve the work-life balance of staff members as it can more flexibly meet various individual needs. This contributes to making IGES more compatible with the SDGs. While COVID-19 caused the cancellation of overseas missions and face-to-face conferences/workshops, it thus reduced staff travelling time and eased their intensive workload for logistical matters. This then contributed to

⁷ See notes #3 of Table10.

achieving the target on overtime work reduction together with continued efforts on raising work efficiency.

Sound financial base	Operational efficiency and transparent corporate governance
<ul style="list-style-type: none"> Utilised project FVA for project proposal screening and unit-level financial management. Introduced an overseas travel expense self-claim online form with SMO- 	<ul style="list-style-type: none"> Introduced Slack and online meeting tools to support teleworking and communications with remote counterparts. Continued improving environmental
HR capacity & work environment	<ul style="list-style-type: none"> Started teleworking on a fuller scale Obtained two certificates (childcare support certification and women's participation promotion). Conduct Employees Satisfaction Survey

Figure 4: Key Achievements in Management in FY2019

Table 9: IGES Full-time Staff Members

(Persons)		
Categories	FY2018 results (June 2019)	FY2019 results (June 2020)
Professional Staff	128	134
Principal staff	22	21
Senior staff	43	48
Professional staff	54	56
Dispatched from other organisations	9	9
Operation Staff	30	25
Total: IGES Staff members (Full-time)	158	159
Number of administrative staff (including part-time staff)	25.8	25.7
Total: IGES Staff members (Full-time/Part-time)	158.9	162.8
Ratio of administrative staff in total staff	16.2%	15.8%

Note: Temporary staff is excluded.

In FY2019, IGES initiated the preparation of ISRP8 through discussion with staff members, and developed and presented “Major Directions for ISRP8” at the Boards of Directors and Trustees (BOD/BOT) meetings held in May 2020. With received comments and suggestions from the Boards, the first draft of ISRP8 is being developed in time for the Boards of Directors and Trustees (BOD/BOT) meetings to be held in October 2020.

The results of management-related indicators set for the ISRP7 are summarised in Table 10. Among these indicators, institute-wide efforts (Headquarters and Satellite Offices) were made to reduce overtime work. As of June 2020, the rate of reduction of total overtime (time-based) was at 61% in comparison with FY2016; and overtime per person has been decreasing over the past three years (Table 10).

Table 10: Management-related Targets and Their Results in FY2019

	Indicator	FY2019 target	FY2019 results	(Reference) FY2020 (end of phase target)
1	Ratio of administrative staff to total staff	17%	15.8%	15%
2	Reduction of overtime [% , in comparison with FY2016]	45% (time-based)	61% (time-based)	60% (time-based)
3	Improvement in the efficiency of IGES internal decision-making [% , in comparison with FY2016]	Over 50% and 45% for the same two metrics	31% 55%	80%

	Indicator	FY2016	FY2017	FY2018	FY2019
Reference to item 2	Monthly overtime hours per person (results)	20.1	14.5	13.7	10.5

[Notes to indicators]

- 1: Administrative staff members correspond to the staff in the SMO-PM and those who are engaged in administrative work in satellite offices. IGES Fellows are excluded from total staff numbers.
- 2: Overtime by staff members who are not under the discretionary labour system was applied.
- 3: 31%: Improvement rate based on the number of request approvals (The monthly average of requested documents was reduced from 65 in FY2016 to 44.9 in FY2019.) In FY2019, paper-based approvals were replaced by email-based approvals between April and June in 2020 due to COVID-19.
55%: Improvement rate based on the processing time for overseas mission approval. (Average processing time for overseas mission approval was reduced from 79.5 hours in FY2016 to 36 hours in FY2019.) In FY2019, no mission request was made between April and June in 2020 due to COVID-19. These two procedures/systems introduced in FY2017 became well familiarised at IGES. SMO continues to increase operational efficiency where there is room for improvement in administrative procedures.

4.2. Summary of Financial Settlement

Overall revenue and expenditure in FY2019 was JPY 3,033 million and JPY 3,105 million respectively, resulting in a deficit of JPY 72 million. The major reason of this deficit is mainly due to the scheduled costs of investments in addition to a certain unexpected decrease in revenue due to COVID19 pandemic.

Figure 5-a: Fiscal Balance (FY2007-FY2019)

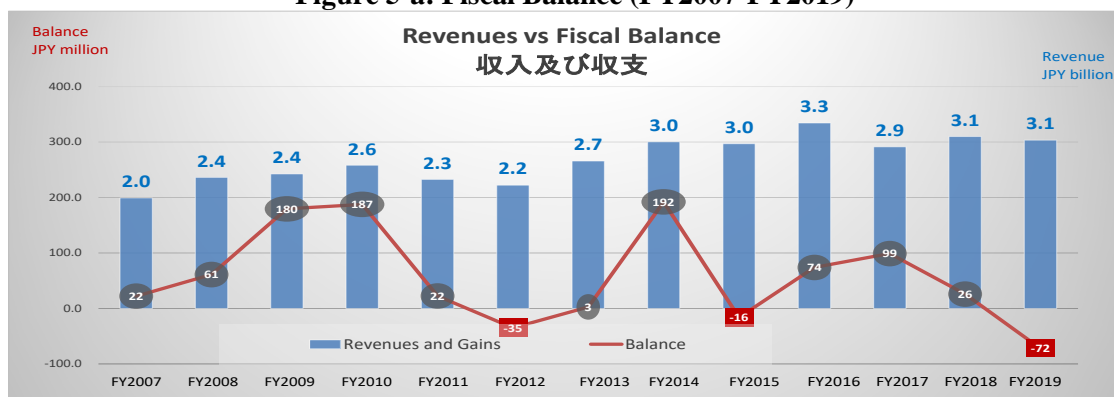


Table 11-a: Fiscal Balance by Breakdown (FY2019)

JPY million

	Budget	Result	Notes
Budget (usual)	0	-1	COVID19 brought lesser revenue than expected in the middle of the year.
Budget for Own Initiatives under the Deposit*	-75	-71	ISAP and investment expenditures

* Deposit for Promoting Strategic Initiatives

A total amount of deficit was withdrawn from the Deposit for Promoting Strategic Initiatives for the Institute's own activities, which is slightly smaller amount than scheduled, resulting in a balanced substantial financial performance for FY2019.

Table 11-b: Substantial Balance and Unrestricted Net Assets

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Fiscal Balance 経常収支	▲ 35	3	192	▲ 16	74	99	26	▲ 72
Deposit for Promoting Strategic Initiatives 戦略事業促進準備資金	Withdrawal 引当		-	-	16			72
	Reservation 積み増し			192	74	99	26	
Substantial Balance 実質的な収支	▲ 35	3	0	0	0	0	0	0

(Reference)								
Unrestricted net assets at end of year 一般正味財産期末残高	603	577	768	804	872	971	994	922
(included in the above/内数) Deposit for Promoting Strategic Initiatives 戦略事業促進準備資金期末残高	-	-	191	179	253	352	378	306

Breakdown of Revenue and Expenditure

Major items of both revenue and expenditure are described in the table below.

Table 11-c: Breakdown of FY2019 Financial Results

[JPY million]

	FY2017 (Result)	FY2018 (Result)	FY2019 (Result)	FY2019- FY2018
Revenue				
MOEJ Contribution	500	500	500	0
External Funds	2,029	2,217	2,152	-65
Subsidies from Local Gov.	354	349	346	-3
Others	30	31	35	4
Total Revenue	2,913	3,097	3,033	-64
Expenditure				
Operating costs for funded projects	930	1,129	1,047	-82
Operating costs for IGES own initiatives*	90	110	128	18
Personnel Costs**	1,246	1,274	1,357	83
Administrative Costs	548	558	573	15
Total Expenditure	2,814	3,071	3,105	34
Balance	99	26	-72	-98

* Includes personnel costs under Investment budget. ** Exclude personnel costs under Investment budget.

Ratio of administrative cost in the total expenditure	13.5%	12.6%	12.9%	+0.3% points
Project Financial Value-Added (FVA)	1,115	1,124	1,136	12
Project FVA Ratio	55.0%	52%	53%	+1% points

On the revenue side, the overall volume of raised funds reached about JPY 2.2 billion, 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 346 million).

IGES fully operationalised funds from overseas projects funded by Japan-ASEAN Integration Fund (JAIF), UNEP, SWITCH-Asia SCP Facility of European Commission (EU), KR Foundation and others. Eventually, the ratio of overseas projects⁸ out of the total amount of external funds increased to 38% while the funds from MOEJ and other domestic ministries decreased to 54%, in the course of diversification of fund resources.

⁸ Including international funding agencies

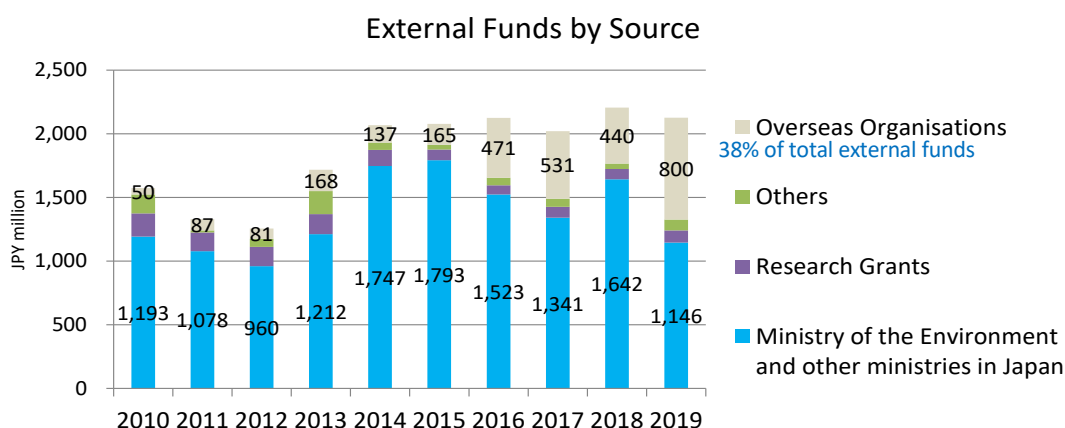


Figure 5-b: External Funds by Source (FY2010-FY2019)

It should be highlighted that COVID-19 pandemic has affected project activities especially implementing international/domestic conferences, capacity building activities and on-site research activities. These eventually had financial implications on IGES in the form of non-cost extension of contracts⁹ and reduction of revenue for personnel costs reflecting a lower workload than scheduled. These financial effects are estimated to result in a decrease of JPY 71 million in terms of FVA as a whole.

The project FVA ratio on average resulted in about 53% at the settlement-base which was an increase of 1% point.

On the expenditures side, the overall amount of own initiatives was increased by JPY 18 million reflecting increased investment expenditures such as for simulation analysis on power systems towards a net-zero emissions society as well as human resources as prior investment addressing emerging opportunities and promoting collaboration with other institutes while also reflecting lower expenditure for travel and conference costs than scheduled mainly due to COVID-19.

Personnel costs increased by JPY 83 million in the FY2019 settlement¹⁰. Administrative costs increased slightly by JPY 15 million, reflecting an increase in the cost for a comprehensive upgrade of the IT facilities as scheduled, and a decrease due to COVID-19, for items such as utilities costs, overseas travel insurance fees and BOD/BOT meeting costs. The ratio of general administrative costs out of the total expenditure was 12.9% as targeted.

⁹ The contract period in some projects was extended until FY2020 without additional funds since scheduled activities were not implemented due to COVID-19 pandemic.

¹⁰ In accounting, the incurred personnel costs are logged when the project is completed and corresponding payment is made. Thus, the personnel costs of FY2019 in Table 10-c include those incurred for the whole period (including FY2018) in each project completed in FY2019, but it excludes those in the ongoing projects. For these reasons, this personnel costs (Table 10-c) do not directly reflect the number of staff members (Table 8). It also excludes the personnel costs under Investment which is included under Operating Costs for Own Initiatives.

Table 11-d: Finance-related Targets and Their Results in FY2019

	Indicator	FY2019 target	FY2019 results (Tentative)	(Reference) FY2020 (end of phase target)
1	Contribution from the Ministry of the Environment, Japan (MOEJ) ('IGES core fund')	JPY 500 million	JPY 500 million	JPY 500 million
2	Volume of external funds	JPY 2.4 billion	JPY 2.2 billion	over JPY 2 billion
3	Ratio of project financial value-added (FVA) in the external funds in total [Contract-based]	49%	53 % (settlement-based)	49%
4	Ratio of international external funds in the external funds	Over 25%	38 %	over 25%
5	Ratio of general administrative cost in the total expenditure	13%	12.9%	12%

[Notes to indicators]

2: Exchange rate as of April 2019 (FY2019 target) or June 2020 (FY2019 result)

3: IGES applies the concept of "value-added" to the externally-funded project or group level (when aggregated) financial management (namely "project financial value-added" or 'project FVA'). 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. The ratio of project FVA to the total project revenues (project FVA ratio) is used for an indicator for the fund availability for IGES's strategic activities. Target ratio is contract-based, and result ratio is settlement-based.






4: Exchange rate as of April 2019 (FY2019 target) or June 2020 (FY2019 result)

5: Headquarters building rental fee is excluded because it is fully subsidised by the local government.






5. Overall Achievement in FY2019

As summarised in Table 12, an overall self-evaluation in FY2019 is satisfactory, despite the disruption caused by the COVID-19 pandemic in the later months of FY2019. A number of overseas missions and face-to-face conferences/meetings were cancelled/postponed or replaced by virtual/online discussions, and steady progress was made in generating impacts and outputs. In terms of financial settlement, FY2019 was a challenging year, but FY2019 logged an increase in revenues and activities while maintaining and improving operational efficiency, along with the introduction of teleworking in response to COVID-19 and adopting it as a workstyle at IGES for FY2020 and beyond.

Table 12: Summary of FY2019 Achievement (Self-evaluation)

	FY2019 Self-evaluation	Remarks
Impact Generation		Several higher-level impacts are reported out of target 35 cases.
Outputs		Increased peer-reviewed journal articles, articles in journals with relatively high impact factors. More submissions to policy processes. Continued increase in citations of IGES publications.
Operations and Human Resources (HR)		Targets are generally achieved with the continued efforts in improving operational efficiency.
Financial Settlement		Targets are generally achieved with institute-wide effort of improvement in FVAs.
Overall		Satisfactory

Self-evaluation is expressed in five types of facial expressions as below.

Exceptionally excellent	Excellent	Good / Satisfactory	Need for improvement	Unsatisfactory
				

ANNEX 1. SUMMARY OF KEY ACHIEVEMENTS BY UNIT

1. Three Issue Areas

1.1. Climate and Energy (CE)

With particular focus on the Asia-Pacific region, IGES CE is carrying out initiatives to facilitate the transition to decarbonised societies at the national and local levels. Specifically, the Institute 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) Intended impacts during ISRP7

- The Paris Agreement is operationalised
- Materialisation of Greenhouse Gas (GHG) emissions reduction through implementation of the Joint Crediting Mechanism (JCM)
- Political and social debates on carbon pricing in Asia are progressed
- Climate policy is developed by offering visualised pathways to decarbonisation

(2) Major activities in FY2019

Operationalisation of the Paris Agreement

At the international level, IGES made timely proposals for the operationalisation of the Paris Agreement, including presentations at various key international conferences (e.g. COP25) and submission of IGES's view to the UNFCCC. IGES also contributed to the creation of the UN Development Programme (UNDP)'s National GHG Inventory Capacity Database as a leading implementing institute. At the regional level, IGES provided capacity building support to the governments of Asian developing countries for the implementation of the "Paris Rulebook", including the enhanced transparency framework.

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

IGES contributed to implementation of the JCM which appropriately evaluates contributions to GHG emission reductions or removals by Japan, and applies them toward achievement of Japan's emission reduction target. IGES supported the development of 20 MRV (monitoring, reporting and verification) methodologies. In addition, the first publication was developed with analysis of the inter-linkage between the JCM and SDGs. This publication aims to clarify how the JCM contributes to SDGs targets. Toward further understanding and implementation of the JCM, IGES developed guidebooks for the JCM in selected partner countries reflecting their respective rules and organised the JCM annual assembly workshop, inviting all JCM partner countries to ensure better understanding of the corresponding adjustment and Article 6 of the Paris Agreement.

Impacts on Political and Social Debates on Carbon Pricing in Asia

Carbon pricing policy is taking shape in Asia, such as the introduction of emissions trading schemes in China and the Republic of Korea. IGES served as Japan's focal point for implementing the fourth Forum of Carbon Pricing Mechanisms in Japan, Korea and China, and contributed to discussions on the trilateral cooperation. IGES conducted timely overview and analysis of the design features and implementation progress of emissions trading schemes in China and the Republic of Korea. An

original policy study was also carried out to check the function of carbon market through cost pass-through to electricity prices. The research articles on emissions trading schemes were published in international journals, thereby stimulating policy development.

Climate Policy Development by Visualisation of Current Status

IGES engages in analysis and visualisation of climate policies around the world in order to facilitate the further development of such policies. Particularly for Asia, IGES completed analysis on coal transition management for 2°C/1.5°C goals in China and India, and a comparative study on low-carbon policy in Japan, Korea and China. IGES also made recommendations for Revising Japan's Nationally Determined Contribution, as well as contributing to two chapters of the UNEP Emission Gap Report 2019. Likewise, IGES provides the most up-to-date information through regular updating of the IGES Climate Databases on various topics.

(3) Selected publications

- “Lessons Learned for Future Transparency Capacity Building under the Paris Agreement: A Review of Greenhouse Gas Inventory Capacity Building Projects in Viet Nam and Cambodia,” (Journal of Cleaner Production).
- “The Sociopolitical Dynamics of Coal Transition in India” (International Studies, April 2020)
- “Features and Prospect of China’s National GHG Emissions Trading Scheme” (Carbon Management, Volume 11(2), 155-167)
- “An Analysis of the Interactions between Electricity, Fossil Fuel and Carbon Market Prices in Guangdong, China” (Energy for Sustainable Development, Volume 55, 82-94)
- Chapter 2 Global Emissions Trends and G20 Status and Outlook and Chapter 4 Bridging the Gap – Enhancing Mitigation Ambition and Action at G20 Level and Globally, UNEP Emission Gap Report 2019.
- Discussion Paper “The Current Status and Prospects for Coal Industry Transition in China”
- Discussion Paper “Joint Crediting Mechanism (JCM) Contributions to Sustainable Development Goals (SDGs)”
- Discussion Paper “Impact of COVID-19 on Japan and India: Climate, Energy and Economic Stimulus”
- Discussion Paper “Current Status and Outlook of China’s Climate Change Policy After COVID-19” (in Japanese)
- “Prospects of International Negotiations toward the Paris Rulebook” (in Japanese)
- Six series articles on “Transformation of China’s Climate Change Policy After the operationalisation of the Paris ” (in Japanese)
- IGES Recommendations for Revising Japan’s Nationally Determined Contribution (NDC)
- “IGES Submission of Views on Common Tabular Formats for the Information Necessary to Track Progress Made in Implementing and Achieving NDCs”
- “Stocktake for Raising the Climate Ambition”
- “Global Database of National GHG Inventory (GHGI) Capacity in Developing Countries”
- “JCM in CHARTS (for Bangladesh, Cambodia, Indonesia, Lao PDR, Myanmar, Mongolia, the Philippines, Thailand and Vietnam)”
- “IGES NDC Database”
- “IGES BUR (Biennial Update Report) Database”
- “IGES JCM Database”
- “IGES CDM Project Database”
- “IGES List of Grid Emission Factors”

- “IGES Kyoto Units Transfer Database”
- “IGES Kyoto Units All Transaction Data for the First Commitment Period”
- “Potential supply of Pre-2020 CERs”

1.2. Natural Resources and Ecosystem Services Area (NRE)

IGES conducts problem-solving research activities on integrated natural resource management to promote the conservation and sustainable use of natural resources in the Asia-Pacific region, focusing on forest conservation, climate change adaptation, water resources management and biodiversity conservation.

(1) Intended impacts during ISRP7

- Increased knowledge, support and incentives for landscape and ecosystem management
- Increased integration of policies and planning across sectors that impact land and natural resources
- Strengthened community resilience through development of local institutions, capacities and services
- Increased provision of scientific data, knowledge and tools for biodiversity conservation and adaptation planning
- Improved water quality through effective policy frameworks for pollution control
- Increased support and incentives for sustainable natural resource management through responsible markets and businesses

(2) Major activities in FY2019

Pilot on Participatory Watershed Management

IGES and partners helped local governments in the Philippines to develop more resilient land-use and climate change action plans through a scenario analysis and impact assessment process. Impacts of land-use change and climate change on flooding, water quality, and habitat quality were assessed using GIS and modeling software. Development of a training guidebook is underway.

Contribution to International Biodiversity Processes

IGES staff contributed (through authorship) to the IPBES Thematic Assessment of the Sustainable Use of Wild Species, (through research and secondment) to the Assessment of Invasive Alien Species and Their Control, and (through chapter scientist role and contributing authors) to the IPCC's sixth assessment report. IGES also led the production of the Japanese translation of the IPBES Global Assessment Report on Biodiversity and Ecosystem Services Summary for Policy Makers, which is now available on the IPBES official website.

Establishment of Environmental Conservation Platform of Tonle Sap Lake

IGES has worked closely with the Tokyo Institute of Technology, Institute of Technology of Cambodia and various other partners in Cambodia and Japan to develop a water environment analytical tool for Tonle Sap Lake and establish an environmental conservation platform of Tonle Sap Lake through the elucidation of the lake and the tools development. A policy guidebook for policymakers, the main output of the Science and Technology Research Partnership for Sustainable Development (SATREPS) project, has been developed and launched, reflecting results from the

research and delivering key messages to policymakers for better conservation and management of Tonle Sap Lake.

Landscape Restoration Research

IGES and partners quantified the changes in ecosystem services due to community-based afforestation in Kenya. A field survey and questionnaire were completed, while a spatial analysis and modelling are ongoing. The results of this work are being fed into a much larger proposal, connecting this work with other efforts in Ghana.

Mainstreaming Biodiversity Conservation and Sustainable Management in Priority SEPLS

IGES and partners supported another six projects to demonstrate the value and potential of socio-ecological production landscapes and seascapes (SEPLS) around the world. The results were broadcast in a variety of ways, including a self-assessment report of the Satoyama Development Mechanism (SDM) projects and the Satoyama Initiative Thematic Review Report vol. 5 on the multiple values associated with sustainable use in SEPLS.

Plausible Alternative Futures of Island Mangroves in the Asia-Pacific Region

IGES and partners have been working on developing scenarios in changing mangrove ecosystem services to promote proactive landscape and seascape planning in India, Japan, Taiwan, the Philippines and Fiji. The results in the form of spatial outputs are important to operationalise the ecosystem based disaster risk reduction concepts in the study areas.

Responsible Timber Trading

IGES and partners are working to provide information on timber legality risks and mitigation measures to support the implementation of Japan's Clean Wood Act. Literature reviews, trade analyses, interviews and field observations were conducted in timber producing countries, Papua New Guinea and Solomon Islands and timber importing countries, UK, Netherland and Germany. Additionally, summaries for a website managed by the forestry agency to facilitate implementation the Act and a public seminar were prepared. IGES has reviewed and assessed the Japanese Clean Wood Act contracted by the Chatham House. IGES and partners also studies impact of Clean Wood Act by investigating implementation of legal check by timber business entities in Japan by questionnaire and interview studies. IGES supported the Forestry Agency to advise their founded project to the Food and Agriculture Organization of the United Nations (FAO) to develop "Timberlex", an aggregation site on timber-related law and regulation.

JCM REDD+¹¹

IGES supported MOEJ to advise on a project proponent for a JCM REDD+ project to develop a methodology and project design document.

Regional/Local Circulating and Ecological Sphere (Regional/Local-CES)

IGES and START International Inc. (START) are collaborating to promote the Regional/Local Circulating and Ecological Sphere (Regional/Local-CES) concept in South Asia and Southeast Asia. Together with partners, IGES and START are elaborating the Regional/Local-CES concept through analysis of best practices and proposal of pathways for the creation and operationalisation of

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

regional CES in various contexts. Based on this collaborative work, one journal paper, one research report on the Regional/Local-CES have been developed.

Urban Water, Energy and Food Management Innovation

IGES closely worked with Keio University, University of Michigan, Delft University of Technology, Qatar University, Queen's University Belfast conducted collaborative research to advance design-leading practices across the water-energy-food nexus in cities and develop user-friendly decision-making tools and systems. A case study was conducted and based on the results, a book chapter has been produced and a prototype FEW Print Tool was developed.

Adaptation Communication of Indigenous and Local Knowledge (ILK) in Hindu Kush Himalayan (HKH) Region

IGES in collaboration with International Centre for Integrated Mountain Development (ICIMOD) started a project on adaptation communication focusing on identification and promotion of ILK for climate change adaptation (CCA) in HKH region. IGES organised a regional workshop, which was the first of its kind, at ICIMOD to discuss the framework of adaptation communication, conducted field trials of adaptation with the involvement of community radios, and submitted a book chapter. IGES further jointly developed an APN capacity building project collaboration with Himalayan University Consortium (HUC), of which IGES is a strategic regional partner, ICIMOD, research institutes and government agencies in HKH to advance the concept and support adaptation communication of ILK in the HKH.

Integrated Decentralized Domestic Wastewater Management in ASEAN

IGES has been working closely with all ASEAN Member States to implement a regional initiative to promote policy dialogues and capacity building of multi-stakeholders on integrated decentralised domestic wastewater management in ASEAN countries (2018-2020). A series of lectures have been presented by IGES to more than 60 representatives from all ASEAN countries attending a one-week capacity development and training course held in Tsukuba International Congress Center. In addition, as one of the outcomes from this initiative, a “Regional Policy Roadmap Towards the Achievement of Integrated Domestic Wastewater Management” for ASEAN is being developed and will be launched in due course.

Water Environmental Management in Asia

As secretariat for the Water Environment Partnership in Asia (WEPA), IGES has been contributing to the improvement of the water environment in Asian countries for over a decade. In FY2019, the WEPA annual meeting was conducted in Bangkok with the participation of government officials from 10 countries.

Socio-hydrological Perspective of Climate Change Adaptation in Large Riverine Islands: Comparative Study from India, Bangladesh and Vietnam

This proposed work strives to explore how the nexus of human–water relations can be applied to improve adaptive measures to maintain hydrological cycle along with managing local water needs. For FY2019, we have accomplished the following work under this project: 1) a kick-off workshop was organised to finalise the work plan, methodology and deliverables with all collaborators; 2) a field survey was made in India and Bangladesh to fix sampling locations, supervise installation of hydrological parameter monitoring instruments, and focus group discussions; and 3) secondary data was collected to set-up the hydrological modelling.

Assessment of Business Impacts on Biodiversity

This research project aims at the development of biodiversity indicators, an economic valuation method for ecosystem services and a model for assessing business impacts on biodiversity, in order to support the execution of biodiversity mainstreaming policy led by MOEJ.

(3) Selected publications

- “Environmental Changes in Tonle Sap Lake and its Floodplain: Status and Policy Recommendations”
- “Training Module on Forest Sector Involvement in Nepal’s Nationally Determined Contributions (NDCs) Version 1”
- “Adaptation communication of indigenous and local knowledge: How to mobilize community radio in the Hindukush Himalayan region?”
- “A managed aquifer recharge scheme involving intentional flooding of rice fields and payment for ecosystem services in Kumamoto, Japan” (In Exemplary case studies of sustainable and economic managed aquifer recharge)
- “A river basin approach for the coordinated implementation of water related targets in Sustainable Development Goals (SDGs)” (In Water, Climate Change and Sustainability)
- “Effective Models for Payment Mechanisms for Forest Ecosystem Services in Papua New Guinea, Philippines and Thailand”
- “Regional Assessment Report on Biodiversity and Ecosystem Services for Asia and the Pacific”
- “Forest Certification: More Than a Market-Based Tool, Experiences from the Asia-Pacific Region”
- “Priority Practices for Addressing Non-economic Loss and Damages Caused by Cyclones in Bangladesh: Case Study of Koyra”
- “Understanding National Biodiversity Targets in a REDD+ Context”
- “Investigating the Relationships between Climate Hazards and Spatial Accessibility to Microfinance Using Geographically-weighted Regression”
- “Assessment of Climate-Induced Long-term Water Availability in the Ganges Basin and the Impacts on Energy Security in South Asia”
- “The Satoyama Development Mechanism Progress Evaluation Summary Report”
- “National Efforts in Adaptation Planning”
- “Exploring Futures of the Hindu Kush Himalaya: Scenarios and Pathways”
- “Water-Energy-Food Nexus: A Provision to Tackle Urban Drought”
- “Transboundary Impacts of Climate Change in Asia: Making a Case for Regional Adaptation Planning and Cooperation”
- “Socio-Ecological Production Landscapes and Seascapes: Experiences Overcoming Barriers from around the World”
- “Governing the Water-Energy-Food Nexus Approach for Creating Synergies and Managing Trade-offs”
- “Sustainable Use of Biodiversity in Socio-ecological Production Landscapes and Seascapes and its Contribution to Effective Area-based Conservation”
- “Participatory approach for enhancing robust water resource management: case study of Santa Rosa sub-watershed near Laguna Lake, Philippines.” Water.
- “Monitoring effect of spatial growth and land surface temperature in Dhaka.” Remote Sensing.
- “Multi-temporal remote sensing data to monitor responses of terrestrial ecosystem to climate variations in Ghana.” Geocarto International.

- “Hydrological simulation for future prediction of water quality of Adyar River, Chennai, India.” International Journal of Environmental Research and Public Health.
- “Implications of urban expansion on land use and land cover: towards sustainable development of Metro Manila, Philippines.” GeoJournal.
- “Citizen Science websites/apps for invasive species sightings: An analysis of 26 ongoing initiatives.” Global Ecology and Conservation.
- “Hydrochemical assessment of groundwater quality of Mokopane area, Limpopo, South Africa using statistical approach.” Water.
- “Utilizing geospatial information to implement SDGs and monitor their progress.” Environmental Monitoring and Assessment.
- “Population-Urbanization-Energy nexus: A review paper.” Resources.
- “Combined Fuzzy-AHP and GIS for groundwater quality assessment in An Giang province of Vietnam.” Geosciences.
- “Numerical quantification of current status quo and future prediction of water quality in eight Asian Mega cities: Challenges and opportunities for sustainable water management.” Environmental Monitoring and Assessment.
- “Sustainability Assessment of the Groundwater Quality to Achieve Urban Water Security in the Western India.” Applied Water Science.
- “Effect of Land use changes on water quality in an ephemeral coastal plain: Khambhat City, Gujarat, India.” Water.
- “Environmental Changes in Tonle Sap Lake and its Floodplain: Status and Policy Recommendations”
- “Applying Urban Nexus Approach for Achievement of Sustainable Development Goals (SDGs)”
- “Urban Nexus Approach: Integrating and Strengthening City Efforts towards National and Local Climate Actions”
- “Accelerating Septage Management – A Key Factor to facilitate the Achievement of Sustainable Development Goal 6 in Asia” (in Japanese)
- “Invasive alien species and local communities in socio-ecological production landscapes and seascapes: A systematic review and analysis”
- “Mapping the Current Understanding of Biodiversity Science–Policy Interfaces”
- “Understanding the multiple values associated with sustainable use in socio-ecological production landscapes and seascapes (SEPLS)”
- “Managing Socio-ecological Production Landscapes and Seascapes for Sustainable Communities in Asia: Mapping and Navigating Stakeholders, Policy and Action”

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) Intended impacts during ISRP7

- Establishment of SCP model cases towards long-term sustainability living within one planet (SCP Model Case)
- IGES/SCP is recognised as a regional policy research hub on SCP policy in Asia and the Pacific both at global and regional level (SCP Research Hub)

- Resource efficiency and the Reduce, Reuse, Recycle (3Rs) are progressed at the key international policy forum (the 3Rs) by IGES acting as knowledge catalyst
- Capacity of less developed economies in national, city and regional waste management is developed

(2) Major activities in FY2019

New Initiatives under the 10YFP Sustainable Lifestyles and Education Programme

IGES has been working on establishing model cases of SCP through conceptualisation and operationalisation of long-term sustainable living within the limits of one planet.

As the coordination desk of the Sustainable Lifestyles and Education (SLE) Programme of the United Nations' 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (10YFP), IGES supports eight new projects aiming to facilitate sustainable lifestyles and livelihood at city and community level (* IGES has supported 24 projects in total since 2016). To facilitate sustainable education, IGES coordinated Global Search for Sustainable Schools in nine countries, showing the cases of making schools as the centres for collaboration of local teachers, students and community members in learning and working on sustainable lifestyles and livelihoods

To examine possible future lifestyles for long-term sustainable living within the limits of one planet, IGES continued its work on 1.5- Degree Lifestyles project aiming at creating at least six cases of scenario co-creation for low-carbon and resilient living in collaboration with both Japanese and global local governments including Yokohama city and Kyoto city.

The COVID-19 pandemic has had tremendous impacts on these ground-level projects. Due to the lockdown and travel ban, their key activities, such as face-to-face workshops and other collaborative actions were restricted. IGES has supported the ground-level projects to seek a way forward, e.g. online communication, changing of schedules and activity plans and contracts. For the 1.5 Degree Lifestyles project, IGES has collaborated with experts to develop a methodology for an online scenario-building workshop.

Regional SCP Policy and Research Hub

IGES aims to establish itself as a regional SCP policy and research hub in collaboration with regional stakeholders.

As the leading organisation for the theme of “Policy Design and Evaluation for SCP in Asia and the Pacific” (S-16: Environment Research and Technology Development Fund), IGES took the lead in developing a policy brief titled “Six Proposals for Future Policies towards Circular Economy and Society” which was a part of an official policy brief series by T20, the think-tank process of G20.

IGES also contributed to several special sessions of academic conferences including a special session on evidence-based policymaking at the International Society for Industrial Ecology (ISIE) Conference 2019 organised in Beijing, a special session on SDGs at the Sustainable Built Environment Conference (SBE19), as well as carrying out capacity development in ASEAN countries through a seminar on SCP policy instruments organised by German Society for International Cooperation (GIZ) in Bangkok in October.

As a part of the consortium operating the EU SWITCH-Asia SCP Facility, IGES has contributed to the development of a national SCP action plan in Viet Nam. Based on this achievement, IGES has been preparing new projects in Cambodia, Myanmar, and Viet Nam.

Contribution to Mainstreaming Circular Economy, Resource Efficiency, and the 3Rs

To contribute to putting resource efficiency and circular economy onto the central agenda for emerging economies in the region, IGES engaged in key international processes to support the Japanese government such as G7 (Group of Seven), G20, Organisation for Economic Co-operation and Development (OECD) Working Party on Resource Productivity and Waste (WPRPW), UNEP International Resource Panel (IRP), and ASEAN.

IGES supported G20-related agenda-setting on marine plastic litter and circular economy through the G20 preparatory process, the G20 Environment and Energy Ministers' Meeting, and the G20 Resource Efficiency Dialogue. Along with this role to support MOEJ for G20 Japan Presidency, IGES took on the main editorial role for developing a G20 Report on Actions Against Marine Plastic Litter: First Information Sharing based on G20 Implementation Framework on Marine Plastic Litter as well as developing and maintaining the portal site on G20 Actions and Progress on Marine Plastic Litter.

As a part of an EU-funded project, IGES took the lead in publishing a key policy report for circular economy and plastic pollution in ASEAN member states titled "Circular Economy and Plastics: A Gap-Analysis in ASEAN Member States" in October 2019.

In December 2019, IGES successfully completed the 1st phase of a Japan International Cooperation Agency (JICA) project to support Da Nang city to implement model projects for source separation and the 3Rs which resulted in Da Nang city's decision to expand community-level 3R activities to the whole city from mid-2019.

IGES Centre Collaborating with UNEP on Environmental Technologies (CCET)

CCET, in collaboration with UNEP- International Environmental Technology Centre (IETC), has been assisting national and sub-national governments in Asia and the Pacific in developing waste management strategies and action plans, and enhancing technical and institutional capacities for moving from end-of-pipe solutions to integrated resource management.

CCET supported six Asian countries (Maldives, Sri Lanka, India, Myanmar, Cambodia and Indonesia) in developing national/sub-national waste management strategies and action plans. National Waste Management Strategy and Master Plan of Myanmar, City Waste Management Strategy and Action Plan of Phnom Penh and Mandalay Cities, as well as Regional Waste Management Strategy for Region 6 and 7 in Maldives were officially endorsed and published. In FY2019, CCET expanded its project support in national processes to develop plastic waste action plans in Sri Lanka and Indonesia, and drafting of a city waste management strategy in Negombo city in Sri Lanka, as well as a plastic waste management strategy for Hyderabad in India.

In collaboration with the Japan Society of Material Cycles and Waste Management, the National Institute for Environmental Studies (NIES) and Okayama University, a series of technical guidelines for MSW treatment technologies are being prepared. One set of guidelines on waste-to-energy and incineration has already been developed and published. Another two guidelines, one on mechanical biological treatment (MBT) and the other on composting will be published in FY2020.

With the involvement of the South Asia Co-operative Environment Programme (SACEP) and all eight member countries in the region, the Roadmap for Sustainable Waste Management and Resource Circulation in South Asia, 2019-2030 was developed. This Roadmap was officially approved and adopted by the member countries at the 15th Meeting of the Governing Council of SACEP, 3-6 Nov 2019 in Dhaka, Bangladesh. CCET is further expanding its network with sub

regional governmental organisations such as the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) for efficient and effective dissemination of its activities.

With the outbreak of COVID-19, CCET immediately began collaborating with UNEP-IETC and other international and national partners to develop a policy report on Safe Management of Medical Waste under the COVID-19 Pandemic. This report is due to be published as a UN Report, which serves as valuable information for consideration and development of action plans in developing countries and economies in transition, so that they can better handle medical waste management beyond the COVID-19 recovery.

(3) Selected publications

- Policy Process “A Roadmap for Sustainable Waste Management and Resource Circulation in South Asia, 2019-2030”
- Policy Process “National Waste Management Strategy and Master Plan for Myanmar, 2018-2030”
- Policy Process “National Plastic Waste Reduction Strategic Actions for Indonesia”
- Policy Process “Ecology Note Towards a Clean, Green and Beautiful Bhutan”
- T20 Policy Brief “Six Proposals for Future Policies towards Circular Economy and Society”
- Policy Report “Strategies to Reduce Marine Plastic Pollution from Land-based Sources in Low and Middle-Income Countries”
- Policy Report “Circular Economy and Plastics: A Gap Analysis in ASEAN Member States”
- Policy Report “G20 Report on Actions Against Marine Plastic Litter: First Information Sharing based on G20 Implementation Framework”
- Policy Report “State of Municipal Solid Waste Management in Negombo City, Sri Lanka”
- Technical Report “CCET Guideline on Waste to Energy (Incineration)”
- Technical report “1.5° C ライフスタイル — 脱炭素型の暮らしを実現する選択肢 — 日本語要約版”
- Discussion Paper “Society and Lifestyles in 2050: Insights from a Global Survey of Experts”
- Discussion Paper “Sustainable Lifestyle Policy and Practice: Challenges and Way Forward”
- Book Chapter “Apprehending Food Waste in Asia: Policies, Practices and Promising Trends” in Routledge Handbook of Food Waste
- Book Chapter “Policy Responses to Plastic Pollution in Asia: Summary of a Regional Gap Analysis” in Plastic Waste and Recycling, Elsevier
- Book Chapter “Status of Solid Waste Management in Myanmar: Key Challenges and Opportunities” in Sustainable Waste Management Challenges in Developing Countries, IGI Global
- Peer-reviewed Article “持続可能な消費と生産（SCP）に関する国際政策動向”, 日本 LCA 学会誌
- Peer-reviewed Article “ライフスタイルのイノベーションへ向けた EBPM”, 環境分野におけるエビデンスに基づく政策立案に向けて, 環境経済・政策研究
- Peer-reviewed Article “Food Waste in Bangkok: Current Situation, Trends and Key Challenges”, in Resource, Conservation, Recycling

- Peer-reviewed Article “Technology Foresight for Social Good: Social Implications of Technological Innovation by 2050 from a Global Expert Survey”, in Technological Forecasting and Social Change
- Peer reviewed Article “Challenges and an Implementation Framework for Sustainable Municipal Organic Waste Management using Biogas Technology in Emerging Asian Countries”, in Sustainability
- Non Peer-reviewed Article “廃棄物処理を原動力とした地域活性化の可能性”, 月刊 INDUST 2020 年 6 月号

2. Two Functional Centres

2.1. Centre for Strategic and Quantitative Analysis

QAC functions as a hub to promote science-policy linkage for achieving sustainable development. It contributes in creating value-added knowledge through strategic research and quantitative policy assessment so as to provide practical policy recommendations, helping informed policymaking and problem-solving in developing countries in Asia and the Pacific and beyond. The Centre looks to support policy assessment at the regional, national and subnational levels by identifying appropriate indicators, and working on filling in the data gaps and data analysis. Work is also done on applying quantitative analysis tools and integrated assessment models to critical topics such as those covered by SDGs, including SDG integration and policy coherence, water-energy-food nexus, low-carbon and green economy pathways, green investment and green jobs, climate policy, carbon pricing, trade and the environment in collaboration with key partners.

(1) Intended impacts during ISRP7

- Policymakers are better informed on SDGs and effective policy implementation at both the national and city levels
- Transformational changes needed to achieving the long-term mitigation targets and the SDGs are materialised
- Measurement of the progress made in achieving the 2030 targets for climate change and for the SDGs is enhanced by effective data and indicators

(2) Major activities in FY2019

Integrated Policymaking through the Applications of IGES SDG Interlinkages Tool

Supported by IGES Strategic Research Fund, IGES developed the pioneering SDG Interlinkages Tool covering 27 countries in Asia and Africa.

(<https://sdginterlinkages.iges.jp/visualisationtool.html>).

At the international level, United Nations Department of Economic and Social Affairs (UNDESA) included the Tool as an example of SDG integration in the 2020 Handbook for Voluntary National Review (VNR), and UN ECOSOC selected the Tool as a good practice for the High Level Political Forum 2020 Exhibition. The Tool was used to support UNDESA’s VNR capacity building on SDG integration into national development planning (2019).

Through the collaborations with relevant stakeholders at the national, sectoral and sub-national levels, the Tool was applied to support the development of: i) the national action plan for sustainable consumption and production (2020-2030) in Viet Nam; ii) the national industrial action plan in

Bangladesh; iii) a chapter on SDG interlinkages included in the national SDGs Roadmap and the VNR 2019 in Indonesia, and iv) provincial SDG planning in West Java (Indonesia).

Net-zero Emissions Reports and Activities

In December 2019, IGES organised a dialogue on climate policies related to the mid-century strategies and carbon pricing between relevant stakeholders in Japan and the EU under the Strategic Partnerships for the Implementation of the Paris Agreement (SPIPA) project. During the event, IGES demonstrated that scenario analysis and modelling is a powerful means to support the design of long-term strategies due to its capability to evaluate the opportunities and risks of regions and businesses in a society which is heading towards decarbonisation. Under this project, IGES will strengthen its partnership with the EU and GIZ.

In June 2020, IGES published a research report, “A Net-Zero World–2050 Japan”, which provides a vision for achieving net-zero greenhouse gas emissions in Japan supported by solid social, energy and technological assumptions based on a comprehensive review of various studies and reports. This research report has been used as the basis supporting the implementation of several activities aiming for achieving a decarbonised society: i) IGES conducted a scenario analysis of the industrial cluster in Kawasaki city for achieving a net-zero emissions society; ii) IGES has been supporting the development of a vision on net-zero emissions in Kanagawa prefecture, which will be continued as a key activity in FY2020; iii) In a collaborative effort between units, IGES has been working on a scenario analysis for achieving net-zero emissions in Asia; iv) Due to the important role of renewable energy in achieving a net-zero emissions society in Japan, QAC and Climate and Energy Area have been working on a simulation analysis of Japan’s power systems using the PROMOD model, developed by ABB. The work will be continued in FY2020.

Development of a Regional Strategy on Climate Mitigation and Adaptation in ASEAN

As part of the Japan-ASEAN Integration Fund (JAIF) project on the assessment of the state of climate change in the ASEAN region, IGES prepared an Inception Report which includes the methodology and framework for developing a regional strategy for climate actions on mitigation and adaptation. The first regional meeting was held in June 2020 convening external partners of ASEAN, relevant think tanks and the ASEAN Working Group on Climate Change (AWGCC) national focal points. IGES developed a summary report of the meeting. The final report will be launched at the ASEAN Summit in 2021.

Shared Socioeconomic Pathways (SSPs) for Cities: Methodology Development and Applications

One major area of interest is on how climate policies can be integrated into development planning and implementation at the local levels. Methodologies for integrating scientific evidence into long-term development planning are urgently needed. Analysing the future development of cities is challenging due to the uncertainties. QAC researchers developed the socioeconomic pathways at the urban scale by downscaling the global-scale Shared Socioeconomic Pathways (SSPs) developed by the climate change research community. The local scale SSPs can play a significant role in the process of developing sustainable development strategies and their implementations including an on-going case study in Da Nang City, Viet Nam.

(3) Selected publications

- Research Report “A Net-Zero World -2050 Japan- An Insight into the Indispensable Changes”
- Commissioned reports on the country studies of SDG integration into national development planning in Ethiopia, Lao PDR and Tanzania

- Journal Paper “Challenges and Potential Solutions for Sustainable Urban-Rural Linkages in a Ghanaian Context”, *Sustainability* 2020, 12, 507.
- Discussion Paper “Closing the SDG Gaps for Building a Resilient and Sustainable Asia in the COVID-19 Recovery Era”
- Miho Kamei, Kiyoko Kurisu, Keisuke Hanaki (2019) “Evaluation of Long-term Urban Transitions in a Mega-city’s Building Sector”, *Sustainable Cities and Society*, 47.

2.2. Centre for Sustainability Governance

IGES worked to promote forms of governance that can enable the integration of multiple development objectives into development plans under SDGs and the Paris Agreement. Some of the work of the Sustainability Governance Centre (SGC) focused chiefly on how national governments, businesses and other actors can collaborate on the SDGs. An additional stream of research explored how cities can govern low-carbon transitions. A third area of study focused on governance that can promote the co-benefits between climate change and other development priorities. In each of these project areas, the SGC provided timely recommendations on the governance reforms required to make links across issues and move down a sustainable low-carbon development path in Asia.

(1) Intended impacts during ISRP7

- A more integrated and inclusive approach to implementing the SDGs is adopted at least 3 countries (and cities)
- SDGs are mainstreamed into their core operations and planning processes in at least 3 Japanese cities, businesses, and civil society organisations (CSOs)

(2) Major activities in FY2019

Business and the Sustainable Development Goals (SDGs)

In 2019, IGES continued its collaboration with the Global Compact Network Japan (GCNJ) and launched a new report that discussed opportunities for environmental, social and governance (ESG) investment in Japan. This report underlined that ESG investment and financing and the increase in sustainable financial products can help set science-based targets to achieve ambitious goals under the SDGs and the Paris Agreement.

Strengthening the Environmental Dimensions of the SDGs

In 2019, IGES worked with the Asian Development Bank to conclude a project helping countries to improve their performance on the environmental dimensions of the SDGs. The project is setting the stage for an e-learning class that will help spread knowledge to other countries.

Shaping the Regional Agenda on the SDGs

In 2019, IGES developed a set of key messages corresponding to the six entry points of the Global Sustainable Development Report. The messages were shared and well received at the Asia Pacific Forum on Sustainable Development.

Co-benefits Approach

This year, IGES led a team of authors in the publication of the Asian Co-benefits Partnership’s White Paper entitled “Implementing Solutions to Climate Change and Air Pollution in Asia: Mobilising Finance, Strengthening Policies and Building Capacities”. IGES also worked with the Alliance for Financial Inclusion on high-profile report on financial inclusion and climate change.

That report has since led central banks to take actions that will ensure that efforts to make finance more inclusive are not undermined by climate change.

(3) Selected publications

- Policy Report “ESG 時代における SDGs とビジネス ～日本における企業・団体の取組み現場から～”
- Submission to Policy Process “持続可能な開発目標（SDGs）実施指針（改定版）の骨子に関する意見”
- Commentary “Assessing the HLPF Four Years On: Enhancing Integration, Linking Processes, and Strengthening Political Leadership”
- Submission to Policy Process “Key Messages on Accelerating Progress on the SDGs in the Asia-Pacific Region Prepared for the Asia Pacific Forum for Sustainable Development (APFSD)”
- Commissioned Report “Circulating and Ecological Economy -- Japan's Vision for Realisation of Decarbonisation and SDGs”
- Policy Report “Inclusive Green Finance: A Survey of the Policy Landscape”
- Policy Report “Implementing Solutions to Climate Change and Air Pollution in Asia: Mobilising Finance, Strengthening Policies and Building Capacities”
- Book Chapter “Managing Air Pollution in Asia: Towards a Multi-Benefit, Multi-Source Strategy” (In “Global Environment Outlook 6 for Industry in Asia-Pacific”)
- Book Chapter “Enabling Purposive Experimentation in the Transport Sector, the Case of BRT Improvement and CNG Conversion in Semarang, Indonesia” (In “Sustainability and the Automobile Industry in Asia: Policy and Governance”)
- Peer-reviewed Article “Modelling of Sectoral Emissions of Short-lived and Long-lived Climate Pollutants under Various Control Technological Strategies” (In Science of the Total Environment)

3. Three Taskforces

3.1. City Taskforce

IGES 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) Intended impacts during ISRP7

- Capacity of cities to incorporate SDGs into city planning and implementation is enhanced.
- Cities developed carbon neutral strategies or conducted multi-benefit activities towards sustainable society.

(2) Major activities in FY2019

Supporting SDG Localisation through Voluntary Local Reviews (VLRs)

In FY2018, IGES supported three Japanese cities, namely Shimokawa town (Hokkaido), Toyama city, and Kitakyushu city to produce the Voluntary Local Review (VLR) reports that are the first

VLRs in the world together with the VLR of New York city. In FY2019, IGES supported the VLR report of the City of Hamamatsu, which the Mayor of Hamamatsu city launched at an event at the SDG Summit held in New York in September 2020. IGES also published the Shimokawa Method for Voluntary Local Review (VLR) that shows practical steps for the VLR based on the experience of VLR of Shimokawa town, as a reference material for local governments interested in conducting their VLR.

IGES provides showcases for SDG actions by local governments through the “VLR Lab,” an online platform of VLR launched in March 2019 in collaboration with partner organisations including the United Cities and Local Governments Asia-Pacific (UCLG ASPAC). By the end of July 2020, VLR reports of 16 cities around the world have been included on the platform. IGES published the State of the VLR 2020 that extracted lessons from the VLRs of 14 cities in Asia, North and South America and EU.

In addition to the support for voluntary reviews of the SDGs by local governments, IGES also assists in the voluntary review of SDG actions of small companies in Japan thereby contributing to local sustainability. The review report “Taiyo Juken SDG Report 2019” was launched at HLPF2019 in July 2019 in New York as the world first voluntary review report of SMEs (small and medium enterprises).

IGES also contributed to information-sharing and capacity development on SDG localisation through the ASEAN SDGs Frontrunner Cities Programme, the Asia Pacific Mayors Academy led by the UNESCAP and UN-Habitat, and side events on VLRs at the 7th Asia Pacific Urban Forum (in Penang, October 2019) and the 9th World Urban Forum (in Abu Dhabi, February 2020).

Sharing Lessons and Providing Support towards Zero-carbon Cities

IGES supported city-to-city collaboration projects between Kawasaki-Riau (Indonesia), Kawasaki-Jakarta (Indonesia), and Tokyo-Kuala Lumpur (Malaysia) aiming to bring co-benefit impacts to cities. Under the collaboration project of Tokyo-Kuala Lumpur (KL), Tokyo’s building energy efficiency and renewable energy policy schemes and programmes were shared to support the development of sustainable building policy framework for KL, which contribute to the goals set by KL’s Low Carbon Society Blueprint 2030. In addition to the city-to-city collaboration project, IGES developed a low-carbon society scenario towards 2050 in Jakarta in collaboration with Bandung Institute of Technology, Indonesia.

IGES also continued to contribute to the China-Japan-Korea Joint Research on Decarbonisation of Cities endorsed at the 20th Tripartite Environment Ministers Meeting among China, Japan and Republic of Korea (TEMM 20) in Suzhou, China, in June 2018. A report of good practices towards decarbonisation and sustainable cities in cities in the three countries was produced and a report on the progress of the research project “Good Practices towards Decarbonization and Sustainable Cities” was presented at the TEMM 21 held in Kitakyushu, Japan, November 2019 and launched at UNFCCC-COP25 held in Madrid, Spain, December 2019.

Contributing the Discussion of Climate and SDG Synergy Approach

IGES contributed the discussion of climate and SDG synergy approach through events such as one at the UNFCCC-COP25 entitled “Climate and SDGs Synergy Approach: Achieving Decarbonised Societies and Securing Human Wellbeing”, which was a follow-up event of the first Climate and SDGs Synergy Conference organised by UN DESA and UNFCCC Secretariat in Copenhagen, Denmark in April 2019.

(3) Selected publications

- “Hamamatsu City Voluntary Local Review 2019”
- “Taiyo Juken SDG Report 2019”
- “Shimokawa Method for Voluntary Local Reviews”
- “State of the Voluntary Local Reviews 2020: Local Action for Global Impact in Achieving the SDGs”
- “Good Practices towards Decarbonization and Sustainable Cities”
- “Long-term Strategy to Achieve DKI Jakarta's Low Carbon Society 2050”

3.2. Finance Taskforce

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, IGES is engaged in policy research and recommendations as well as capacity building. Specific areas of focus are responsible investment (e.g. ESG investment), financing options, financial disclosure on climate-related risks, responses to business opportunities, and financial flows related to SDGs.

(1) Intended impacts during ISRP7

- SDG finance tracker is developed in the Asian region by establishing a database on flow of SDG-aligned finance or SDG finance
- Finance shift by Japanese companies to low-carbon/resilient investment using pressures from overseas investors is enhanced by IGES acting as a Facilitator on climate engagement between overseas investors and Japanese companies
- A mechanism to promote financing low-carbon/adaptation technology development and transfer in Asian region is established by developing innovative technologies through financing

(2) Major activities in FY2019

Green Bond Knowledge Platform

IGES has been engaged in commissioned work on green bonds from the MOEJ since April 2017. MOEJ has strongly supported the issuance of green bonds in Japan through development of the Green Bond Guidelines, support for demonstration projects, subsidy programmes and a knowledge platform. Since April 2018, IGES has served as the secretariat of a knowledge platform on green bonds, which was expanded to become the green finance portal from April 2020.

IGES has collected and consolidated information on the status of the global green bonds market, green bond guidelines in various countries and regions, good practices on green bonds, case studies of controversial green bonds, definition and taxonomy of green projects, types of green bonds and green financial products, and so forth. IGES was also selected as an Advisory Council member of the International Capital Markets Association (ICMA) in October 2019. ICMA drafted and now updates the Green Bond Principles. This has enabled access to information on crucial developments regarding green bonds and has proven useful in establishing networks and relationships with stakeholders in the finance industry. It has also built a partnership with Climate Bonds Initiative, a globally reputable non-profit organisation focused on green bonds, in collecting information, connecting experts, and engaging in outreach for the platform through networking. IGES has also supported MOEJ in a secretariat role regarding the revision process of the Green Bond Guidelines

(initially established in 2017) and in the drafting process of the Green Loan and Sustainability Linked Loan Guidelines. The revised Green Bond Guidelines and the new Green Loan and Sustainability Linked Loan Guidelines were released in March 2020.

Sustainable Finance

In order to mobilise the huge sums of funds required for implementing the SDGs, it is essential to build sustainable financial systems in which the financial sector, including banks, investors and other service providers, will shift their finance and investments to greener and more sustainable options. For example, the EU has taken the lead, developing the EU Action Plan on Sustainable Finance in March 2018. IGES has been following global trends on sustainable finance, including the EU Action Plan, and identifying specific areas for its analytical work.

In FY2019, IGES also conducted research work on identifying and comparing best practices for policies on sustainable finance both in the EU and Japan under the “Strategic Partnership to Implement the Paris Agreement: Japan-EU Policy Dialogue on Climate Change” and organised an event at Europa House in October 2019. The event brought together representatives from Japanese industry, EU authorities and experts on sustainable finance for a stakeholder dialogue. An IGES Policy Paper, “Japan EU Comparative Analysis on Sustainable Finance Policy” was drafted, completion forthcoming in early FY2020. Furthermore, interviews with Japanese corporates participating in the Global Compact Network Japan were conducted in collaboration with Sustainability Governance Centre, and the results were published in the publication “SDGs and Business in the Era of ESG – Actions by Companies and Organisations in Japan.” Two commentaries were also written this fiscal year. More specifically, IGES received a media interview request in regard to the commentary, “Japan’s Sustainable Finance Initiatives: Recent Developments and Challenges,” allowing for an opportunity to share recent insight as a result of our recent work with media.

(3) Selected publications

- Policy Report “SDGs and Business in the Era of ESG – Actions by Companies and Organisations in Japan”
- Commentary “Japan’s Sustainable Finance Initiatives: Recent Developments and Challenges”
- Commentary “Impact Reporting in Green Bonds: Current Practice and Harmonization”

3.3. Business Taskforce

IGES 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) Intended impacts during ISRP7

- Japanese Energy/climate policies to become consistence with 2°C Pathway in 4 years. (*Redefined intended impact statement in May 2018*)

(2) Major activities in FY2019

Developing Momentum for Decarbonisation in Japanese Industry

As the secretariat of the Japan Climate Leaders' Partnership (JCLP), a group for companies that develop and publish ambitious recommendations, IGES has proactively organised a total of 10 events, including Symposium on Renewable Energy with 500 participants and the JCLP delegation to Climate Week NYC. Through these dialogues between JCLP companies and overseas experts, as well as by delivering key information mainly to the Japanese industrial sector, IGES has contributed to developing a momentum for decarbonisation among businesses in Japan. In particular, IGES has catalysed the movements by Japanese businesses to decarbonise their own business through RE100, and established a wide recognition for RE100. As a result, there has been substantial growth in companies declaring to switch to 100% renewable energy as mentioned in the later section.

Expansion of the Corporate Network of JCLP

JCLP has rapidly expanded in size during FY2019. Its 102 members as of April 2019, have grown to 140 members as of April 2020 (37% growth from the previous year). As a result, as a measure of significance in the Japanese business sector, the joint sales figures of JCLP members are approximately 15% of sales for all Japanese companies.

Supporting Decarbonisation by Businesses

In cooperation with The Climate Group, IGES has supported the applications of Japanese companies for RE100, EV100¹², and EP100¹³ memberships as the JCLP secretariat. As a result, a total of 17 companies have newly joined RE100, EV100, and/or EP100 initiatives, thereby accelerating efforts toward decarbonisation by businesses. In addition, IGES has supported global recognition of Japanese companies taking decarbonisation actions, through sharing their activities to overseas network. As a result, AEON's case study was highlighted in RE100 Annual Report, and RICOH was appointed as a member of RE100 Advisory Council.

Promoting Expansion of Renewable Energy in Japan

In October 2019, IGES and JCLP, together with ICLEI Japan, and Green Purchasing Network launched "RE Action", a new initiative in Japan for SMEs, educational institutions, medical institutions, and local governments to declare switching to 100% renewable electricity by 2050. This is a complimentary initiative to RE100, both of which will create demand for renewable energy in Japan. Since its launch, the number of members has reached 62 (0.79TWh electricity consumption) as of April 2020.

Policy Engagement

JCLP has participated in the following committee that encourage recommendations for ambitious policy engagement from a corporate perspective: Policy Development Working Group of the Central Environment Council, and Subcommittee on Carbon Pricing (Ministry of the Environment). IGES has supported participation as the JCLP secretariat.

In addition, JCLP has conducted dialogues with the Minister of the Environment and the Vice Minister of Economy, Trade and Industry. Dialogue participants have communicated corporate efforts along with their strong motivation to decarbonise, calling for more ambitious deployment of policies. JCLP has published four policy statements/recommendations, which IGES has contributed as the secretariat. Furthermore, in addition to regular information sharing with MOEJ as in the past, IGES, as the JCLP secretariat has supported coordination to strengthen relation with Ministry of

¹² International business initiative aims to drive the transition to electro-mobility.

¹³ International business initiative pledged to double the energy productivity of businesses.

Economy, Trade and Industry (METI) and agreed to organise regular dialogue with JCLP from FY2020. JCLP was invited to present at a meeting by Group of LDP members on Renewable Energy, which again IGES supported in its coordination as the JCLP secretariat.

(3) Selected publications

- Recommendations from JCLP for Japan's Long-Term Growth Strategy Under the Paris Agreement (by JCLP)
- Proposal from Corporate Consumers Aiming to Sourcing 100% Power from Renewable Electricity (by 20 RE100 Members in Japan)
- Position Statement on Introduction of New Basic Transmission Fees to Power Suppliers (by JCLP)
- Position Statement on Japan's Nationally Determined Contribution (NDC) to Reduce Greenhouse Gas Emissions (by JCLP)
- Japanese translation of Mission Possible Report by Energy Transition Committee
- Climate Leaders' Signal
- JCLP Website

4. Five Satellite Offices and IPBES-TSU-AP

4.1. Kansai Research Centre (KRC)

The Kansai Research Centre (KRC) carries out research focused on actions taken by the private sector, in particular businesses that promote environmental and energy conservation measures, under the theme of "Business and the Environment". Specifically, KRC contributes to actual reduction in GHG emissions in developing countries by promoting the transfer and diffusion of low-carbon technologies (LCTs).

(1) Intended impacts during ISRP7

- Low-carbon technology diffusion in developing countries
- Improved decentralised natural resources management for disaster risk reduction (DRR) (added in FY2018)
- Development of regional circular and ecological sphere (R-CES) models in Hyogo (added in FY2019)

(2) Major activities in FY2019

Low-carbon Technology Transfer in India and Thailand

Through the Japan-India Technology Matchmaking Platform (JITMAP) network, KRC has been promoting technology transfer of compressed air systems and steam management systems to Indian companies. With the cooperation of the Energy and Resources Institute (TERI) and Japanese companies, simple energy-saving diagnoses were conducted at local companies to which the technology may be applied, and the results were shared with the companies as well as with other potential end-users at workshops. The application status of recommended equipment and operation methods was also investigated in the companies that have been diagnosed in the past, which revealed cases where energy savings of about 30% were achieved.

In Thailand, energy management report data for the past ten years of 20 anonymous companies (chemical, metal, paper/pulp, textile, food processing) were obtained from the Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy. Analysis was carried out on how much energy efficiency had improved with respect to the production. As a result, it was found that five to six companies showed a certain improvement trend, while others showed a flat or irregular tendency. DEDE collects such reports from more than 9,000 designated factories and buildings every year, but does not perform this type of analysis. This issue was pointed out at the policy dialogue with the DEDE officials, and KRC recommended to promote the energy conservation efforts of each company by evaluating and publishing the analysis results. In cooperation with DEDE, inspection training for about 20 energy managers of buildings was also organised in a commercial building in Bangkok which achieved significant energy savings.

Regional Circular and Ecological Sphere Model Project in Hokusetsu Region

In cooperation with the Hyogo Prefectural Government Hanshin-kita Regional Office and the Global Warming Countermeasures Division of the Agricultural Policy and Environment Department, KRC coordinated with the concerned parties of three municipalities in the Hokusetsu region and created a regional circular and ecological sphere (CES) plan centered on the conservation of satoyama in the region. Under the plan, through the forest management of prefectural-owned environmental forests utilising local environmental NGOs and forest volunteer groups, the felled woody biomass will be processed into firewood and chips, and then will be used as fuel for heating and hot water supply in local public facilities and welfare facilities; the plan aims to build such a supply system. It was also planned to install share cycles and green slow mobility (public transportation by electric cars of four or more passengers at less than 20 km/h) along Nose Electric Railway, which runs through the area, to improve convenience for residents and tourists along the line. The aim is to increase the number of people who interact in the region and to revitalise the local economy.

Disaster Risk Assessment Training for ASEAN Officials in Charge of Disaster Prevention and Climate Change

Since October 2018, KRC and IGES Regional Centre in Bangkok have been carrying out a disaster risk assessment project by incorporating the climate change impact in ASEAN supported by the Japan-ASEAN Integration Fund (JAIF). Under the project, KRC managed a two-week training in October-November 2019 in Japan. A total of 22 officials in charge of disaster prevention, meteorology/hydrology, rivers, forest management, etc. from nine ASEAN countries participated in the training, and learned about Japan's sabo (erosion control) and flood prevention measures and risk assessment methods in consideration of climate change.

Collaborative Lesson of Decarbonised Society at Kobe University

In collaboration with Econo-Legal Studies (ELS), Kobe University, in the first half of FY2020, KRC held a subject research course on the theme of a decarbonised society which consists of 12 lectures. For undergraduate and graduate students of the faculties of economics and law, an overview was shared detailing actions taken at a country level, such as carbon tax and emission trading schemes, as well as actions by private companies, local governments, and civic groups, towards the formation of a decarbonised society. The policies and actions necessary for the formation of a decarbonised society were discussed and the main message is being compiled to be submitted to the director in charge of environment and the president of Kobe University.

(3) Selected publications

- FY2019 MOEJ Commissioned Report on CO₂ Emissions Reduction Technology Assessment and Verification Project

- Japan-India Technology Matchmaking Platform (JITMAP) Brochure
- Hokusetsu Regional CES project website (<https://hokuces.jp/>)
- Presentation on Disaster Risk Reduction by Integrating Climate Change Projection into Flood and Landslide Risk Assessment at the International Disaster Reduction Alliance (DRA) Forum 2020

4.2. 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. Kitakyushu aims 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) Intended impacts during ISRP7

- Low-carbon and resilient policies are mainstreamed into urban planning and implementation in Asian cities
- Sustainable waste management practices are evolved in Asian cities
- Green growth and sound urban environmental management are promoted in Asian cities

(2) Major activities in FY2019

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

KUC has been functioning as a MOEJ-led platform to facilitate city-to-city collaboration activities between Asian and Japanese cities for creating low-carbon societies in Asia since FY2013. KUC supported the implementation of 17 projects under this City-to-City Collaboration Programme in FY2019. Also, KUC directly participated in various projects such as the Kitakyushu-Davao collaboration project, and supported Davao City government to create GHG inventory and a list of mitigation options to be included in a local climate change action plan (LCCAP). Moreover, KUC supported the Climate Change International Technical and Training Center (CITC) in Thailand in the development of a training curriculum for climate change laws and regulations as a JICA technical expert team member. In addition, together with the Climate and Energy team of IGES, KUC conducted comprehensive reviews on GHG inventories of developing countries submitted to UNFCCC/COP. The work was done by IGES and the Greenhouse Gas Management Institute, and the result was published as UNDP's "Global Database of National GHG Inventory (GHGI) Capacity in Developing Countries".

Evolving Sustainable Waste Management Practices

KUC supported various national governments (Philippines, Malaysia, and Bangladesh) and local governments (Davao City, Balikpapan City and Bandung City) in the improvement of waste management policies, plans and practices. Specifically, KUC contributed to the development of waste-to-energy guidelines as well as the Department Administrative Order on waste-to-energy technologies for the national governments of Malaysia and the Philippines respectively. KUC has also been an implementation partner of the World Bank to design a policy framework as well as implementation arrangements on Extended Producer Responsibility (EPR) targeting plastic waste in Bangladesh. In addition, KUC provided technical guidelines to operate the Takakura composting method in Bandung City. The corresponding operational manual was published in English and Bahasa Indonesia, and will be used as the Standard Operational Procedure (SOP) of composting

centres in Bandung. KUC also worked as a mediator to facilitate the transition of applying appropriate system and technologies to Asian cities together with City of Kitakyushu, including support for Nishihara Corporation to initiate a pilot project of municipal solid waste composting business with PT Pupuk Indonesia in Balikpapan City. KUC explores new opportunities to improve plastic waste management in Asian cities in collaboration with other international donors (e.g. UN-Habitat, Toyota Foundation, and Alliance to End Plastic Waste). KUC has contributed to accelerating the transition of cities to the circular economy by developing the “Kitakyushu Circular Economy Vision”. This vision sets out the future direction for eco-industry located in Kitakyushu City under an initiative by the private sector in collaboration with academia and the city government.

Promoting Green Growth and Sound Urban Environmental Management (Localising the Sustainable Development Goals (SDGs) in Kitakyushu City and Kyushu Region)

KUC has been acknowledged as a practitioner of SDGs localisation, and researchers have been invited as speakers on several key international programmes such as Local 2030 of High-Level Political Forum (HLPF) 2019, UN-DESA’s Expert Group Meetings on the sub-national reviewing processes of the Voluntary Local Reviews (VLRs), and the OECD’s Territorial Approach to the SDGs for launching the synthesis report and local indicator web-tool at the World Urban Forum 2020 in Abu Dhabi. In the domestic front, KUC acted as the Vice-Chair of the Kitakyushu City SDGs Council, provided lectures on the SDGs to local schools, companies and other organisations (conducted about 10 times in FY2019). KUC also launched its own initiative, the Kitakyushu SDGs-Training Platform which includes work on developing a website (<https://sdgs-kitakyushu.iges.jp/en>) and a pilot training programme held in October 2019 in English, which charged a fee for participation. KUC has been acting as a chief advisor in JICA’s verification survey on an environmentally-friendly soap-based fire-extinguishing agent for forest and peatland fire in Indonesia in collaboration with a local SME, Shabondama Soap Co., Ltd., University of Kitakyushu, and the City of Kitakyushu. This initiative is listed under the Kitakyushu City’s SDGs Future City actions.

(3) Selected publications

- “Takakura Composting Method (TCM) as an Appropriate Environmental Technology for Urban Waste Management” (International Journal of Building, Urban, Interior and Landscape Technology (BUILT) Volume (Issue): 13-2019)
- “Opportunities of Overseas Expansion of Plastic Resource Circulation System” (Journal of Environmental Information Science, No. 48-3, 2019)
- “History and Development of Water Business Overseas Development in Kitakyushu” (KIGS commissioned product in Japanese)
- “Operation Manual for Small-to-Medium Scale Compost Centres Using the Takakura Composting Method” (IGES training and learning material in English/Bahasa Indonesia)
- “Creating Sustainable, Zero-Carbon Societies Through City-to-City Collaboration” (MOEJ commissioned product in Japanese and English)
- “Article on COP25 and UNFCCC” (Annual publication of Kitakyushu Japan and German Association, July 2020)

4.3. 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) Intended impacts during ISRP7

- Increased capacities of Asia-Pacific governments to develop and implement climate change adaptation policies and projects
- Improved environmental compliance and enforcement of pollution control practices in 18 Asian member countries.
- Know-how and resources to drive clean development are adopted to create more sustainable capacity for regional engagement in climate change mitigation activities
- Improved environmental quality in ASEAN cities through better long-term city planning and higher capacity to implement transformative local actions, closely linked to the SDGs

(2) Major activities in FY2019

Climate Change Mitigation

The UNFCCC-IGES Regional Collaboration Centre (RCC) is supporting efforts to substantially scale up climate finance to contribute to the objectives of the Paris Agreement and has implemented several Needs-Based-Finance projects in a number of subregions, including ASEAN, Asian LDCs, Central and North Asia, and Polynesia. Additionally, the RCC continues to provide support for the Clean Development Mechanism (CDM) and standardised baselines in the Asia-Pacific region and assists ASEAN countries and Pakistan in exploring the potential of carbon pricing instruments. The RCC has also increased MRV capacity building under a project on Article 6 of the Paris Agreement and transparency, and has reached out to non-state actors for their contributions under the Global Climate Action Agenda.

Climate Change Adaptation

The ASEAN project on Disaster Risk Reduction (DRR) by integrating Climate Change projection into flood and landslide risk assessment targets long-term positive impact and aims to make meaningful progress in improving institutional mechanisms and integration of DRR and CCA into local development plans through close inter-ministerial/agency coordination in each of the ASEAN Member States. The project equips government (and wider stakeholders in ASEAN) with accurate planning, technical skills-application of risk/hazard maps integrating future climate change projection and early warning services, with the ultimate goal of improving how the impacts of natural disasters and climate change are handled.

To date, 10 out of 11 planned activities have been carried out, including field exercises, data-collection and hands-on training. Learning visits and regional workshops have been marked completed while remaining activities include the finalisation of its guideline, technical reports and regional seminar – to be completed by/before December 2020.

In addition, in anticipation of the launch of Asia-Pacific Adaptation Information Platform (AP-PLAT), BRC not only supported the operation of Climate Change Asia (CCA) for adaptation project proposal development for Asia-Pacific countries in cooperation with the Asian Institute of Technology (AIT) Regional Resource Centre for Asia and the Pacific (RRC.AP), it also organised a session as a side event on AP-PLAT at Asia Pacific Climate Week (APCW) in Bangkok in September 2019.

Localising the SDGs in ASEAN Cities

The 2nd Regional Workshop of the ASEAN SDGs Frontrunner Cities Programme (SDGs-FC) was reported to the 18th ASEAN Working Group on Environmentally Sustainable Cities (AWGESC). The 3rd Regional Workshop (initially planned in March 2020) in Manila, Philippines was postponed due to Covid-19. However, 'National SDGs Workshops' managed to be convened in Cambodia, Indonesia, Lao PDR, Malaysia, Thailand and Viet Nam. A total of 26 cities' innovative policies/practices relating to the 3Rs (i.e. organic waste management and reducing single-use plastics), multi-purpose green public spaces and low-carbon cities (MRV, building energy efficiency etc.) were supported with pilot project grants and then highlighted in reports, showcase videos for dissemination to the world stage social media, publications (national/city priority SDGs reports) and website.

Environmental Compliance and Enforcement

In 2019, AECEN, in partnership with the International Network for Environmental Compliance and Enforcement (INECE) and the United States Environmental Protection Agency (USEPA), facilitated the Environmental Governance Twinning Programme between the Taiwan Environmental Protection Administration (EPA Taiwan) and the Viet Nam Ministry of Natural Resources and the Environment (MONRE).

In addition, AECEN has been promoting and sharing the series of EIA articles (Phase 4-5) through the Asia Environmental Impact Assessment Network to increase capacity and knowledge sharing of government officials of AECEN member countries as well as other practitioners worldwide.

Sustainable Consumption and Production (SCP)

Launched in 2007, the EU SWITCH-Asia programme has achieved more than a decade of progress on SCP in 24 countries in the region. A launch event to introduce the SWITCH-Asia programme in Central Asia was held on 5 July 2019 in Bishkek, Kyrgyzstan. In addition, the launch event for SWITCH-Asia new grants projects in Central Asia was organised on 3 March 2020.

In 2019, IGES is currently assisting the SCP Facility on the implementation of activities in Lao PDR and Viet Nam, following multi-stakeholder dialogues in those countries. The SCP Facility together with IGES provided technical support to the Ministry of Industry and Trade (MoIT) of Viet Nam in the development of its National Action Plan on SCP 2021-2030. The National Action Plan was approved by Viet Nam's Prime Minister in June 2020. In addition, IGES conducted the assessment of the state of SCP in Lao PDR and presented its results during the Multi-Stakeholder Consultation conducted in the country.

In line with the SWITCH-Asia Communication Strategy, the SCP Facility officially launched the new SWITCH-Asia website. Since July 2019, more than 80 knowledge products have been designed, produced and published on the SWITCH-Asia website, and promoted to target audiences.

Global Environment Outlook (GEO)

GEO-6, UN Environment's flagship report, aims to help policymakers to deliver on the environmental dimensions of the SDGs and Multilateral Environmental Agreements (MEAs). BRC took the lead preparing an e-book of the GEO-6 Industry in Asia Pacific in FY2018. In FY2019, a launch session for this publication, "Asian Industrialisation as a Source of Emerging Pollutants and Environmental Impacts" was organised at ISAP 2019.

(3) Selected publications

- Report on Green Climate Fund Existing Portfolio
- Report on Financial Landscape for Improving Energy Efficiency in Thailand
- Report on Inclusive Green Finance
- 4 showcase videos of ASEAN SDGs Frontrunner Cities
- 2nd Interim Progress Report of the ASEAN SDGs Frontrunner Cities Programme
- Report on Environmental Governance Twinning Program for Vietnam Ministry of Natural Resources and Environment
- Sustainable Housing: Addressing SCP in the Housing Sector (Scoping Study/Switch Asia)
- Addressing SCP in the Fashion and Apparel Sector (Scoping Study/Switch Asia)
- Current State of SCP in Lao PDR (Background Document/Switch Asia)
- Current State of SCP in Vietnam (Background Document/Switch Asia)
- 2nd Interim Project Progress Report on Disaster Risk Reduction by Integrating Climate Change Projection into Risk Assessment
- Global Assessment Report on Disaster Risk Reduction 2019 (GAR-19) Contributing Paper: “As assessment of mainstreaming climate change concerns into institutions and policies for disaster risk reduction in ASEAN”
- 4 showcase videos of ASEAN project on Disaster Risk Reduction (DRR) by integrating Climate Change projection into flood and landslide risk assessment

4.4. Beijing Office (BJG)

The Beijing Office was set up within the Sino-Japan Friendship Center for Environmental Protection of the Ministry of Environmental Protection of China in 2006 as a base to facilitate the implementation of research activities in China. The office conducts a variety of studies and research activities based on bilateral cooperation with China, as well as multilateral cooperation (including international organisations).

(1) Intended impacts during ISRP7

- Co-benefit of better air quality and CO₂ reduction in China are promoted through city-to-city cooperation between local governments in China and Japan.
- Policy recommendation and maintenance manual on wastewater treatment are adopted in local cities in China

(2) Major activities in FY2019

Promoting the Co-benefits of Better Air Quality and CO₂ Reduction in China through Model Projects

The “Japan-China city- to-city cooperation project” was started in FY2014 to improve air quality in China, based on the existing relationship of friendship cities between Japan and China, and aimed at promoting Japan-China cooperation mainly by capacity building. This cooperation (Phase 1) ended in FY2018. From FY2019, new cooperation (Phase 2) started based on the “Agreement between the Ministry of the Environment, Japan, and Ministry of Ecology and Environment of the People’s Republic of China on cooperation to implement researches and model projects to improve air quality,” which was signed by the Ministers of the Environment of Japan and China at the Tripartite Environment Ministers Meeting among Japan, China and Korea (TEMM) in June, 2018.

The policies of cooperation in Phase 2 are as shown below. In FY2019, IGES focused on coordination with stakeholders and local governments in Japan and China, and also on starting up new model projects. IGES started the following seven projects.

Policies of Cooperation in Phase 2	
When deciding specific content for cooperation, research and model projects should be selected and implemented so as to fulfill the conditions shown below:	
(1)	Impact given to policies and contribution to better air quality
(2)	Co-benefits of GHG reduction
(3)	Contribution of Japanese environmental technologies and facilities
(4)	Possibilities of horizontal development in China and development to Asian countries (third countries)

Model Projects Started in FY2019

No.	Model projects
1	Model project on energy saving and reduction of air pollutants using new technology to recover and reuse exhaust heat
2	Model project on PM reduction countermeasures using residual stems from crops
3	Model project on countermeasures against small-sized decentralised sources of pollution in the restaurant industry
4	Model project on reduction of VOC emissions from manufacturers
5	Model project on CO ₂ reduction by recycling household waste
6	Model project on energy-saving and reduction of air pollutants in spinning, weaving and dyeing manufacturers
7	Model project on countermeasures in priority areas to reduce ozone pollution

(3) Selected publications

- Serial columns in “Kankyo Shimbun” (every month)
- Serial columns in “Global Net” magazine (every two months)
- Columns in “EIC Net” (irregular)

4.5. 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 office of ICLEI Japan. The Forum implements the Japan Biodiversity Fund (JBF) IPBES Capacity Building Project and also works in collaboration with the Natural Resources and Ecosystem Services Area and the City Taskforce, respectively.

(1) Major activities in FY2019

IPBES Technical Support Units

TSF continued to host the IPBES Technical Support Units for the Regional Assessment for Asia and the Pacific (TSU-AP) and for the Assessment of Invasive Alien Species (TSU-IAS), and

supported their work, including the uptake of the IPBES regional assessment report for Asia-Pacific and the development of a thematic assessment report on invasive alien species.

IPBES Capacity Building Project

As part of the JBF IPBES Capacity Building Project started in April 2016, TSF organised the Northeast Asia and the Southeast Asia sub-regions meetings of the science-policy dialogue based on the IPBES regional assessment report. TSF also created the summary report of the results of entire project.

International Collaboration on Environmental Impact Assessment (EIA)

In order to promote international collaboration on EIA among Asian countries, and commissioned by MOEJ, TSF conducted research on EIA systems and their implementation in Bangladesh and India, developed an information platform for the Asia EIA Network, and held EIA technical training seminars in Myanmar.

IGES Evening Forum

To strengthen cooperation between IGES and related organisations including MOEJ, TSF launched “IGES Evening Forum”, a forum for cross-cutting exchanges of views. The two forums were held in collaboration with the Natural Resources and Ecosystem Services Area and the City Taskforce.

Function as a Satellite Office in Tokyo

TSF assisted IGES staff with meeting support and provided administrative support to the IGES President, Managing Director, and Senior Fellows/ Fellows based in Tokyo for implementing their activities.

(2) Selected publications

- “Project Report on Promoting Asian Regional Collaboration on EIA”
- “EIA Guidebook for Japanese Companies (Bangladesh, India)”

4.5.1. IPBES-TSUs hosted at Tokyo Sustainability Forum

IGES has been hosting the technical support unit for the IPBES TSU-AP since 2015 at TSF. Additionally, the IPBES TSU-IAS was also set up at TSF in February 2019. These TSUs have functioned as extensions of the IPBES secretariat that is headquartered in Bonn, Germany. The purpose of the TSUs has been to support and assist in the coordination of these two IPBES assessments, including the drafting of the respective IPBES assessment reports.

(1) Intended impacts

- The region-wide scientific assessment on biodiversity and ecosystem services in the Asia-Pacific Region is widely recognised
- Scientifically sound and policy-relevant information on Biodiversity and Ecosystem Services in the Asia-Pacific Region is reflected in policies

(2) Major activities in FY2019

In order to promote the uptake of the IPBES Regional Assessment Report on Biodiversity and Ecosystem Services for Asia and the Pacific and its Summary for Policymakers which were

approved in March 2018, the IPBES TSU-AP contributed to uptake events in the Asia-Pacific region including a subregional science-policy dialogue workshop organised under a capacity building project funded by the Japan Biodiversity Fund (October 2019 in Bangkok).

The IPBES assessment of invasive alien species was launched in May 2019. In this project, around 90 experts selected from more than 40 countries are working on the scientific assessment of the status and trends of invasive alien species, their threats to biodiversity and socio-economy, and policies or measures for their prevention. The final report and its summary for policymakers will be published in 2023. IPBES TSU-IAS has been providing support to the selection of the expert group of the assessment, organisation of author meetings, and drafting of the assessment report. In August 2019, the TSU organised the first author meeting in Tsukuba, Japan. Additionally, it contributed to the organisation of a dialogue workshop between authors and representatives of indigenous peoples and local communities in November 2019 in Montreal, Canada.

Funding for TSU operations is provided by the UNEP Trust Fund, matched by contributions from the Ministry of the Environment of Japan. Further, the TSU is operated in collaboration with entities including the United Nations University (UNU) and Asia-Pacific Network for Global Change Research (APN).

5. 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: Planning and Management (PM); Knowledge and Communications (KC); and Research and Publications (RP).

5.1. Knowledge and Communications (KC)

(1) Intended impacts during ISRP7

- Enhanced profile of IGES both in Japan and abroad
- IGES expertise amplified and IGES messages well-received, in two or more areas (viz. climate change and SDGs), nationally and internationally among key stakeholders and incorporated into their visions, plans and actions
- Networks and opportunities established and enhanced to advance knowledge co-learning and co-generation around low-carbon, resilient and sustainable development strategies and actions
- Events and multi-stakeholder policy processes managed for effective dissemination and achievement
- IGES's knowledge and expertise adopted and applied by target stakeholders through effect knowledge services and exchange; and targeted stakeholders gain necessary knowledge and capacity to implement practical sustainability solutions
- Sustainability innovations streamlined into policies, planning and practice

(2) Major activities in FY2019

Monitoring & evaluation of impact generation cases

KC identified about 35 high level of impact generation cases during FY2019 through its monitoring & evaluation activities.

- KC collected expected impact generation cases from each research unit at the beginning of the fiscal year, conducted mid-term review on its progress, and presented tentative results of impact generation cases at BOD/BOT meetings in May 2020.
- When evaluating impact cases, KC analysed each impact case with several categories; by five impact clusters (International process impacts, Policy/institutional change impacts, Practical solution impacts, Media impacts, and Journal/knowledge product impacts), by key themes, by target countries, and etc.

Facilitation of cross unit collaboration

KC took the lead to convene periodic cross-unit meetings regarding climate change and SDGs (every first Monday of the month for climate change and every third Monday for the SDGs) to share relevant information and create opportunities for cross-unit collaboration.

- Regarding climate change, KC recognises that processes from the United Nations (UN) Climate Action Summit (in September 2019 in New York) to the 25th Conference of the Parties (COP25) to the United Nations Framework Convention on Climate Change (UNFCCC) (in December 2019 in Madrid) are important opportunities for cross-unit collaboration. Given this perspective, KC has tried to take an integrated approach in coordinating each unit's activities, such as releasing IGES research-based policy recommendations, providing expertise as a member of the government's negotiation team, and engagements with such stakeholders as businesses and local governments. Further, KC made plans to provide information in multiple forms to a wide range of stakeholders, leading or supporting a series of activities such as creating special pages for the website, holding media briefings, releasing briefing notes and op-eds, promoting relevant research outputs (publications), reporting during the UN Climate Action Summit and COP25 on social media outlets, and organising two COP seminars after COP25. On top of this, in time for the COP25 debriefing seminar, two handbooks on the Intergovernmental Panel on Climate Change (IPCC) Special Report on Climate Change and Land (IPCC SRCCL) and the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (IPCC SROCC), respectively, were created (both in Japanese only). In this way, KC led the creation of timely publications that meet the needs of various stakeholders.
- Regarding SDGs, KC was able to strengthen cross-unit collaboration through supporting activities such as collating key messages in time for the High-Level Political Forum (HLPF) in July 2019, showcasing IGES achievements at the HLPF during the International Forum for Sustainable Asia and the Pacific (ISAP2019), and releasing key messages for the 7th Asia-Pacific Forum on Sustainable Development (APFSD7) planned in March 2020 (postponed until May). KC will continue and strengthen its efforts in taking such initiatives in FY2020.

Effective outreach

Outreach improved both in quality and quantity.

- The IGES e-newsletter, which had been irregularly issued, has been issued on a regular monthly basis since the beginning of 2018, and the number of issues doubled. Due to efforts to support and encourage each Unit, information on the website is being more frequently updated.
- The number of website page views (PV) has shown an increasing trend since FY2016. Compared to the monthly average of 68,039 PV in FY2018, the monthly average in FY2019 is still on track to exceed that average with 69,507 PV. In August 2019, the website was fully renovated, creating more landing pages for each type of information and improving the search functionality within pages.
- The number of publication downloads in FY2019 increased considerably. While there was an increase in the number of visits via search engines, there was also a decrease in the exit rate, showing that the desired page can be found more easily.

- Various media-related initiatives that had started in FY2018 such as holding media briefings, actively developing and acquiring writing opportunities for external media, utilising press release distribution services for international dissemination, were continued. As a result, KC has achieved a similar number of exposures in FY2019 to FY2018.
- Communication through social media outlets has continued, and, IGES Japanese and English Twitter accounts have 1,826 followers and 988 followers, respectively. In addition, the IGES Facebook page has 369 likes.
- During the latter half of FY2019, to prevent the spread of COVID-19, many planned business trips and meetings were postponed or cancelled. In future, instead of inviting experts from overseas, there may possibly be more virtual opportunities such as requesting online lectures and organising virtual meetings. As such, KC set up learning opportunities amongst staff members concerned on how to organise on-line seminars smoothly, and began to consider shifting staff members' tasks and allocations to accommodate such requests.

Main achievements are provided in the Section 2.

5.2. Research and Publications (RP)

(1) Major activities in FY2019

Direct contribution to research and research outputs

- To directly produce and contribute to flagship/priority and other outputs, RP conducted some research on issues related to SDGs, climate and governance. Main outputs included a policy report on “Assessment of the G20 countries’ concrete SDG Implementation efforts,” a peer reviewed journal article on “Carbon Footprints and Consumer Lifestyles: An Analysis of Lifestyle Factors and Gap Analysis by Consumer Segment in Japan,” and a peer reviewed journal article on carbon pricing towards decarbonisation (in Japanese). Six short articles on climate and energy issues were published in a Japanese online publication “Energy Shift.” The “New York Times” published remarks on climate by RP Director, Mark Elder.
- RP managed the following six externally funded projects related to quantitative analysis, organising workshops/symposia and capacity building:
 - Carbon Pricing Suishinhi Project (led by Waseda University),
 - International Institute for Applied Systems Analysis (IIASA) Japan Committee Secretariat (MOEJ fund),
 - OECD coordination project (MOEJ fund)
 - G20 support (MOEJ fund)
 - 1.5 Degree Lifestyles project (funded by UNEP, collaborating with SCP)
 - JICA capacity building project.
- RP coordinated the IGES contribution to IISD’s Energy Policy Tracker related to COVID-19 recovery policies
- RP supported Prof. Takeuchi’s participation in UNEP’s Steering Committee on the Future of GEO (Global Environmental Outlook).
- RP coordinated and/or contributed to several translations (Japanese/English) of major outputs such as the UN’s “Global Sustainable Development Report 2019 (Executive Summary)”, UNEP’s “Emission Gap Report (Executive Summary)”, and IRENA’s “Transforming the Energy System – And Holding the Line on Rising Global Temperatures”.

Institute-wide research management

- RP managed the SRF application process. RP also conducted a review of the achievements of the FY2018 SRF projects and is in the process of reviewing the FY2019 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 IGES researchers publish in.
- The Publication policy was maintained, and RP also continued to manage the publication approval process.
- Preparations were made for the transfer of the editorial office of the peer reviewed journal “Sustainability Science” to IGES.
- RP supported the process for selecting the IGES President’s Award for Best Publication

Research-related support

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

Main achievements are provided in the Section 3.

5.3. Planning and Management (PM)

(1) Major activities in FY2019

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, 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 the 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 FY2019, the total amount of the funds received was JPY175 million (including JPY 150 million from the Government of Japan), while the total expenditure was JPY 154 million. The unspent amount of JPY 21 million, which was caused mainly by the underspending on travels due to the COVID19 pandemic, is deposited into the Deposits for IPCC TFI TSU Project so as to be appropriately used in FY2020.

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

The IPCC Inventory Software¹⁴ helps inventory compilers to estimate emissions and removals of greenhouse gases according to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (2006 IPCC Guidelines). In FY2019, the TSU organised an expert meeting to collect feedback from the software users, which helped improve the software. The TSU released an improved version, 2.691, with extended capacity for Tier 2 methods to estimate emissions from livestock. In addition, the TSU continued to provide technical support to users. In December 2019, IPCC signed an agreement with UNFCCC for the further improvement of the software that the TSU will be implementing in the FY2020 and beyond.

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

The IPCC EFDB¹⁵ is a database of emission factors and other parameters whereby national experts can find nationally appropriate values to develop national GHG inventories in accordance with the IPCC inventory guidelines. In FY2019, the TSU continued enhancing the usefulness of the database by collecting data, organising relevant expert meetings, including data meeting on agriculture, and supporting the EFDB Editorial Board, as well as implementing other activities to improve the database.

¹⁴ <http://www.ipcc-nggip.iges.or.jp/software/index.html>

¹⁵ <http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>

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

At the 49th Session in May 2019, the IPCC adopted/accepted a Methodology Report entitled the “2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories” (2019 Refinement). In FY2019, the TSU did the final copy-edit and published the 2019 Refinement at the IPCC TFI webpage. The TSU also worked on corrigenda for the 2006 IPCC Guidelines. In addition, the TSU has implemented outreach activities for the Methodological Reports, such as through the organisation of side-events at UNFCCC COP 25(December 2019), and participation at other international events. Furthermore, the TSU has started preparatory work to produce a new Methodology Report on estimation of short-lived climate forcers (SLCF) emissions, following the decision taken by the IPCC at its 49th Session.

(4) Inventory Internship Programme

In FY2019, this programme was not be implemented.

(5) Collaboration with Other Organisations

In FY2019, the TSU continued cooperation with other organisations on inventory-related matters. For example, the TSU contributed its support to inventory-related capacity building programmes implemented by the UNFCCC and the National Institute for Environmental Studies (NIES) by sending programme officers as resource persons and providing inventory-related materials developed by the IPCC TFI.

The TSU also collaborated with other projects in IGES, where possible, on matters relating to estimation of greenhouse gas 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, on areas such as climate change, biodiversity and ecosystems, changes in atmospheric, terrestrial and marine domains, and adaptation and resilience. By supporting research and capacity development, APN assists in the development of policy that contributes to sustainable development and low-carbon society.

As a summary of its financial status, overall revenue in FY2019 was JPY 292 million and expenditure was JPY 276 million. This has resulted in a surplus of about JPY 16 million. This surplus is the remaining costs of on-going projects for multiple fiscal years, and is reserved for the Deposit for Promoting APN Projects so as to achieve a substantial financial balance in FY2019.

APN conducted the following activities in FY 2019.

(1) Collaborative Regional Research Programme

APN provided support to international collaborative research projects approved for FY2019 funding projects at the 41st Steering committee (SC) meeting.

(2) Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries (CAPaBLE) Programme

APN provided support to capacity building activities for early-career scientists, practitioners, and others mainly in developing countries for activities approved for FY2019 funding projects at the 41st SC meeting.

(3) International Forum/Symposium/Workshop

i. Task Force Meeting for Drafting 4th Strategic Phase Report and 5th Strategic Plan

APN established the Task Force (TF: composed of APN members, etc.) to draft the 4th Strategic Phase Report and the 5th Strategic Plan. The first TF meeting was held in July 2019, and the second TF meeting was held in January 2020, both in Kobe. Although APN had originally planned to launch the 4th Strategic Phase Report and 5th Strategic Plan in June 2020, it was postponed due to the COVID-19 pandemic.

ii. Sub Regional Committee (SRC) Meeting

To develop a project that serves the policy needs of member countries, APN holds subregional committee (SRC) meetings in each region, i.e., Temperate East Asia (TEA), Southeast Asia (SEA), and South Asia (SA), to discuss the regional research priorities and capacity development needs that are common within those areas. In FY2019, the SEA-SRC meeting was held in November 2019 in Phnom Penh, Cambodia, and the TEA-SRC meeting was held in January 2020 in Kobe, Japan. In addition, the SA-SRC meeting was supposed to be held in April 2020 in Islamabad, Pakistan, and the Scoping workshop to establish the Pacific SRC was supposed to be held in March 2020 in Hawaii, USA, but both meetings were postponed due to the COVID-19 pandemic.

iii. Proposal Development Training Workshop (PDTW)

APN had planned a Proposal Development Training Workshop in April 2020 in Islamabad, Pakistan, to develop the capacity of early-career scientists to compete for research funding. However, it was postponed due to the COVID-19 pandemic. The theme of the workshop was “Climate-Smart Agriculture.”

iv. Activities Jointly Organised and Conducted with Hyogo Prefectural Government

Since the Hyogo Prefectural government is providing continuous support to APN, APN holds a seminar called “Hyogo Activities” every year especially for the residents of Hyogo prefecture. The seminar aims at disseminating and raising awareness of issues on global change. In FY2019, APN, in collaboration with Kobe University and International EMECS centre, held a seminar on “Biodiversity of coastal seas and restoring the environment” at Kobe University in February 2020. Along with researchers from overseas, local high school students and university students also joined the seminar and presented their research and environmental activities.

(4) Others

APN had planned the 24th Intergovernmental Meeting (IGM) and Scientific Planning Group (SPG) Meeting in June 2020 in Dhaka, Bangladesh. However, these meetings were postponed due to the COVID-19 pandemic.

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 FY2019, JISE implemented the following activities to promote its projects, including training and information collection and provision on forests, nature regeneration and ecology.

As a summary of its financial status, overall revenue in FY2019 was JPY 60 million and the expenditure was also JPY 60 million, resulting in a good balance. The revenue from the interest from JISE Funds accumulated in the past has contributed to this balance.

(1) Research Projects

On the international research front, JISE conducted basic and practical research projects aimed at the regeneration of tropical forests mainly in Malaysia, Kenya, Lao PDR and Cambodia, which were partially supported by external research grants. The projects promoted hands-on activities for reforestation and nature restoration by using ecological approaches to clarify floristic composition and structure of natural forests and growth conditions of planted trees and raised seedlings, and by providing technical support for school children to learn about biodiversity in educational institutions. In addition, JISE strengthened mutual cooperation with the IGES Natural Resources and Ecosystem Services (NRE) Area, and promoted research on ecosystem services evaluation and utilisation of forestry resources aiming at regeneration of Satoyama forests in Lao PDR as well as a research on restoration of degraded forests in Southeast Asia. Furthermore, JISE started a joint study with domestic/international NPOs to restore old sites of mine development in northern Philippines and identified a common theme for future activities.

On the domestic front, JISE carried out vegetation surveys for maintaining disaster-prevention coastal forests (Kyushu region), research on vegetation restoration of hardwood plantations in forest control/public works sites and around urban rivers (Fukui), ecological surveys on environmental protection forests (Tokyo and Yokohama), and phytosociological reviews on the vegetation classification system of Japanese forests. Some outputs of the above-mentioned research projects were presented at various domestic academic meetings, as well as being published in the annual bulletin “Eco- Habitat”, the “JISE REPORT” and newsletters.

In addition to the above, JISE conducted other activities on forest regeneration and contributed to the promotion of nature restoration in domestic regions through projects commissioned by private companies, local governments and non- profit organisations. These included vegetation surveys and planning for forest and nature restoration, as well as technical instruction in tree planting in several prefectures including Akita, Iwate, Gunma, Shizuoka, Okayama and Hiroshima.

(2) Capacity Building

As capacity development projects aimed at developing skilled personnel for environmental conservation, JISE carried out outdoor environmental study programmes (i.e. ecology classes for adults and children, three events, in July and August 2019) in collaboration with Hayama Shiosai Museum, and a vegetation survey training session in October 2019. In addition, JISE has continued its collaboration with the Kanagawa Prefectural Government, holding a joint ecology seminar with the Kanagawa Yokohama Mitsuike Park and co-organising the Youth Science and Technology Festival with the Kanagawa Institute of Industrial Science and Technology (KISTEC). Furthermore, JISE responded to requests from other local governments, educational institutions, and non-profit organisations, and provided technical instruction and guidance in their environmental educational programmes for various generations from infants to elderly people. With the support of an external subsidy, JISE also invited a mission from the forestry section of Luang Prabang Province, Lao PDR to conduct technical training on forest conservation in January 2020, in cooperation with local governments, private companies, universities, NPOs and IGES-NRE.

(3) Interaction

JISE conducted an Open Seminar in January 2020, entitled “Afforestation and international cooperation in Asia - what to overcome and what to aim for: Practical cases - challenges and prospects under SDGs”. The Forum introduced cases of overseas afforestation activities promoted in collaboration with various stakeholders, and emphasised the importance of practical activities for achieving the Sustainable Development Goals (SDGs).

(4) Dissemination and Public Awareness

To disseminate news of JISE’s activities and for public relations purposes, JISE distributed newsletters (three 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 contained both domestic and international research results related to ecology and practical activities for ecosystem conservation.

ANNEX 3: LISTS OF THE UNITED NATIONS UNITS, INTERNATIONAL NETWORKS/INITIATIVES OR ORGANISATIONS THAT IGES HOSTS, SERVES AS SECRETARIAT FOR, OR HAS COLLABORATIVE AGREEMENTS WITH

(As of June 2020)

United Nations units (4)

No.	Name of the unit	Year (hosting division at IGES)
1	Intergovernmental Panel on Climate Change (IPCC) Task Force on National Greenhouse Gas Inventories (TFI) Technical Support Unit (TSU)	September 1999- (HQ)
2	IGES Centre Collaborating with UNEP on Environmental Technologies	March 2015- (HQ)
3	United Nations Framework Convention on Climate Change (UNFCCC)-IGES Regional Collaboration Centre (RCC)	September 2015- (BRC)
4	The Technical Support Unit for the Assessment of Invasive Alien Species (TSU-IAS) for the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)	February 2019- (TSF)

Networks to which IGES serves as the secretariat (11)

No.	Name of the network	Main function
1	ASEAN SDGs Frontrunner Cities Programme / High Level Seminar on ESC (HLS ESC)	Regional network which promotes bottom-up innovative practices/policies by ASEAN's frontrunner cities. The annual HLS seminar is the face-to-face networking event under the East Asia Summit Environment Ministers (EAS EMM) (ASEAN+8) framework.
2	Asian Co-benefits Partnership (ACP)	Network to support the mainstreaming of co-benefits into sectoral development plans, policies and projects in Asia launched at the Better Air Quality 2010.
3	Asian Environmental Compliance and Enforcement Network (AECEN)	Regional Network of national and sub-national agencies from Asian countries committed to improving compliance and enforcement launched in 2005 with support from the USAID and partner organisations including ADB, USEPA and UNEP and others.
4	Clean Asia Initiative (CAI)	Initiative to help economic development in Asian countries to leap over environmental degradation by passing on Japan's experiences of technologies, organisations, and systems.
5	International Institute for Applied Systems Analysis (IIASA) Japan Committee Secretariat	Research collaboration currently focuses on solving global scale problems mainly in the field of systems analysis.
6	International Research Network for Low Carbon Societies (LCS-RNet)	Researchers' network which dedicates to governmental policy making processes to promote low-carbon societies. Initiative the G8 Environment Ministers' Meeting.
7	Japan Climate Leaders' Partnership (JCLP)	Support Japanese private-sector network to promote the transition to sustainable and low-carbon society.
8	Knowledge Hub of the Asia-Pacific Water Forum	One of the regional water knowledge hubs to generate and share water knowledge and building capacity in the Asia-Pacific region.
9	Low Carbon Asia Research Network (LoCARNet)	Asian Researchers' network to facilitates science-based policies for low-carbon development in the Asian region, launched by LCS-RNet
10	SWITCH-Asia Sustainable Consumption and Production Facility	Facility to provide information on the SWITCH-Asia grant projects and contribute to a wider dissemination of information material on SCP. The facility is jointly implemented by GIZ, IGES and adelphi.
11	Water Environment Partnership in Asia (WEPA)	Network to improve the water environment in Asia by strengthening water environmental governance.

Collaborative agreement (35)

No.	Institute	Scope
International organisations (11)		
1	Asian Development Bank (ADB)	Climate change, wastes, energy, water resources
2	IPBES	Establishment of and collaboration through the IPBES-TSU for the Assessment of Invasive Alien Species
3	International Council for Local Environmental Initiatives (ICLEI)	City level collaboration for sustainable cities
4	ICLEI Japan	City level collaboration for sustainable cities
5	International Institute for Sustainable Development (IISD)	Knowledge exchange
6	Secretariat of the Convention on Biological Diversity (SCBD)	Implementation of the Capacity building project for the implementation of IPBES Asia-Pacific Regional Assessment
7	United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP)	SDGs, knowledge sharing and mutual support to conferences
8	United Nations Environment Programme (UNEP)	Climate change, wastes, air pollution
9	UNEP-International Environmental Technology Centre (IETC)	Establishment of Collaboration Centre on Environmental Technology
10	United Nations Framework Convention on Climate Change and its Kyoto Protocol (UNFCCC)	CDM data exchange
11	UNFCCC	Establishment of and collaboration through the UNFCCC Regional Collaboration Centre (RCC)
Research collaboration (14)		
1	Asian Institute of Technology (AIT)	Policy research on sustainable development
2	Asia-Europe Foundation(ASEF) The Stockholm Environment Institute(SEI) The Hanns Seidel Foundation(HSF) ASEM SMEs Eco Innovation Center (ASEIC)	Contribution to the Asia-Europe Environment Forum (ENVforum) to foster inter-regional cooperation between Europe and Asia on sustainable development and its environmental dimensions.
3	Earth League Institutional Members	To express intention to be an institutional member of the Earth League
4	Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE), Viet Nam	Research collaboration on major topics incl. SDGs, Low-carbon development, Green tech. and Innovation, Circular economy
5	International Centre for Integrated Mountain Development (ICIMOD)	Research collaboration on natural resources management
6	Korea Environment Institute (KEI)	Research collaboration in the major thematic areas incl. climate change
7	National Environment Commission (NEC), Royal Government of Bhutan	Research collaboration in the area of climate change and its impact in Bhutan
8	National Institute of Ecology (NIE), Republic of Korea	Research collaboration on ecological management and conservation
9	New York Declaration on Forest (NYDF) Assessment Partner	Collaboration in supporting activities associated with NYDF Progress Assessment
10	PT Sarana Multi Infrastruktur (PT SMI), Indoensia	Research collaboration towards realisation of SDGs
11	Sino-Japan Friendship Center for Environmental Protection	Research collaboration on environmental protection
12	START International, Inc.	Research collaboration to promote Regional/Local-CES concept
13	The Energy and Resources Institute (TERI)	Mutual agreement to host desk each other
14	United Cities and Local Governments Asia Pacific (UCLG) Asia Pacific Regional Section (ASPAC)	Promoting and advocating Voluntary Local Review (VLR) as a mechanism for local governments to monitor SDGs
Cities (5)		
1	City of Yokohama (Y-PORT)	City level collaboration for sustainable cities in Asia
2	Kanagawa Prefectural Government, Board of Education,	Collaboration for Kanagawa Prefectural High School Learning Consortium
3	Kawasaki City	City level collaboration for sustainable cities in Asia
4	Shimokawa Town	Technical cooperation on promotion of SDGs
5	Toyama City	Technical cooperation for decarbonised urban development
Japanese Universities (5)		
1	Hiroshima University	Personnel exchange, research collaboration
2	Nagoya University	Implementation of the IUC-J project at the IGES Tokyo Sustainability Forum
3	Tokyo Institute of Technology	Personnel exchange, research collaboration
4	Yokohama City University	Personnel exchange, research collaboration
5	Yokohama National University	Personnel exchange, research collaboration

Other (membership, etc.) (7)

	Institute, network or initiative	Scope
1	Japan Consortium for Future Earth (2013-)	Collaboration on research and knowledge exchange
2	Rockefeller Foundation 100 Resilient Cities program (2016-)	Platform partner to support resilience strategy formulation
3	Sustainable Development Solutions Network (SDSN) Japan (2015-)	Collaboration on research and knowledge exchange on SDGs
	UNEP (2020-)	Accredited Organization (under the category of the scientific and technological community)
3	UNEP Finance Initiative (UNEP FI) (2017-)	Joined as a Supporting Institution
4	United Nations Economic and Social Council (UN ECOSOC) (2003-)	Contribution to the work of UN
6	United Nations Global Compact (UNGC) / Global Compact Network Japan (GCNJ) (2015-)	Collaboration on knowledge exchange on SDGs