

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

FY2018 (Year 2)

Business Report

September 2019

Institute for Global Environmental Strategies

TABLE OF CONTENTS

1. About ISRP7	1
2. Impact Generation	2
2.1. Highlights of impact generation	2
2.2. Digital Outreach.....	4
2.3. Media coverage.....	6
2.4. Think Tank ranking.....	7
3. Outputs	7
3.1. Written publications	7
3.2. Citations of peer-reviewed articles	9
3.3. Strategic Research Fund (SRF)	10
4. Management.....	11
4.1. Operations and Human Resources	11
4.2. Summary of Financial Settlement.....	14
5. Overall Achievement in FY2018	17
ANNEX 1. Summary of key achievementS by unit	18
1. Three Issue Areas	18
1.1. Climate and Energy (CE)	18
1.2. Natural Resources and Ecosystem Services Area (NRE).....	19
1.3. Sustainable Consumption and Production (SCP).....	22
2. Two Functional Centres	25
2.1. Centre for Strategic and Quantitative Analysis	25
2.2. Centre for Sustainability Governance	26
3. Three Taskforces.....	28
3.1. City Taskforce.....	28
3.2. Finance Taskforce	29
3.3. Business Taskforce.....	31
4. Five Satellite Offices and IPBES-TSU-AP	32
4.1. Kansai Research Centre (KRC)	32
4.2. Kitakyushu Urban Centre (KUC).....	33
4.3. Regional Centre in Bangkok (BRC)	35
4.4. Beijing Office (BJG)	37
4.5. Tokyo Sustainability Forum (TSF)	40
4.5.1. IPBES-TSUs hosted at Tokyo Sustainability Forum	41
5. Strategic Management Office (SMO).....	41
5.1. Knowledge and Communications (KC).....	42
5.2. Research and Publications (RP).....	43
5.3. Planning and Management (PM).....	44
ANNEX 2: Key achievement by other Projects for Public-interest Purposes	45
1. Technical Support Unit (TSU) for the Intergovernmental Panel on Climate Change (IPCC) - Task Force on National Greenhouse Gas Inventories (TFI)	45
2. Asia-Pacific Network for Global Change Research (APN)	46
3. Japanese Center for International Studies in Ecology (JISE).....	47
ANNEX 3: FY2018 Lists of the United Nations units, international networks/initiatives or organisations that IGES hosts, serves as secretariat for, or has collaborative agreements with.....	50

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 FY2018, 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 could attain the target both in FY2017 and FY2018, with 25 cases in FY2017 and 36 cases in FY2018.

In FY2018, IGES set up an award called the “Mountain View Award”, awarded to the team with the “best impact” case. The award promotes impact generation and allows good impact cases to be shared within the institute. Out of the 36 cases in FY2018, the six cases selected as finalists for the award are outlined below.

1. Contributing to the Revision of the Sustainable Sourcing Code for Timber for the Tokyo 2020 Olympic and Paralympic Games

IGES explained to the Tokyo 2020 Organising Committee about the current situation of timber production and deforestation impacts, and proposed initiatives that could improve the sustainability of forest management and supply chains in timber-supplying countries such as Indonesia and Malaysia. Consequently, IGES contributed to the revision of the Sustainable Sourcing Code for timber during the preparation and operating phases of the Tokyo 2020 Olympic and Paralympic Games. The new Sourcing Code clearly mentions timber that is derived “from forests maintained and managed based on mid- to long-term plans or policies,” and that which is not derived “from the conversion of forest to non-forest area, such as farmland.”¹ This is one of the first decisions by the Japanese public sector on public purchase policy that contributes to the Zero Deforestation target.

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. The IGES Centre Collaborating with UNEP² on Environmental Technologies (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. The main achievements thus far are highlighted below:

- CCET has been supporting six Asian countries in South Asia (The Maldives, Sri Lanka, India) and Southeast Asia (Myanmar, Cambodia, Indonesia) in developing national and sub-national waste management strategies and action plans that are more integrated and reflect resource management perspectives.

¹ https://tokyo2020.org/en/games/sustainability/data/sus-procurement-timber-code2_EN.pdf

² United Nations Environmental Programme (UN Environment or UNEP)

- The national and sub-national (regional and city) waste management strategies and action plans developed with support from CCET in Myanmar, Cambodia, and the Maldives have officially approved, adopted and published by the respective governments.

3. Taking the Lead on High-profile UNEP Report on Air Pollution Solutions

IGES served as the lead coordinator for a report entitled, “Air Pollution in Asia and the Pacific: Science-Based Solutions”, released by UNEP in October 2018. The report identifies 25 solutions to air pollution that could positively impact human health, crop yields, climate and socio-economic development, as well as contribute to achieving other SDGs. A total of 14 IGES researchers across five divisions (Sustainability Governance Centre, Climate and Energy Area, Natural Resources and Ecosystem Services Area, Sustainable Consumption and Production Area, and Strategic Management Office) contributed to the report, including coordinating lead author for chapter 3 of the report.

4. Facilitating Consultations for Business: Creating Change via RE100

The Japan Climate Leaders’ Partnership (JCLP) is a coalition of 107 companies that are undertaking measures towards decarbonisation and aiming to lead this transition process. IGES is currently serving as the secretariat of the JCLP.

The JCLP has been working towards promoting RE100, a collaborative initiative in which companies commit to 100% renewable energy for business activities. This has involved forging a partnership with the Climate Group, carrying out business-policy dialogues as well as dialogues between JCLP member businesses and the Climate Group, and disseminating timely information to the media. Furthermore, in June 2019, the JCLP released its “Proposal from Corporate Consumers Aiming to Sourcing 100% Power from Renewable Electricity” with major corporations calling on the Japanese Government to draw on all policies and measures to transform Japan’s power grid to one powered by 50% renewable electricity by 2030. At present, 16 JCLP members have been participating in RE100. Ultimately, IGES has been involved in facilitating consultations among relevant stakeholders, as well as in the collecting, analysing and sharing information that is indispensable to the JCLP’s activities.

5. Contributing to the Development of “Kyoto Appeal to Jointly Achieve 1.5°C” through IGES’s Strategic Communications & Networking

Working towards the goal of “Net Zero” carbon emissions by 2050 to limit global warming to 1.5°C, the City of Kyoto expressed its resolve to pursue specific measures and proceed to take concrete actions in the Kyoto Appeal to Jointly Achieve 1.5°C. IGES contributed to the effort by helping to formulate this Appeal, as well as coordinating the logistics of its unveiling. In particular, IGES made substantial contributions to the Appeal based on the knowledge cultivated from collaborations with Kyoto, networks with stakeholders, and the IGES publication IPCC Special Report on Global Warming of 1.5°C Handbook: Background and Future Prospects. Moreover, IGES further supported the Appeal by being involved from the preparation stage of the Commemorative Symposium on the IPCC 49th Session entitled, “To Realise a Decarbonised Society: the State of the World and Kyoto’s Challenge”, and organising a panel session that invited two of the co-Chairs of the IPCC Working Group (WG) III.

Going forward, the Appeal will advance revisions to Kyoto City’s Local Global Warming Countermeasure Ordinance as well as lead to progress in the city’s Local Action Plan on Countermeasures for Global Warming.

6. Contributing to the Transition Pathways of Urban Mobility in Developing Cities: A Case of Semarang City, Indonesia

Based on data from Semarang City, Indonesia, IGES identified three emission reduction scenarios and estimated reductions in greenhouse gas emissions and air pollutants. IGES jointly developed proposals with stakeholders concerned, which paved the way for modal shift improvements due to the expansion of the Bus Rapid Transit (BRT) System, the promotion of BRT eco-driving behaviours, and the introduction of low emission vehicles. Policymakers were receptive to such results and proposals, and have also been working to raise awareness among the youth to encourage more transportation use.

One specific development is a consequence of the agreement between Toyama City and Semarang City, a city-to-city partnership towards the realisation of a low-carbon society. Toyama City's businesses became business entities under Japan's Joint Crediting Mechanism (JCM), and used the mechanism to support Semarang City's initiative to change 72 bus engines into hybrid engines that can use compressed natural gas.

In this way, attempts to implement specific actions and develop projects based on policy research have proven to have multiple benefits for Semarang City. These successes can be attributed to the sufficient ability to plan and carry out such actions and projects, the proactive participation of stakeholders, and, with respect to mobilisation of funding, the combination of multiple sources to mobilise sufficient funds for implementation. This success story may inform strategies to pursue in other cities in Indonesia as well as in other Asian countries.

2.2. Digital Outreach

In June 2018, IGES moved its outreach activities up a gear by launching its official IGES Twitter and Facebook pages in time to promote the International Forum for Sustainable Asia and the Pacific (ISAP) 2018 and IGES' activities at the High Level Political Forum on Sustainable Development (HLPF) in New York.

During FY2018, social media was operated with the primary purpose of acquiring new audiences, and we were able to steadily acquire numbers.

Table 1: Key Numbers of Social Media Activities (FY2018)

Twitter		Facebook	
FY2018	Followers	FY2018	Page Like
Japanese Account	931		262
English Account	611		

IGES' website has continued steady growth with monthly average pageviews increasing to 68,039 in FY2018, as compared to 59,316 in FY2017. Increasing trend continued with 15% gain between FY2017 and FY2018, which was almost equivalent to 16% gain between FY2016 to FY2017. While inflows from all channels grew year-on-year, especially from publication database, social media, and email magazines were significant. The use of social media and regular publication of the e-newsletter are considered to have contributed to an increase in promotion channels for publications.

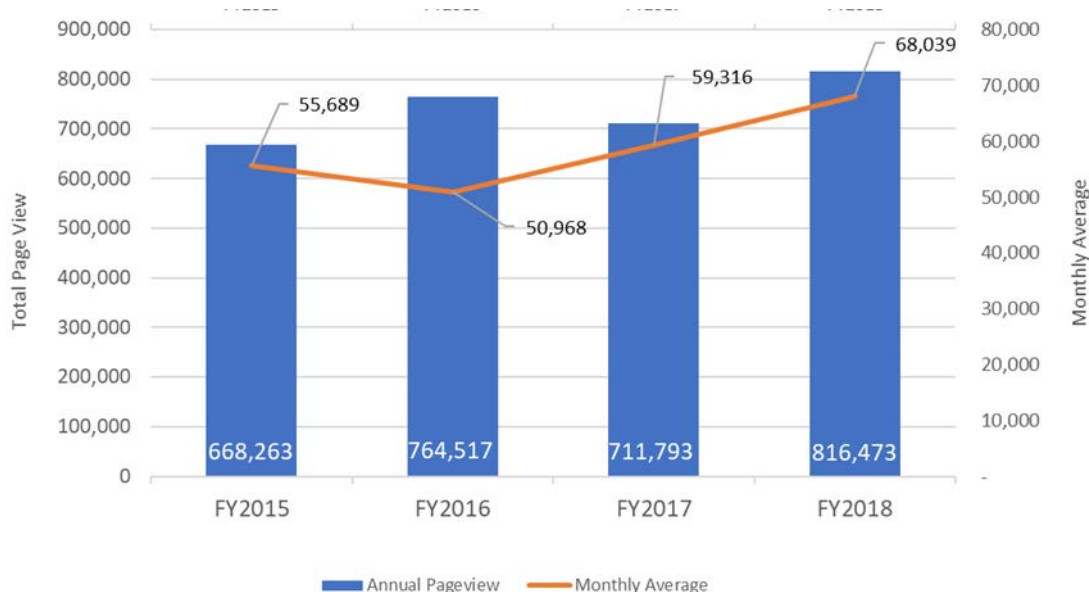


Figure 1: IGES Website Viewership (FY2015-2018)
 IGES FY2016 was reported for April 2016-June 2017 (15 months)

In FY2018 publications were downloaded from the publications database 280,917 times which achieved the FY2018 target. Unfortunately, the download counts in Google Analytics include sporadic spikes that are not unique enough to be excluded, but seem to clearly indicate some activity other than legitimate downloads of publications for human use. The scale of these irregular downloads is such that it significantly skews download counts beyond fluctuations that would be likely to occur based on our own attempts to influence download numbers. We have removed peaks that were unreasonably high from this statistic, but it is very difficult to identify and completely exclude these excess downloads.

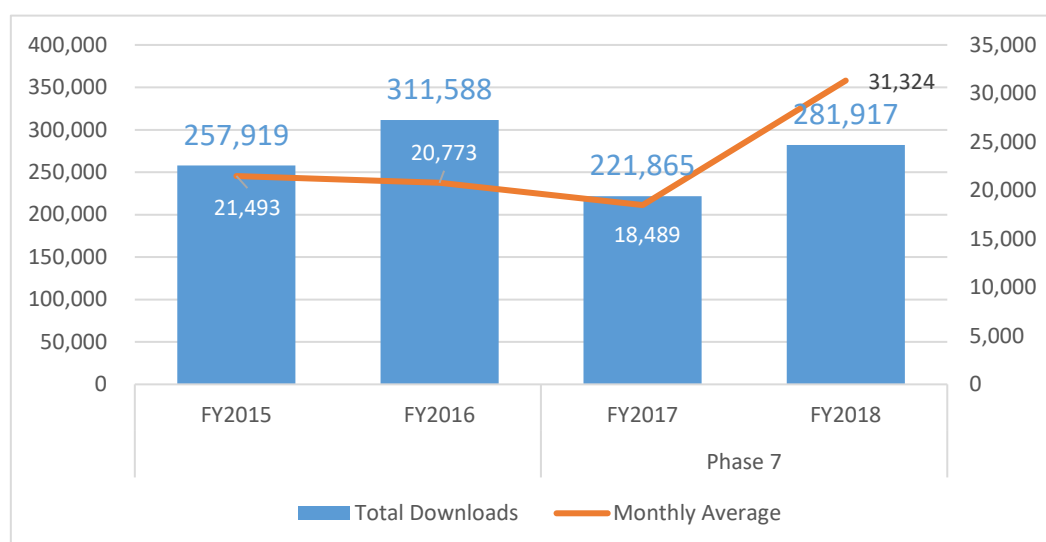


Figure 2: Downloads of IGES Publications (FY2015-FY2018)
 IGES FY2016 was reported for April 2016-June 2017 (15 months)

Table 2 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 the

high demand from the business sector for information on those topics. The list also shows a high level of interest in Japanese publications on contemporary issues such as IPCC 1.5°C Special Report (SR1.5), circular economy and plastic litter. Given these trends, it is important to ensure that major reports and information on timely topics are available in Japanese.

Table 2: Top 10 publication downloads in FY2018 (Published in last two years)

Rank	Title	Type	Published Date
1	未来につなげる SDGs とビジネス～日本における企業の取組み現場から～ (SDGs and Business for the Future: Actions by Private Companies in Japan)	Policy Report	Mar-18
2	SDGs を企業報告に統合するための実践ガイド (日本語翻訳版) (Integrating the SDGs into Corporate Reporting: A Practical Guide (Translated by IGES))	Policy Report	Jan-19
3	IGES List of Grid Emission Factors	Data/Tool	Mar-19
4	主流化に向かう SDGs とビジネス ～日本における企業・団体の取組み現場から～ (Mainstreaming the SDGs in Business: Actions by Companies and Organisations in Japan)	Policy Report	Feb-19
5	1.5-Degree Lifestyles: Targets and options for reducing lifestyle carbon footprints	Policy Report	Feb-19
6	「IPCC1.5°C特別報告書」ハンドブック:背景と今後の展望 (IPCC Special Report on Global Warming of 1.5°C Handbook: Background and Future Prospects)	Policy Report	Dec-18
7	プラスチックごみ問題の行方: 中国輸入規制の影響と今後の見通し (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)	Policy Brief	Oct-18
8	循環経済をめぐる動向: 持続可能な社会への移行に向けて -SDGs とビジネス観点からの考察	Discussion Paper	Oct-18
9	北九州市持続可能な開発目標 (SDGs) レポート 2018 (Kitakyushu City SDGs Report 2018)	Policy Report	Jul-18
10	日本の地方自治体による SDGs の取組み: SDGs 先行事例としての「環境未来都市」構想 (Taking action on the SDGs in Japanese cities: The "FutureCity" Initiative and its achievement on the SDGs)	Discussion Paper	Nov-17

2.3. Media coverage

Like the website viewership, instances of media coverage have also increased compared to previous years. FY2017 showed an average of 21 instances / month, while the figure for FY2018 is 38. In addition to commercial media and online media pioneered last year, IGES has also succeeded in developing new channels such as the use of overseas press release distribution services and television coverage by local TV stations. Holding timely "Press Seminars" for the media, despite only a few articles directly on the content, has increased opportunities for additional coverage and provision of materials, contributing to indirect media posting.

Table 3: Total Number of Media Coverage (FY2014-FY2018)

Language	FY2014	FY2015	FY2016	FY2017	FY2018
Japanese	117	199	240	223	367
Other languages	34	97	45	34	87
Total	151	296	285	257	454

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

2.4. Think Tank ranking

The position of IGES in the University of Pennsylvania think tank ranking has remained quite stable, at number 40 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. The future of the International Center for Climate Governance (ICCG) survey of climate-related think tanks is unclear, since ICCG's website does not seem to have been updated since 2017, and the last think tank report is no longer posted on its website.

Table 4: IGES in Rankings (FY2013-FY2018)

	2013	2014	2015	2016	2017	2018
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
ICCG Climate Think Tank Ranking by the International Center for Climate Governance (Published in July of the following fiscal year)	15	22	37	7	NA*	NA*

*As of July 2019, the results have not been published.

The results of the indicators of impact generation set for the ISRP7 are summarised in Table 5.

Table 5: Key Targets of Impact Generation and Their Results in FY2018

Indicator	FY2018 target	FY2018 results
Cases of high level of influence	25	36
IGES publication downloads	250,000	281,917
IGES website viewership	730,000*	816,473
Media coverage (newspapers, magazines, TV/radio broadcasts, web-media)	250	454

3. Outputs

3.1. Written publications

The publication targets were solidly achieved in FY2018. The flagship/ priority output target was exceeded in FY2018. One flagship output on "Asia-Pacific Landscape Transformations", started in FY2017, was completed in FY2018. It relates to both climate and SDGs. In addition, substantial outputs which could be considered as flagship outputs, having already received considerable attention, have also been produced. These include a Handbook on the IPCC SR1.5 (in Japanese), and a report on 1.5 degree lifestyles led by IGES and produced in cooperation with several other

institutes. A report on SDG-related activities by Japanese businesses, in both Japanese and English, was produced in cooperation with a business group. Other important timely outputs include a policy brief on plastic pollution as well as a policy report and a peer reviewed journal article on Japan's greenhouse gas (GHG) reduction target.

IGES made important contributions to 10 major assessment reports in FY2018, including as a coordinating lead author (CLA) for the IPCC SR1.5 (see Table 7). IGES researchers were coordinating lead authors for eight chapters in the Global Environment Outlook (GEO6), which was published in March 2019, and also contributed to related outputs, GEO-6 for Youth - Asia Pacific, and GEO-6 for Industry in the Asia Pacific. IGES was a coordinating lead author for one chapter of a major assessment of air pollution in Asia and the Pacific by Climate and Clean Air Coalition (CCAC), UNEP, and Asia Pacific Clean Air Partnership (APCAP) published in January 2019. IGES also contributed to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Assessment Report on Biodiversity and Ecosystem Services for Asia and the Pacific, as well as the IPBES global assessment. IGES researchers are also engaged in the process of future assessments by the IPCC Sixth Assessment Report (AR6) and IPBES.

The target for peer reviewed journal articles was exceeded by over 50% in FY2018. The target for written policy and research outputs has been more challenging in the past, and the FY2017 total of 98 fell just short of the target, but in FY2018, the target was comfortably achieved as 107 outputs were produced.

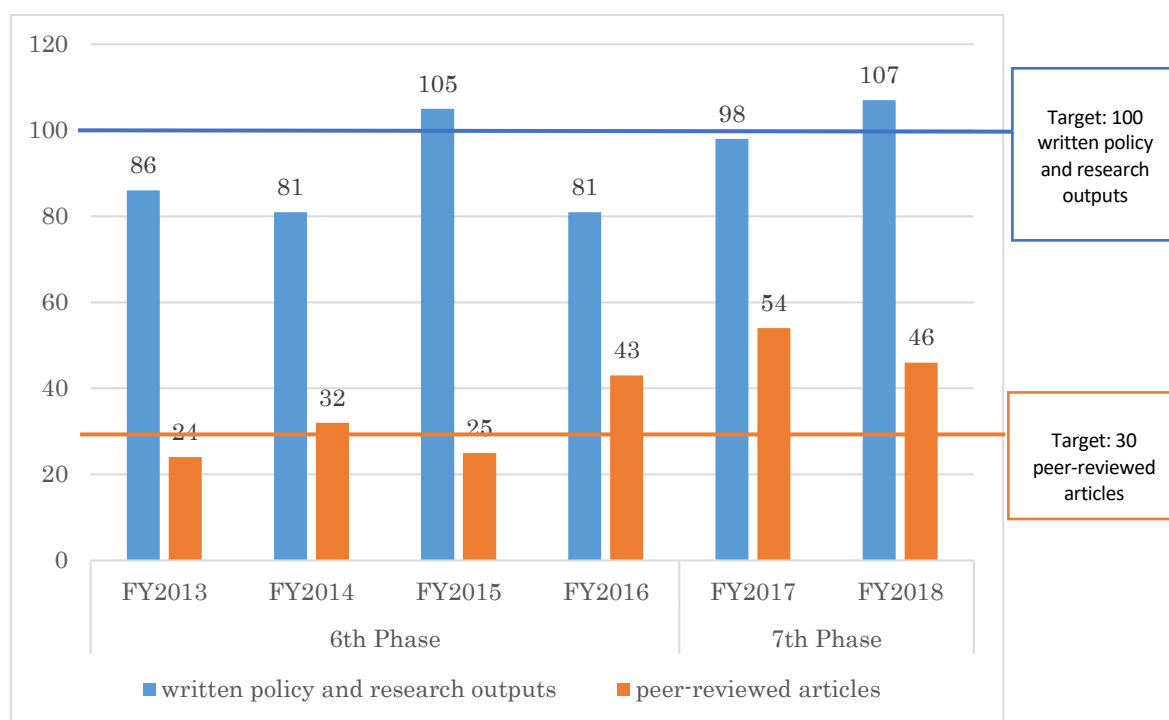


Figure 3: Written Policy and Research Outputs Compared to 7th Phase Targets

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 6. IGES has tracked citations for four years using two different calculation methods, one from the Web of Science 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 nearly three 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 709 between February 2017 and February 2018, and by 857 between February 2018 and February 2019, increases of 42% and 36%, respectively, for a total of 3266. In comparison, citations from Google Scholar increased by 1,812 and 1,756 during these periods, increases of 31% and 23%, respectively, totalling 9,398. 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 starting to include 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 6.

Table 6: Citations of IGES Publications (as of February 2019)

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

The results of the output-related indicators set for the ISRP7 are summarised in Table 7.

Table 7: Outputs Targets and Achievements

		FY2018 target	FY2018 achievement
Priority outputs	Flagship/priority outputs focusing on climate and SDGs	2	5
	Timely output on climate	1	2
	Timely output on SDGs	1	2
Written policy and research outputs		100	107
Peer reviewed journal articles		30	46
Contribution to global/regional assessments*		2	10

*: Number of ongoing and completed major global/regional assessment reports that IGES has contributed to. In FY2017 “parts” of assessments were counted, but from FY2018, only full assessments will be counted.

- (As of August 2019) Published: GEO6 (Global), IPCC SR1.5, Air Pollution in Asia Pacific, IPBES (Asia Pacific), GEO Youth (Asia Pacific), GEO6 Industry (Asia Pacific) (Total 6); Completed but not published: IPBES (Global) (Total 1); ongoing: IPCC AR6 WG1 & 3, IPBES Wild Species (Total 3)
- In FY2017, IGES was working on 3 parts of GEO6, and the IPBES BES AP regional assessment.

3.3. Strategic Research Fund (SRF)

In FY2018, 15 SRF projects were approved. As in FY2017, 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 FY2017 SRF was conducted in FY2018, and the results were quite positive. Ten projects already produced 21 completed outputs, while another 11 projects demonstrated significant progress in producing outputs (completed draft, submitted for review, or accepted for publication). The number of funding proposals developed was 16, of which six were accepted, two rejected, and eight were waiting for results at the time of the review. Some projects even achieved a certain level of impact despite the very short timeframe. One project’s recommendations were adopted by a Japanese prefecture, and the SDG interlinkages tool was being used to provide advice to the government of Bangladesh. Outputs from four projects were presented at the HLPF in July 2018. The report on Japanese business and SDGs was mentioned in the media over 10 times at the time of the review. Overall, SRF served as an effective internal mechanism to support IGES’s own research activities. The review found that significant underspending was a challenge in FY2017, as only 54% of the funds were spent. Only three projects did not underspend their budgets. The most common reason was efficient management, including some substitution of external funds, good negotiation with subcontractors, and reduction of travel expenses. Other issues related to the timing of the fiscal year, since ISAP and the HLPF occurred right after the end of the fiscal year, making fund management difficult, especially for travel and printing costs. Two cases involved down-scaling by external partners.

In FY2018, measures were taken to address spending issues crossing fiscal years, especially for ISAP and the HLPF, as well as circumstances under which project activities may extend into an additional fiscal year. SRF planning for FY2019 began near the end of FY2018 to develop ways to speed up the application and decision-making process, organise some “top-down” proposals to

provide more strategic direction, and to allow two-year proposals to enable a few longer term projects as well as further facilitate budget management across fiscal years.

A review of the FY2018 projects will be conducted at the beginning of FY2019. In addition, an effort will be made to start checking the longer term effectiveness of the SRF, so the FY2017 projects will be surveyed again to see whether they have produced additional outputs, impacts or funding proposals, or generated external funds.

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).

For (i), SMO-PM continued to improve financial value-added (project FVA)³ 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.

For (ii), SMO-PM continued updating and upgrading various administrative procedures, including online application form for joining networks and initiatives, and provided legal review and advice on various contracts by in-house legal expert. In addition, an overseas mission reporting was incorporated in the mission request/approval system, by which the rate of timely report submission and information sharing among staff members are greatly enhanced. SMO-PM continued monitoring the operational efficiency with the same metrics used in the previous years (Table 9). In addition, IGES maintained its environmental management certification (Eco-Action 21 certification which is administered under Ministry of the Environment of Japan (MOEJ)) and in FY2018 with the growing awareness of the damage to marine life caused by plastics, IGES joined initiatives such as the “Plastics Smart Forum” by MOEJ and “Kanagawa No Plastic Waste Declaration” by Kanagawa Prefecture.

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 above (Table 8). The efforts have also contributed to reducing overtime work among administrative staff. In FY2018 IGES introduced Tenure/Tenure-track system to secure excellent staff members with their longer-term commitment and contribution. In addition, IGES made continued efforts to provide a better working environment to retain staff members and raise productivity by supporting their diverse work styles such as operationalising a telecommuting work scheme to support staff members in their child-raising period and for elderly family care.

³ See notes #3 of Table10.

Sound financial base <ul style="list-style-type: none"> Utilised FVA for project proposal screening and unit-level financial management. Supported to acquire new overseas funds by preparing various requested documents. 	Operational efficiency and transparent corporate governance <ul style="list-style-type: none"> Updated/upgraded approval and administrative procedures. Strengthened legal check by in-house expert, upgraded legal document templates, updated regulations and rules, etc.
HR capacity & work environment	<ul style="list-style-type: none"> Secured necessary staff members. Introduced Tenure/Tenure-Track system. Introduced diversified working style (reduced work-day/remote for support child-raising/elderly family care). Regularly monitored overtime and HR costs

Figure 4: Key Achievements in Management in FY2018

Table 8: IGES Full-time Staff Members

Categories	(Persons)	
	FY2018 plan (July 2018)	FY2018 results (June 2019)
Professional Staff	127	128
Principal staff	22	22
Senior staff	40	43
Professional staff	56	54
Dispatched from other organisations	9	9
Operation Staff	25	30
Total: IGES Staff members (Full-time)	152	158

(Ref: Administrative staff⁴ numbers including Part-time staff)

Amount of administrative staff	27	25.8
Total: IGES Staff members (Full-time/Part-time)	153	158.9
Ratio of administrative staff in total staff	18%	16.2%

In FY2018, IGES conducted ISRP7 Mid-Phase review in April 2019 to revisit the progress made so far in the first two years (FY2017-2018) against the plans laid out in the ISRP7. The results were reported to the BOD/BOT in May 2019. The review produced several recommendations, and necessary adjustment for an effective implementation has been partially incorporated in FY2019 plan or to be further considered for a longer-term planning such as next phase integrative research programme (ISRP8).

⁴ See notes of Table 9 #1.

The results of management-related indicators set for the ISRP7 are summarised in Table 9. Among these indicators, institute-wide efforts (Headquarters and Satellite Offices) were made to reduce overtime work. As of June 2019, the rate of reduction of total overtime (time-based) was at 42% in comparison with FY2016; however, overtime per person has been decreasing in the past two years (Table 9).

Table 9: Management-related Targets and Their Results in FY2018

	Indicator	FY2018 target	FY2018 results	(Reference) FY2020 (end of phase target)
1	Ratio of administrative staff in total staff	19%	16.2%	15%
2	Reduction of overtime [%, in comparison with FY2016]	45% (time-based)	42% (time-based)	60% (time-based)
Ref	Monthly overtime hours per person (results)	<u>FY2016</u> 20.1	<u>FY2017</u> 14.5 <u>FY2018</u> 13.7	-
3	Improvement in the efficiency of IGES internal decision making [%, in comparison with FY2016]	over 40%	27% 49%	80%

[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: 27%: Improvement rate based on the number of request approvals (Monthly average number of request documents was reduced from 65 in FY2016 to 47.5 in FY2018.)
49%: 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 41.8 hours in FY2018.) These two new 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 FY2018 was JPY 3,097 million and JPY 3,071 million respectively, resulting in a surplus of JPY 26 million.

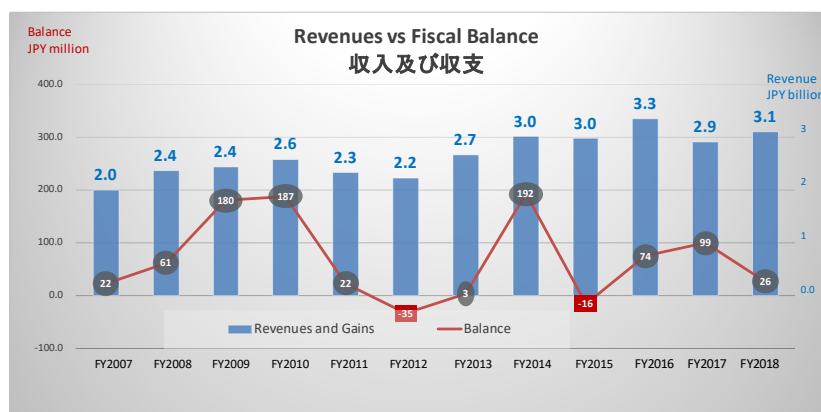


Figure 5-a: Revenue and Fiscal Balance (FY2007-FY2018)

A surplus was reserved for the Deposit for Promoting Strategic Initiatives⁵ for the Institute's own activities, which are expected to be promoted further in the latter part of the 7th Phase, resulting in a balanced substantial financial performance for FY2018.

Table 10-a: Substantial Balance and Unrestricted Net Assets

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

⁵ The cost limit (currently JPY 351,755,891) of the Deposit should be raised to JPY 377,768,780 reflecting the equivalent amount of the surplus.

Breakdown of Revenue and Expenditure

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

Table 10-b: Breakdown of FY2018 Financial Results

	* 15 months				[JPY million]
	FY2015 (Result)	FY2016* (Result)	FY2017 (Result)	FY2018 (Result)	FY2018- FY2017
Revenue					
MOEJ Contribution	500	750	500	500	0
External Funds	2,087	2,125	2,029	2,217	188
Subsidies from Local Gov.	358	436	354	349	(5)
Others	23	32	30	31	1
Total Revenue	2,968	3,343	2,913	3,097	184
Expenditure					
Operating costs for funded projects	1,108	1,029	930	1,129	199
Operating costs for IGES own initiatives	76	83	90	110	20
Personnel Costs	1,189	1,482	1,246	1,274	28
Administrative Costs	611	675	548	558	10
Total Expenditure	2,984	3,269	2,814	3,071	257
Balance	-16	74	99	26	(73)
Ratio of administrative cost in the total expenditure	15.0%	13.9%	13.0%	12.5%	-0.5% points
Project Financial Value-Added (FVA)	979	1,096	1,115	1,124	9
Project FVA Ratio	47%	52%	55%	52%	-3% 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 349 million).

IGES increased funds from MOEJ with a few strategically important projects related to G20 (Group of Twenty), Talanoa Dialogue, carbon pricing, green bond, etc. It should be also noted that larger overseas projects funded by Japan-ASEAN (Association of Southeast Asian Nations) Integration Fund (JAIF) and SWITCH-Asia SCP Facility of European Commission (EU) became fully functionalised to implement; however, respective income/costs should be counted from FY2019 due to the difference in accounting cycle. Eventually, the ratio of overseas projects⁶ decreased slightly at about 20%.

External Funds by Source

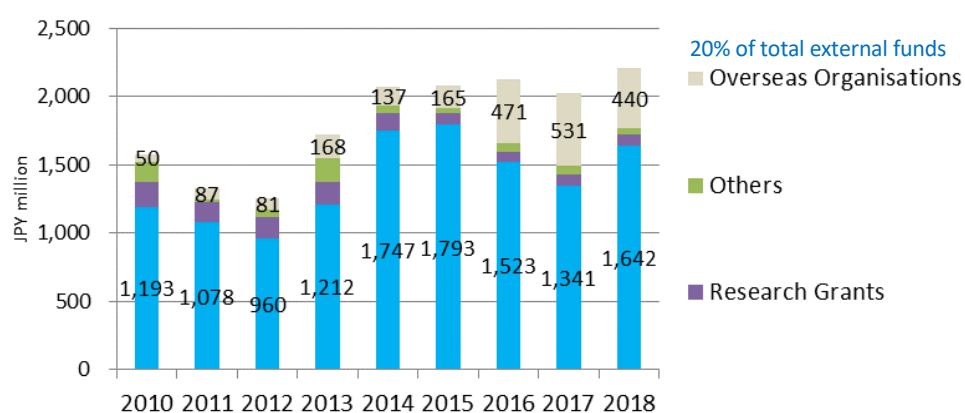


Figure 5-b: External Funds by Source (FY2010-FY2018)

⁶ Including international funding agencies

The project FVA ratio on average was resulted at about 52% at the settlement-base. This has enabled IGES to utilise more existing human resources effectively and to provide more value added service and outputs.

On the expenditures side, operating costs for implementing externally funded projects were increased from the previous year by JPY199 million in line with the increase in the volume of raised funds. The costs for the Institute's own initiatives were also increased by JPY20 million along with the promotion of strategic activities. Personnel costs were also increased reflecting the increase in staff members by JPY28 million. Administrative costs were eventually increased by JPY10 million due to the increased business volume and staff members, such as for IT related costs, bank transfer charges and consumption tax, while **the ratio of general administrative costs** out of the total expenditure performed at 12.5% as targeted.

Table 10-c: Finance-related Targets and Their Results in FY2018⁷

	Indicator	FY2018 target	FY2018 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 2.3 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]	48%	52% (settlement-based)	49%
4	Ratio of international external funds in the external funds	25%	20%	over 25%
5	Ratio of general administrative cost in the total expenditure	12.7%	12.5%	12%

[Notes to indicators]

2: Exchange rate of April 2018 (FY2018 target) or June 2019 (FY2018 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 of April 2018 (FY2018 target) or June 2019 (FY2018 result)







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

⁷ The figures are tentative as of 26 August 2019 and are subject to change reflecting the final settlement.






5. Overall Achievement in FY2018

As summarised in Table 11, overall almost all targets set for the FY2018 have been met, and a few of the targets, such as the number of publications of peer-reviewed journal articles and the project FVA ratio, have been substantially exceeded. These are considered welcome achievements in light of the expected role and capabilities of IGES as an international policy research institute. It can be further noted that a very sound financial balance has been achieved.

Table 11: Summary of FY2018 Achievement (Self-evaluation)

	FY2017 Self-evaluation	Remarks
Impact Generation		Several higher-level impacts are reported out of target 36 cases.
Outputs		Targets generally expected to be achieved. Enhanced contributions to major assessments such as GEO6 and IPCC AR6. Continued strong increase in citations of peer reviewed articles.
Operations and Human Resources (HR)		Targets are generally achieved with the introduction of updated regulations/policy related to information management and conducting a mid-phase review in time.
Financial Settlement		Targets are generally achieved with institute-wide effort of improvement in FVAs.
Overall	 	Satisfactory to Excellent

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
- GHG emissions reduction through implementation of the 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 FY2018

Operationalisation of the Paris Agreement

IGES made timely proposals regarding the operationalisation of the Paris Agreement, as well as presentations at international conferences. IGES has made submissions to the United Nations Framework Convention on Climate Change (UNFCCC) as an accredited research institution on modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement. Likewise, IGES proposed development of the “Paris Rulebook” to the Government of Japan before the 24th Conference of the Parties (COP24) to the UNFCCC. IGES introduced these proposals to stakeholders and experts engaged in international negotiations at side events for COP24 and Subsidiary Body sessions, as well as at international workshops organised by IGES. Regarding capacity building for enhanced transparency in Asian developing countries, IGES conducted research with various stakeholders and reported on outputs to international organisations, particularly United Nations Development Programme (UNDP).

Materialisation of GHG Emission Reductions 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 five MRV (monitoring, reporting and verification) methodologies, and the submission of 30 requests for official registration of projects to the Joint Committees between Japan and partner countries. These projects are expected to generate approximately 1.1 million tCO₂ in emission reductions by 2030. 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.

Impacts on Political and Social Debates on Carbon Pricing in Asia

Carbon pricing policy is taking shape in Asia, including the introduction of emissions trading schemes in China and Republic of Korea. IGES served as a focal point for implementing the third

Forum of Carbon Pricing Mechanisms in Japan, Korea and China, and contributed to discussions on future cooperation. IGES also conducted a study on allocation and MRV methodologies, and published articles in newspapers and magazines on emissions trading schemes, 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. Likewise, IGES provides the most up-to-date information through the regular updating of IGES Climate Databases on various topics.

(3) Selected publications

- “IGES Submission to Views on Modalities, Procedures and Guidelines for the Transparency Framework for Action and Support Referred to in Article 13 of the Paris Agreement”
- “Stocktake for Raising the Climate Ambition”
- “National Greenhouse Gas Inventory Capacity: An Assessment of Asian Developing Countries” (Environmental Science and Policy, Volume 78)
- “Visualisation Approach and Economic Incentives toward Low Carbon Practices in Households: A Survey Study in Hyogo, Japan” (Journal of Cleaner Production, Volume 220)
- “Prospects of International Negotiations toward the Paris Rulebook” (in Japanese)
- “Development Status and Future Prospect of Emissions Trading Scheme in China” (in Japanese)
- “Report on EU ETS (European Union Emissions Trading System)” (in Japanese)
- “Development Status and Background of CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation)” (in Japanese)
- “Theory and Practices of Global Tax” (Nippon Hyoron Sha) (in Japanese)
- “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”

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 FY2018

Pilot on Participatory Watershed Management

IGES and partners helped local governments in the Philippines to develop more resilient land-use plans and climate change action plans through land-use change scenario analysis and risk assessment. Flood risk assessments were completed in five watersheds, and water quality and habitat quality assessments are underway.

Lake Conservation and Management

IGES and partners helped to develop databases, tools and platforms to support lake management in Cambodia. Communities surrounding a lake were surveyed and a book chapter, leaflet and video were produced. Meanwhile, the annual “International Symposium on Conservation and Management of Tropical Lakes” was organised.

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 10 projects to demonstrate the value and potential of socio-ecological production landscapes and seascapes (SEPLS) around the world with a focus on Asia. The results were broadcast in a variety of ways, including an issue brief presented at a side event during the 14th meeting of the Conference of the Parties to the Convention on Biological Diversity.

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

IGES and partners have begun developing scenarios in changing mangrove ecosystem services to promote proactive landscape and seascape planning in India, Japan, Taiwan, the Philippines and Fiji. An inaugural workshop was conducted to develop common methodology and inform the research to follow.

Urban Green Spaces Assessment

IGES and partners conducted a study on spatial connectivity and accessibility of urban green spaces in the Greater Tokyo Region by means of spatial analysis and a survey questionnaire. A conference paper was produced and a peer-reviewed paper is in preparation.

Clean Wood Research

IGES and partners are working to provide national data 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 will be conducted to produce country reports for Brazil, Ecuador, the Philippines, Thailand and Lao PDR. Additionally, summaries for a website managed by the forestry agency to facilitate implementation the Act and a public seminar will be prepared.

Invasive Alien Species and Communities

IGES and partners are contributing to an international assessment of invasive alien species (IAS) through a suite of three studies on the under-studied interface between local communities and IAS. The studies include an analysis of local communities' perspectives on IAS; an analysis of citizen science projects collecting IAS observation data; and an empirical study on community use of the invasive *Lantana camara* in India.

Science-policy Interfaces on Natural Capital and Ecosystem Services

IGES and partners are working to deepen our understanding of science-policy interfaces (SPIs). This is being achieved through literature reviews, surveys and interviews at both the national level in Japan, and internationally with the input of biodiversity scientists and policymakers.

Regional Circular and Economic Sphere

IGES and partners are elaborating the regional circular ecological sphere (CES) concept through analysis of best practices and proposal of pathways for the creation and operationalisation of regional CES in various contexts. Spatial analyses and household surveys are being conducted in Bangladesh and India, based on which an issue brief on the broader concept and its relevance to socio- ecological production landscapes and seascapes has been produced.

Urban Water, Energy and Food Management Innovation

IGES and partners began to design leading practices across the water-energy-food nexus in cities and develop user-friendly decision-making tools and systems. A preliminary analysis has been conducted of a Tokyo case and a prototype food selection tool developed.

Sustainable Consumption and Production of Food

IGES and partners have begun to link sustainable food production in rural, peri-urban and urban areas with responsible consumption. Four "Food- info Marts" and four "Mobile Food-info Marts" were established in two cities in India, and 100 urban consumers and 200 rural producers were trained.

Contribution to International Assessments

IGES staff contributed to the Global Environment Outlook for Youth, the Global Environment Outlook for Industry, the IPBES Regional Assessment for Asia and the Pacific, and the IPBES Thematic Assessment of Invasive Alien Species and Their Control. These contributions were made as authors and by secondments for members of staff to the relevant IPBES technical support units, also hosted by IGES.

Standardised and Decentralised Domestic Wastewater Treatment and Management

IGES and partners in ASEAN countries have begun to create opportunities for policy dialogue, networking and capacity building for multi-stakeholders and experts in all ASEAN countries on standardised and decentralised domestic wastewater treatment and management. A policy and institutional design platform and technology showcase is being developed for various stakeholders.

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 FY2018, the WEPA annual meeting was conducted in Tokyo with the participation of government officials from 13 countries.

(3) Selected publications

- “Asia-Pacific Landscape Transformations”
- “Regional Assessment Report on Biodiversity and Ecosystem Services for Asia and the Pacific”
- “Global Environment Outlook 6 (GEO-6) for Industry”
- “Global Environment Outlook 6 (GEO-6) for Youth”
- “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”
- “Effects of Logging on Wildlife Communities in Certified Tropical Rainforests in East Kalimantan, Indonesia”
- “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”
- “WEPA Third Phase Final Report” “Sustainable Use of Biodiversity in Socio-ecological Production Landscapes and Seascapes and its Contribution to Effective Area-based Conservation”
- “T20 Japan: Biodiversity - A Key Source of Technological Innovation”

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 FY2018

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 hosted the 4th multi-stakeholder advisory committee (MAC) meeting of the programme and played a leading role in the launch of new initiatives under the SLE Programme. Likewise, IGES administered the 4th call for proposals facilitating sustainable lifestyles over the world. About 180 proposals were evaluated and eight new projects were selected. IGES will support the launch, implementation, and monitoring of these projects.

To examine possible policy targets for long-term sustainable living within the limits of one planet, IGES conducted several works in collaboration with EU research institutes and published “1.5-Degree Lifestyles: Targets and Options for Reducing Lifestyle Carbon Footprints” in March 2019.

IGES launched the “Global Search for Sustainable Schools” initiative in six countries to identify schools working on sustainable lifestyles and promote exchanges among selected schools.

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 a theme leading organisations of “Policy Design and Evaluation for SCP in Asia and the Pacific” (S-16: Environment Research and Technology Development Fund), IGES collaborated with the Indonesian government, Thai government, Japanese government, and the Asia Pacific Roundtable on SCP (APRSCP) to organise an official side event, as well as to publish a policy brief on SCP, at HLPF 2018 in July.

As a part of the consortium operating the EU SWITCH-Asia SCP Facility, IGES has contributed to the baseline study of the national SCP status and the development of national-scale projects in Vietnam and Lao PDR.

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

To contribute to putting resource efficiency and circular economy on 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 served in the main editorial role for developing a G7 synthesis progress report on both the Toyama Framework on Material Cycles (2016) and the 5-year Bologna Roadmap (2017).

IGES supported G20-related agenda-setting on marine plastic litter and circular economy through the G20 preparatory process to develop discussion papers, T20 (Think20) process of think-tanks, and S20 (Science20) process of national academies of G20 countries.

IGES supported the World Circular Economy Forum 2018 as a key partner. Also, IGES published a policy brief on China's ban on plastic imports coordinated with the timing of the forum.

As a part of an EU-funded project, IGES played a leading role in conducting a feasibility study on policy capacity development for ASEAN countries on plastics and circular economy.

In collaboration with Yokohama city, IGES is supporting Da Nang city to implement model projects for source separation and the 3Rs. As a result, Da Nang decided 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.

The emission quantification tool (EQT) was developed with the Climate and Clean Air Coalition (CCAC) to measure SLCPs (short-lived climate pollutant) reduction in the waste sector. Application of IGES' EQT was part of Philippine's strategic action concerning its nationally determined contribution (NDC).

CCET contributed to sub-regional, regional and global policy processes on sustainable waste and resource management, including the South Asia Co-operative Environment Programme (SACEP), the Global Waste Management Dialogue of UNEP-IETC, and the Regional 3R Forum in Asia and the Pacific, among others.

(3) Selected publications

- Technical Report “1.5-Degree Lifestyles: Targets and Options for Reducing Lifestyle Carbon Footprints”
- “Our Actions for a Resource-efficient Future: Following up G7 Progress on Toyama Framework on Material Cycles and 5-year Bologna Roadmap”
- Policy Brief “Reconfiguring Consumption and Production in Asia and the Pacific”
- Policy Brief “Six Proposals for Future Policies towards Circular Economy and Society”
- Guidelines “A Project Assessment Framework for Adaptive Planning, Impacts Generation, and Scaling”

- Policy Brief “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”
- Issue Brief “Paradigm Shift from Incineration to Resource Management, and Town Development: The Case of Oki Town”
- “National Waste Management Strategy and Master Plan for Myanmar” (national policy)
- “Phnom Penh Waste Management Strategy” (city policy)

2. Two Functional Centres

2.1. Centre for Strategic and Quantitative Analysis

The Strategic and Quantitative Analysis Centre (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 FY2018

SDG Integrated Policymaking through Interlinkages

Supported by the IGES Strategic Research Fund, IGES developed a free online tool, SDG Interlinkages Analysis & Visualisation, to support integrated policymaking for SDG planning and implementation. Covering 27 countries in Asia and Africa, the tool helps identify and quantify the interlinkages between SDG targets and enables the identification of major synergies and trade-offs. The tool has been used to support integrated SDG priority setting and institutional arrangement in Bangladesh, the development of a chapter on SDG interlinkages for the national SDG Roadmap and the preparation of the Voluntary National Review 2019 by the government of Indonesia, and the development of national sustainable consumption and production action plans in the Philippines and Viet Nam. IGES provided a capacity building workshop on SDG interlinkages to the national planning commission and other stakeholders in Indonesia. Using this tool, IGES conducted a few case studies on thematic issues related to climate actions, sustainable consumption and production, sustainable infrastructure, and biodiversity and ecosystem services. IGES will explore the application of the tool at the subnational level, including river basins and cities.

Just Transition to a Decarbonised Society

Funded by the MOEJ, IGES conducted quantitative assessment on the employment impacts of a transition to a decarbonised society, focusing on mid-and-long term mitigation options such as phasing-out of coal power plants and structural change through technological transformation (a case study on the promotion of electric vehicles). IGES successfully informed relevant domestic policymakers on relevant policy options for a just transition.

Long-term Mitigation Scenarios Analysis

In collaboration with the National Institute for Environmental Studies (NIES), IGES conducted an analysis on Japan's long-term climate mitigation scenarios using the AIM/CGE [Japan]⁸ model developed by NIES. Under the project "Climate Policy Assessment and Mitigation Modeling to Integrate National and Global Transition Pathways" (COMMIT), IGES informed relevant stakeholders about climate policy options for achieving long-term mitigation targets and contributed to the Talanoa Dialogue. IGES, in collaboration with the University of Tokyo, launched a visualisation tool for climate mitigation scenarios, namely mipplot, which is expected to be used by policymakers and academia for better understanding of mitigation pathways.

IGES Contribution to the TWI2050 Project

IGES conducted local-level long-term social- economic scenario analysis for low-carbon transition and presented the case studies in Tokyo and Bhutan at the Cities IPCC Conference 2018. IGES contributed to The World in 2050 (TWI2050) report which was presented at the HLPF2018.

(3) Selected publications

- Policy Report "An Integrated Approach to Sustainable Development through SDG Interlinkages"
- "IGES SDG Interlinkages Analysis & Visualisation Tool" (Version 3.0)
- "Climate Mitigation Scenarios Analysis and Visualisation Tool" (mipplot) (Version 0.1.0)
- "Long-term, Low-emission Pathways in Brazil, Canada, EU, India and Japan" (contribution to the Talanoa Dialogue by the COMMIT project)
- "Can Japan Enhance Its 2030 Greenhouse Gas Emission Reduction Target?: Assessment of Economic and Energy-related Assumptions in Japan's NDC" (Energy Policy)
- Research Report "Assessment of Climate- induced Long-term Water Availability in the Ganges Basin and the Impacts on Energy Security in South Asia"
- "Japan 2050 Low Carbon Navigator" (2018 updates)
- TWI2050 Report "Transformations to Achieve the Sustainable Development Goals"
- "Urban Transformation Towards Sustainability in Asian Cities" (In "Devising a Clean Energy Strategy for Asian Cities", Springer)

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

⁸ AIM/CGE (Asia-Pacific Integrated Model / Computable General Equilibrium) for Japan

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 FY2018

Sustainable Development Goals (SDGs)

In 2019, IGES worked with the Global Compact Network Japan (GCNJ) to launch a new report that demonstrated progress in integrating the SDGs into businesses in Japan. This report underlined the growing awareness and activity among businesses on the SDGs, with notable increases in awareness below the leadership level. The report also showed that, while some Japanese businesses are working on social issues covered by the SDGs (as part of their commitment to diversity management), significant scope remains for enhancing these efforts. In 2019, IGES also worked with the Kanagawa prefectural government to develop a guidebook to help small and medium enterprises (SMEs) engage in the SDGs. This cooperation underscored the need to take not only an integrated but an inclusive approach to the SDGs.

Co-benefits Approach

This year, IGES also took the lead on a UN Environment report that demonstrated the public health threat that air pollution poses to 92% of the population in Asia. The report received extensive coverage in international outlets such as the New York Times and many newspapers in Asia. A Japanese version of the report was also published, garnering significant attention in Japan. Based on the report's 25 recommended solutions, countries such as Thailand have begun to strengthen air pollution policies. A follow-up report on integrating short-lived climate pollutants into nationally determined contributions (NDCs) was also published this year in collaboration with the Climate and Clean Air Coalition (CCAC). Looking forward, IGES is planning to work with cities to mainstream co-benefits into clean air policies and plans.

(3) Selected publications

- “From Linking Issues to Aligning Interests: Integrated Solutions to Climate Change and Sustainable Development”
- “Mainstreaming the SDGs into Business: Corporate and Organisational Experiences”
- “The Basics of the SDGs”
- “Kanagawa SDGs Guidebook for Small and Medium Enterprises”
- “Strengthening Environmental Dimensions of the SDGs”
- “Air Pollution in Asia and the Pacific: Science-Based Solutions”
- “Integrating Short-Lived Climate Pollutants into Asian NDCs”
- “Air Pollution in the Hindu Kush Himalaya”
- “Inclusive Climate Governance in Southeast Asia: Lessons Learned from Gender-Responsive Climate Mitigation”
- “Climate Change and Cities Second Assessment Report of Urban Climate Change Research Network”

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 FY2018

Support for SDG Localisation through Voluntary Local Reviews (VLRs)

IGES produced the local SDGs reports, or Voluntary Local Review (VLR) reports, for three Japanese cities, namely Shimokawa Town (Hokkaido), Toyama City, and Kitakyushu City, in close collaboration with these governments. The reports were launched at the HLPF2018, receiving attention from both the regional and international community as the first VLRs in the world, together with the VLR of New York City. These reports are referred to in the “Towards the Localisation of the SDGs” report prepared by the Global Taskforce of Local and Regional Governments.

IGES also launched an online information platform on VLR, entitled “VLR Lab”, at the Sixth Asia-Pacific Forum for Sustainable Development (APFSD) in March 2019 in Bangkok, with partners such as the United Cities and Local Governments Asia-Pacific (UCLG ASPAC). Experiences in VLR were shared by the Deputy Mayor of Kitakyushu and President of IGES at APFSD 6. In addition to the VLR reports for four cities launched at the 2018 HLPF, five VLR reports have been put up on the VLR Lab as of the end of July 2019, namely Bristol (UK), Buenos Aires (Argentina), Los Angeles (USA), Oaxaca (Mexico), and Santana de Parna ba (Brazil). With the VLR Lab, IGES provides showcases for cities regarding planning, implementation, monitoring and reporting on SDG actions by local governments.

IGES also contributed to information sharing and capacity development on SDG localisation through organising the East Asia Summit (EAS) High-Level Seminar on Sustainable Cities (HLS-SC) and the ASEAN SDGs Frontrunner Cities Programme in collaboration with other IGES units, such as the Regional Centre in Bangkok.

Contribution to Low-carbonisation Projects in Indonesia

IGES supported city-to-city collaboration projects intended to bring co-benefit impacts to cities including Semarang (with Toyama City), Bali (with Toyama City), and Bandung (with Kawasaki City). In Semarang, 72 of the 141 diesel buses of the Trans Semarang operating BRT in the city were retrofit to hybrid diesel-CNG buses based on the results of a feasibility study conducted within the collaboration between Toyama and Semarang. The Ministry of Transport of Indonesia recognised Semarang for its impressive efforts to increase BRT ridership during the Indonesian Road Safety Award (IRSA) in December 2018.

Launch of Summary Report of the China-Japan-Korea Joint Research on Decarbonisation of Cities at UNFCCC COP24

The China-Japan-Korea joint research project on cities towards decarbonisation and sustainable development was formally endorsed at the 20th Tripartite Environment Ministers Meeting among China, Japan and Republic of Korea (TEMM 20) in Suzhou, China, in June 2018. IGES conducted case studies on actions by three Japanese local governments aiming to become low-carbon/decarbonised cities, namely Nagano Prefecture, Toyama City, and Yokohama City. The summary report of the joint research was launched at a COP24 official side event in Katowice, Poland, in December 2018 with the ministers of all three countries in attendance.

Sharing Concepts related to the Circulating and Ecological Economy

The Circulating and Ecological Economy and the Regional/Local Circulating and Ecological Sphere (CES) are concepts put forward based on Japan's Fifth Basic Environment Plan. IGES shared these concepts with ASEAN countries through workshops and regional meetings, such as the 10th HLS-SC in January 2019 in Bali. In addition, a discussion paper entitled "Circulating and Ecological Economy - Regional and Local CES: An IGES Proposal" was presented at the IGES-UCLG ASPAC joint side event at APFSD 6 in March 2019 in Bangkok.

(3) Selected publications

- "Circulating and Ecological Economy - Regional and Local CES: An IGES Proposal"
- "Assessment of Urban Passenger Fleet Emissions to Quantify Climate and Air Quality Co-benefits Resulting from Potential Interventions (In Carbon Management)"
- "Low Carbon Society Scenario Semarang 2030"
- "Toyama City the Sustainable Development Goals Report - Compact City Planning based on Polycentric Transport Networks -"
- "Shimokawa Town the Sustainable Development Goals (SDGs) Report"
- "Taking Action on the SDGs in Japanese Cities: The 'FutureCity' Initiative and Its Achievement on the SDGs"

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 FY2018

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 2019.

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. 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 as a secretariat to organise a green bond conference in Japan to disseminate and share good practices and experiences in green bond issuance in Japan (March 2019).

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 our analytical work.

IGES has issued a discussion paper, “Transforming the Financial System for Delivering Sustainable Development: A High-level Overview” in September 2018. This paper makes high-level recommendations in order to mainstream sustainable finance into national and international financial systems, building on pioneering initiatives in this area, which have already strengthened international cooperation, domestic leadership and market-led efforts. The Institute has also started 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”. Discussion paper and relevant event forthcoming in FY2019.

Cooperation with UNEP Finance Initiative (UNEP FI)

Following appointment as a supporting institution of UNEP FI in February 2017, IGES has been working with UNEP FI Tokyo on outreach activities with Japanese member companies concerning new initiatives by UNEP FI, including decarbonising portfolios, climate-related information disclosure, and positive impact finance. IGES has shared information on important discussion points at COP24 related to climate finance with Japanese member companies of UNEP FI (December 2018), as well as cooperating with the UNEP FI/Japan Climate Initiative (JCI) conference held in Tokyo and organising an informal workshop between Japanese members and UNEP FI experts (June 2019). Mutual information has been shared on sustainable finance with UNEP FI Tokyo desk.

(3) Selected publications

- Policy Brief “Strengthening the Integration of Climate Risks in the Banking Sector”
- Discussion Paper “Impact of Climate Change: Transforming Business Behaviour in favour of Sustainable Development”
- Policy Report “Testing the Japanese Equity Market Alignment with the 2°C Climate Goal”

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 FY2018

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 11 events, including dialogues with companies and investors outside Japan and the JCLP delegation to COP24. Through these dialogues between JCLP companies and overseas companies, 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 provided key updates in a business context on the latest developments in climate change and trends overseas, particularly targeting the financial media in Japan. As a result, there have been many articles published.

Expansion of the Corporate Network of JCLP

JCLP has rapidly expanded in size during FY2018. Its 38 members as of April 2018 have grown to 102 members as of April 2019 (268% growth from the previous year).

Supporting Decarbonisation by Businesses

In cooperation with The Climate Group, IGES has supported the applications of Japanese companies for RE100⁹, EV100¹⁰, and EP100¹¹ memberships as the JCLP secretariat. As a result, a total of 10 companies have newly joined RE100, EV100, and/or EP100 initiatives, thereby accelerating efforts toward decarbonisation by businesses.

Policy Engagement

JCLP has participated in the following committees 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 (MOEJ).

In addition, JCLP has conducted dialogues with the Minister of the Environment and the Minister of Foreign Affairs. Dialogue participants have communicated corporate efforts along with their strong motivation to decarbonise, calling for more ambitious deployment of policies. IGES has made various contributions including coordination of dialogues.

⁹ International business initiative committed to 100% renewable power, working to massively increase corporate demand for and delivery of renewable energy.

¹⁰ International business initiative aims to drive the transition to electro-mobility.

¹¹ International business initiative pledged to double the energy productivity of businesses.

(3) Selected publications

- Policy Recommendation on Long-term Decarbonisation Strategy by JCLP
- Non State Actors' Climate Action 2018
- 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).

In FY2018, with support from MOEJ and Hyogo Prefecture, KRC conducted research activities mainly on three fronts in collaboration with other research groups within IGES, as well as leading regional and international organisations.

(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)

(2) Major activities in FY2018

Low-carbon Technology Transfer in India and Thailand

Activities in India have been expanding in cooperation with Japanese private companies, which provide the latest technologies and managerial know-hows related to air compressors, electric heat pumps, refrigeration, steam management and transmission belts. These technology suppliers are connected to potential end-users identified by the network of The Energy and Resources Institute (TERI) and other partners through the means of workshops, trainings and feasibility studies on technology transfer.

Activities in Thailand are more focused on policy discussion, particularly with the Department of Alternative Energy Development and Efficiency (DEDE) and the Ministry of Energy, which manages the energy reporting system mandating more than 9,000 designated factories and buildings to report their energy management status every year. Based on the opinions of participants in a training programme for energy managers co-organised by DEDE and MOEJ in October 2018, KRC is recommending DEDE to start evaluating the energy reports using tentative benchmarks set for each industry by analysing the past reports for enhancing the system.

Initiation of Disaster Risk Assessment Project in ASEAN

A disaster risk assessment project incorporating climate change projection in ASEAN countries has been developed by KRC and IGES Regional Centre in Bangkok in FY2018, and its implementation was begun in October with funding support from the Japan-ASEAN Integration Fund (JAIF). KRC is in charge of a two-week case visit in Japan to take place in October to November 2019. The

main findings of a previous project implemented from 2016-2018 under Japan International Cooperation Agency (JICA) on strengthening institutional and policy frameworks for disaster risk reduction (DRR) and climate change adaptation (CCA) integration in ASEAN, the essence of which was integrated into the ongoing JAIF project, were incorporated in the “Global Assessment Report on Disaster Risk Reduction 2019” of the United Nations Office for Disaster Risk Reduction (UNDRR).

Developing a Regional Circular and Ecological Sphere Model in Hyogo

In cooperation with the Hyogo Prefectural Government, particularly the Hanshin-kita Regional Office, a project proposal for a regional circular and ecological sphere model in the Hokusetsu area was developed. The project focuses on promotion of renewable energy, regional mobility, local production and consumption of food, and forest conservation through coordination of various stakeholders including constituent municipalities, NGOs and private companies. Implementation of the project starts in FY2019.

(3) Selected publications

- “Strategies to Promote Energy Efficient Compressed Air Systems among Indian Companies” and “NH3-CO2 Brine System for Cold Storages and Seafood Processing Plants in India” (conference papers for the International Conference on Energy Efficiency in Motor Driven Systems (EEMODS) 2019)
- “Japan-India Technology Matchmaking Platform: Approach to Promote Japanese Low Carbon Technologies in Indian Industries” (Journal of Resources, Energy and Development, TERI)
- FY2018 MOEJ Commissioned Report on CO2 Emissions Reduction Technology Assessment and Verification Project
- “An Assessment of Mainstreaming Climate Change Concerns into Institutions and Policies for Disaster Risk Reduction in ASEAN” (contributing paper to the “Global Assessment Report on Disaster Risk Reduction 2019”)

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 FY2018

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

KUC facilitated city-to-city collaboration activities between Asian and Japanese cities using a MOEJ-led platform for creating low-carbon societies in Asia. KUC supported the implementation of 14 projects under this City-to-City Collaboration Programme. KUC also supported Davao City in the Philippines to carry out mainstreaming of low-carbon and resilient policies through the development of a local climate change action plan (LCCAP). Based on an Executive Order issued by the Mayor, a technical working group (TWG) was created to facilitate the preparation of this plan for Davao City, focusing on a GHG inventory, as well as both adaptation and mitigation measures. In addition, together with the Climate and Energy Area of IGES, KUC developed a country report (Japan part) for a comparative study on low-carbon city policy in Japan, China and Republic of Korea as part of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) North-East Asian Sub-regional Programme for Environmental Cooperation (NEASPEC). Besides, 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.

Evolving Sustainable Waste Management Practices

KUC supported various national governments (Philippines, Malaysia, and Myanmar) and local governments (Davao City, Bandung City, and Medan City) in the improvement of waste management policies, plans, and practices. Specifically, KUC supported the national government of the Philippines in the development of a manual on “Waste Analysis and Characterisation Study: A Guide for Philippine Local Government Units”, and supported Medan City in the development of a work plan entitled, “Reduction of SLCs from Municipal Solid Waste Management in Medan City, Indonesia: 2019-2025”. Additionally, KUC will also support a Kitakyushu-based private company in the exploration of business opportunities for producing compost from organic waste in Balikpapan City, Indonesia, in collaboration with the City of Kitakyushu. KUC regularly explores opportunities to improve plastic waste management in Asian cities in collaboration with other international organisations. Also, KUC contributed a Japan case study chapter to a World Bank publication entitled, “Municipal Solid Waste Management: A Roadmap for Reform for Policy Makers”.

Promoting Green Growth and Sound Urban Environmental Management

KUC supported the City of Kitakyushu in the development of the world’s first voluntary local review (VLR) on SDGs together with the City Taskforce of IGES, along with a leaflet introducing SDG activities at city level entitled, “Kitakyushu City Reaches Out to the World through the Sustainable Development Goals 2018”. Likewise, KUC engaged in a JICA verification survey on an environmentally- friendly soap-based fire-extinguishing agent for forest and peatland fire in Indonesia in collaboration with a private company, academia, and the city government. In addition, KUC participated in a JICA project team headed by the University of Kitakyushu to promote environmental education activities in North Sumatra Province, Indonesia.

Furthermore, in November 2018, KUC organised a joint seminar to commemorate the 55th anniversary of the commencement of Kitakyushu’s municipal system and the 20th anniversary of IGES. A report entitled “Actions for a Sustainable Society - Collaboration between Asia and the City of Kitakyushu” was released at this event. Likewise, KUC provided support to the mayor of Kitakyushu who gave a presentation at the Local and Regional Governments Forum in New York in July 2018, and also to the Deputy-Mayor who gave a presentation at the Plenary of the 6th Asia Pacific Forum on Sustainable Development in Bangkok in March 2019.

(3) Selected publications

- “Actions for a Sustainable Society - Collaboration between Asia and the City of Kitakyushu”
- “Kitakyushu City the Sustainable Development Goals Report”
- “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”
- Chapter “Japan Case Study” in “Municipal Solid Waste Management: A Roadmap for Reform for Policy Makers”
- “WHAT A WASTE 2.0 - A Global Snapshot of Solid Waste Management to 2050”
- “Discussions and Recommendations to Promote Japanese Local Governments to Conduct International Cooperation Projects in Environment Areas Using Public Funds”
- “Initiatives by Local Governments in the Local Production of Renewable Energy for Local Consumption”
- “Practice and Experience of Addressing Climate Change in Japan: Supplementary Reader for the Training Workshop on Climate Change Strategies for Local Governments FY2018”

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 FY2018

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 projects on synergies between financial inclusion and climate change, pipeline setup for accessing bilateral and multilateral funding, and country- driven strategic development for mobilising long-term climate finance. Additionally, the RCC continues to provide Clean Development Mechanism (CDM) and standardised baselines support in the Asia-Pacific region and to assist ASEAN and Pakistan in exploring the potential of carbon pricing instruments. The RCC

has also increased MRV capacity building under a project on Article 6 and transparency, and has reached out to non-state actors for their contributions under the Global Climate Action Agenda.

Climate Change Adaptation

With completion of the JICA technical cooperation project for strengthening the institutional and policy framework for disaster risk reduction and climate change adaptation in ASEAN, Member States concurred that floods and landslides were the two most common water-related disasters across the region, while improvement of hazard and risk assessments/risk mapping integrating future climate change projection was marked as highest priority. The new project aims to contribute to the overall goal of ASEAN in “building a resilient ASEAN Community to reduce disaster losses and collectively respond to disasters” in line with the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Programme 2016-2020 and Sendai Framework on Disaster Risk Reduction 2015-2030: Priority 1 to 4. Key activities including pilot projects, case visits, workshops and guideline development were started from October 2018.

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 Asian Institute of Technology (AIT) Regional Resource Centre for Asia and the Pacific (RRC.AP), it also organised a workshop for a group of academics and practitioners working on climate change adaptation in the Asia-Pacific region. Participants shared their experiences in delivering capacity building programmes with a view to creating a consortium of training institutions that could assist IGES in its capacity building responsibilities under AP-PLAT in the future.

Localising the SDGs in ASEAN Cities

The first phase of the ASEAN SDGs Frontrunner Cities Programme (SDGs-FC) was launched at the programme’s 1st Regional (Inception) Workshop in September 2018 in Tokyo. National Focal Points (NFPs) from eight ASEAN Member States nominated a total of 26 participating cities, comprising 13 candidate SDGs Frontrunner Cities and 13 Model Cities to propose innovative local actions linked to the SDGs. Cities’ achievements are to be captured and presented in national SDGs workshops that aim to contribute to the UN’s Voluntary National Review process. As of June 2019, NFPs and cities have nearly completed their SDGs action plans for implementation. Key topics include single-use plastics reduction, the 3Rs, integrated solid waste management, low-cost wastewater treatment, public greening, community-led eco-tourism, and low-carbon cities, which contribute to SDGs 3, 6, 7, 11, 12, 13 and 14. Progress was reported to the 2nd Regional Workshop and the 17th ASEAN Working Group on Environmentally Sustainable Cities (AWGESC).

Environmental Compliance and Enforcement

The International Network for Environmental Compliance and Enforcement (INECE) collaborated with the Asian Environmental Compliance and Enforcement Network (AECEN) under the assistance of United States Environmental Protection Agency (USEPA) in supporting the Ministry of Natural Resources and Environment of Vietnam (MONRE) to strengthen capacity and exchange information through a twinning programme in order to review and revise the Environmental Protection Law. This programme will subsequently lead to the replication of other twinning programmes in FY2019, which is under discussion with the USEPA. In addition, AECEN has also been facilitating information exchange/ sharing through the Asia Environmental Impact Assessment (EIA) network, which will also be continued in FY2019.

Sustainable Consumption and Production (SCP)

The SWITCH Asia Facility has conducted a series of multi-stakeholder dialogues to identify national priorities for support from SWITCH Asia. A second call for proposals has been released

and a large number of proposals are currently being evaluated by the European Union. Another major development during the year was the addition of five Central Asian countries to SWITCH Asia. IGES is currently assisting the Facility to prepare concept notes for Lao PDR and Viet Nam following multi-stakeholder dialogues in those countries.

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 in the preparation of the e-book of the GEO-6 Industry in Asia Pacific in FY2018.

(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
- Interim Progress Report on ASEAN SDGs Frontrunner Cities
- Project Progress Report on Disaster Risk Reduction by Integrating Climate Change Projection into Flood and Landslide Risk Assessment
- E-book of GEO-6 for Industry in Asia-Pacific

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 FY2018

Promoting the Co-benefits of Better Air Quality and CO₂ Reduction in China through City-to-City Cooperation between Japan and China

FY2018 was the last year of the "Japan-China city-to-city cooperation project", a project to improve air quality in China started in FY2014. As the overall coordination platform of the project, IGES promoted Japan-China cooperation by organising seminars, holding training programmes in Japan, and implementing joint research and model/pilot projects. IGES also summarised the results of the five-year cooperation.

The results of cooperation were compiled in a press release issued in March 2019 on the website of the Ministry of the Environment, Japan. Overall activities and major contents are shown in Table 12 and Table 13 below. The cities etc. where cooperation took place are shown in Figure 6.



Source: JICA China Office WEB

Figure 6: Cities where cooperation took place were distributed in 3 major designated areas to implement countermeasures against air pollution* (Beijing/Tianjin/ Hebei area, Yangtze River delta area, and Pearl River delta area)

*Major areas designated in National Action Plan on Air Pollution Control

Table 12: Overall Activities from FY2014 to FY2018

No	Activities	Total
1	Dispatching experts to give advice (including coordination with Chinese and Japanese local city governments and related organisations)	224 times
2	Organising Japan-China joint seminars (city-to-city cooperation seminars)	10 times
3	Organising seminars in local cities in China	29 times
4	Training / research in Japan	73 times, with 438 people invited to Japan
5	Meetings among relevant parties in Japan	11 times
6	Monthly monitoring report on policy trends in China	47 months, about 2000 pages

**Table 13: Major Contents of Cooperation and Cities etc. in China
Where Cooperation Took Place**

City or province in China	City or prefecture in Japan	No.	Major Contents of Cooperation
Jiangsu province	Fukuoka prefecture	1	Model project on countermeasures against air quality in spinning, weaving and dyeing manufacturers (introduction of high-efficiency tentering machine and waste gas treatment facilities using Japanese advanced technologies)
Guangdong province	Hyogo prefecture	2	Pilot project on reduction of VOC emissions in small- and medium-sized companies
Shanghai city	Kitakyushu city	3	Support for promoting reduction of VOC emissions based on self-management of private companies
		4	Analysis of source by utilising results from real-time monitoring of heavy metals in PM2.5
		5	Joint research on photochemical oxidants
Tianjin city	Kitakyushu city Yokkaichi city Kobe city	6	Cooperation to improve capacity of administrative authority (to enforce countermeasures to improve air quality)
		7	Joint research on analysis of sources of VOCs
Shenyang city	Kawasaki city	8	Joint research on analysis of sources by monitoring PM2.5
Dalian city	Kitakyushu city	9	Support to establish a plan to achieve air quality standards within a designated period
Tangshan city	Kitakyushu city	10	Support on remodeling of facilities in steel industry for emission of super-low density waste gas
Wuhan city	Oita city Kitakyushu city	11	Support to improve capacity of administrative authority to enforce permission and management system on emission of pollutants
Hebei province	Nagano prefecture	12	*Promotion of exchanges in environmental technologies
Beijing city	Tokyo metropolitan government	13	*Exchanges in environmental technologies with Beijing city
Chongqing city		14	Study on countermeasures to reduce emissions of VOCs from manufacturers
Xi'an city		15	Study on countermeasures to reduce ozone pollution by analysing the mechanisms of production of highly concentrated ozone
Xiamen city		16	Study on environmental restrictions utilising big data obtained by remote sensing monitoring of gas emissions from vehicles
		17	Study on restrictions of gas emissions utilising emissions data obtained while driving by NOx/PM on-board measuring device
Zhuhai city		18	Support to establish overall systems on countermeasures against VOCs to reduce ozone

(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 FY2018

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.

IPBES Technical Support Units

TSF continued to host the Technical Support Units for the IPBES Regional Assessment for Asia and the Pacific (TSU- AP) and the thematic assessment of invasive alien species and their control (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, and in cooperation with the Asia-Pacific Network for Global Change Research (APN) and other relevant stakeholders, TSF organised two science-policy dialogue workshops based on the IPBES regional assessment report.

The first science-policy dialogue for South Asia and West Asia sub-regions was held in Kathmandu, Nepal on 27-28 February 2019, and was attended by 57 participants from 15 countries. The second dialogue for Oceania was held in Canberra, Australia on 4-5 April 2019, and was attended by 39 participants from 15 countries. Discussions addressed common challenges on biodiversity and ecosystem services, as well as the uptake of IPBES assessment report.

Business and Biodiversity

Since 2017, TSF, supported by the Environment Research and Technology Development Fund, has implemented a research project on development of models, indicators and methodology for economic evaluation to assess the impacts on biodiversity arising from business activities. Likewise, in collaboration with Conservation International Japan and the Nikkei BP ESG Management Forum, TSF co-organised a series of seminars on natural capital management. Relevant stakeholders, including representatives of business sectors, participated.

International Collaboration on Environmental Impact Assessment (EIA)

In order to promote international collaboration on EIA among Asian countries, and commissioned by Ministry of the Environment of Japan, IGES conducted research on EIA systems and their implementation in Malaysia and the Philippines, developed an information platform for the Asia EIA Network, proofread English translations of EIA laws and regulations in Japan, and held EIA technical training seminars in Myanmar.

(2) Selected publications

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

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 FY2018

The IPBES Regional Assessment Report on Biodiversity and Ecosystem Services for Asia and the Pacific and its Summary for Policymakers were developed by more than 120 experts from 27 countries. It was approved at the sixth session of the IPBES Plenary in March 2018. In addition to providing support for the production of the assessment report, the IPBES TSU-AP contributed to uptake events in the Asia-Pacific region including a side event at the fifth Session of the Committee on Environment and Development of ESCAP (November 2018, Bangkok), a public symposium on IPBES organised by MOEJ (November 2018, Tokyo), and subregional science-policy dialogue workshops organised under a capacity building project funded by the Japan Biodiversity Fund (February 2019 in Kathmandu and April 2019 in Canberra).

The IPBES assessment of invasive alien species was launched after the seventh session of the IPBES Plenary held in April/May 2019 in Paris, France. The assessment report will be compiled by approximately 80 experts around the world, over the next three to four years. IPBES TSU-IAS supported the selection of the expert group of the assessment and preparation of the first author meeting held in August 2019 in Tsukuba, Japan.

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 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 FY2018

Monitoring & evaluation of impact generation cases

KC identified about 36 high level of impact generation cases during FY2018 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 informal meeting in May 2019.
- KC gathered information on management system on impact generation from World Resources Institute (WRI), Stockholm Environment Institute (SEI), and International Institute for Sustainable Development (IISD), which will be used for improving our system.

Facilitation of cross unit collaboration

KC played a facilitation role in encouraging cross unit collaboration in major international process or events including COP24, the Fourth Session of the UN Environment Assembly (UNEA4), APFSD and HLFP.

- Prior to events : consolidation of IGES key messages, media briefings
- During events : participation in sessions & events, information sharing through Social Networking Service (SNS)
- After events : preparation and outreach of commentary, translation of key documents, seminar on insights or interpretation of events

Effective outreach

KC delivered various information, articles, reports and messages through the IGES website and other media based on IGES research outputs. The following are major results:

- Number of article on web page: increased from 107 (FY2017) to 157 pages (FY2018)
- Number of articles published in domestic media: increased from 223 to 367 articles

- Number of articles published in international media: increased from 34 to 87 articles
- Number of SNS outreach: 1,804 followers (FY2018)
- Number of download of the Handbook on IPCC SR1.5: 2,375 (FY2018)

Strengthening stakeholder partnership

KC took the initiative to enhance collaboration with various stakeholders on climate change and SDGs. This fiscal year focused on collaboration with science circle and NGOs.

- Facilitation of Talanoa Dialogue on enhancing climate actions and ambition with private sector, local and central government
- Co-organising joint symposium at IPCC General Assembly (GA) meeting at Kyoto in May 2019.
- Starting new partnership with Japanese NGO (Green Alliance Japan) and is planning to prepare a joint report and organising a session in ISAP in July 2019

Main achievements are provided in the Section 2.

5.2. Research and Publications (RP)

(1) Major activities in FY2018

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 economics/finance, governance, SDGs, and climate policy. Main outputs included a peer reviewed journal article on “The Environmental Dimensions of the SDGs” and a book chapter on “Regional Governance for Environmental Sustainability in Asia in the Context of Sustainable Development”, and a policy brief for T20 on “Strengthened Actions towards Decarbonised and Climate Resilient Society”.
- RP managed the following five externally funded projects related to quantitative analysis, organising workshops/symposia, and capacity building:
 - Carbon Pricing Suishinhi Project (led by Waseda University),
 - MOEJ commissioned project on carbon pricing,
 - International Institute for Applied Systems Analysis (IIASA) Japan Committee Secretariat (MOEJ fund),
 - OECD coordination project (MOEJ fund), and
 - JICA capacity building project.
- RP contributed to UN Environment’s GEO6.
- RP contributed to several translations (Japanese/English) of major outputs such as excerpts from the IPCC SR1.5, and the GEO6 Summary for Policymakers.

Institute-wide research management

- RP managed the SRF application process. RP also conducted a review of the achievements of the FY2017 SRF projects and is in the process of reviewing the FY2018 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.
- The Publication policy was maintained, and implementation was adjusted to be more flexible and account for changes in the 7th Phase. RP also continued to manage the publication approval process.

Research-related support

- Library database subscriptions were adjusted to cancel subscriptions to less-used databases and enhance subscriptions to others (especially to significantly increase the number of journals with full text access), thereby significantly increasing their usefulness.
- 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 FY2018**

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).

As a summary of its financial status, overall revenue in FY2018 was JPY 173 million and expenditure was about JPY 175 million. This has resulted in a deficit of about JPY 2 million. This deficit was mainly due to travel expenses for expert meetings being higher than were anticipated when the budget plan for FY2018 was developed in May 2018.

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

The IPCC Inventory Software¹² 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 FY2018, the TSU implemented a test of Tier 2 worksheets for the agriculture sector. In addition, the TSU continued to provide technical support to users.

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

The IPCC EFDB¹³ 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 FY2018, the TSU continued enhancing the usefulness of the database by collecting data, organising relevant expert meetings and supporting the EFDB Editorial Board, as well as implementing other activities to improve the database.

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

Based on the decision IPCC/XLIV-5, adopted at the 44th Session of IPCC in October 2016, the TSU continued activities for production of a Methodology Report entitled the “2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories” (2019 Refinement). In FY2018, the TSU organised one Lead Author Meeting in October 2018. The TSU also organised the Government and Expert Review of the Second Order Draft of the 2019 Refinement from 2 July to 9 September 2018, and the Government Review of the Final Draft from 28 January to 25 March

¹² <http://www.ipcc-nggip.iges.or.jp/software/index.html>

¹³ <http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>

2019, in accordance with procedures established by the IPCC. The activities related to the 2019 Refinement were formally concluded with the adoption of the Overview Chapter and acceptance of the whole report at the 49th Session of the IPCC in May 2019 in Kyoto, Japan. Nevertheless, TSU will need to do the final copy-edit to prepare the 2019 Refinement for printing in FY2019.

(4) Inventory Internship Programme

In FY2018, this programme was not be implemented.

(5) Collaboration with Other Organisations

In FY2018, 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 appropriate, 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, practitioner 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.

The financial status of APN in FY 2018 was almost balanced with the revenue of JPY 256.7 million and expenditure of JPY 257.2 million, resulting in a small deficit of JPY 0.5 million.

APN conducted the following activities in FY 2018.

(1) Collaborative Regional Research Programme

APN provided support to international collaborative research projects that were submitted to the FY2018 call for proposals and approved for funding at the 23rd Inter-Governmental Meeting (IGM).

(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 in developing countries, in particular, for activities that were submitted to the FY2018 call for proposals and approved for funding at the 23rd IGM.

(3) International Forum/Symposium/Workshop

i. Sub Regional Committee (SRC) Meeting

APN established subregional committees for each region, i.e. Temperate East Asia, Southeast Asia and South Asia, to discuss and address regional research priorities and capacity development needs that are common within subregions. In FY2018, the Temperate East Asia Subregional Committee Meeting was held in September 2018 in Tokyo, Japan. Likewise, the South Asia Subregional Committee Meeting was held in March 2019 in Colombo, Sri Lanka, and the Southeast Asia Subregional Committee Meeting was held in May 2019 in Vientiane, Lao PDR.

ii. Proposal Development Training Workshop (PDTW)

APN organised a Proposal Development Training Workshop in September 2018 in Tokyo, Japan, to develop the capacity of early-career scientists to compete for research funding. The theme of the workshop, held back-to-back with the 2nd Temperate East Asia Subregional Committee Meeting, was “Sendai, Paris and Beyond: Addressing Challenges of Water Security for Sustainability”.

iii. Activities Jointly Organised and Conducted with Hyogo Prefectural Government

The Hyogo Prefectural Government provides support to APN, including hosting its Secretariat. In collaboration with the prefecture, APN co-organised the “Hokusetsu SATOYAMA International Seminar” in Takarazuka, Hyogo Prefecture. The aim of the seminar was to find new values or roles for satoyama in modern society and to promote efforts to sustainably conserve satoyama. Meanwhile, APN sent researchers to the “12th International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS12)” in Pattaya, Thailand, to give presentations on their research outcomes. The conference was organised by the International EMECS Center, which is supported by the Hyogo Prefectural Government.

(4) Others

APN held its 23rd IGM and Scientific Planning Group (SPG) Meeting in July 2018 in Bangkok, Thailand, and its 40th Steering Committee Meeting in March 2019 in Kobe, Japan.

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 FY2018, 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 FY2018 was JPY 68 million and the expenditure was also JPY 68 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 using ecological approaches to clarify floristic composition and structure of natural forests, growth conditions of planted trees and raised seedlings, and providing technical support for school children to learn about biodiversity in educational institutions. In addition, JISE participated in joint research led by the IGES Natural Resources and Ecosystem Services (NRE) Area in collaboration with the Wangari Maathai Institute for Peace and Environmental Studies (WMI) of the University of Nairobi. This joint research worked on identifying common environmental issues for future collaborations and closer cooperation through conducting interdisciplinary research for evaluating forest resources and ecosystem services in Kenya. Furthermore, JISE strengthened mutual cooperation with the IGES-NRE, and promoted joint research on restoration of degraded forests in Southeast Asia, aimed at regeneration of Satoyama forests in Lao PDR.

On the domestic front, JISE carried out vegetation surveys mainly in the Kyushu and Hokuriku regions for maintaining disaster-prevention coastal forests and afforestation project sites, ecological surveys on windbreak forests and environmental protection forests in Tokyo and Yokohama, and phytosociological reviews on the vegetation classification system of Japanese forests. Some outputs of the above-mentioned research projects were released at various domestic academic meetings, as well as in the annual bulletin “Eco- Habitat”, the “JISE REPORT” and newsletters.

In addition to the above activities, 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, Miyagi, Nagano, Gunma and Shizuoka.

(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 class for adults and children, 4 events) in collaboration with various stakeholders, including non-profit organisations, and a vegetation survey training in October 2018. In addition, JISE has further developed its collaboration with the Kanagawa Prefectural Government, conducting several collaborative educational projects (5 events) with the Kanagawa Prefectural Museum of Natural History and 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.

(3) Interaction

JISE conducted an Open Seminar in May 2019, entitled “APG (Angiosperm Phylogeny Group) System and Flora of Kanagawa 2018” in cooperation with the Kanagawa Prefectural Museum of Natural History. In addition, JISE held an Environmental Forum in June 2019, on the topic of “Bringing Japanese Forest Development Technology to the World--Environmental Activities in SDGs.” The forum showcased the contents and results of domestic and overseas activities for reforestation that private companies and JISE researchers were engaged in.

(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 our 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. In addition, JISE worked on the establishment of a new website.

ANNEX 3: FY2018 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 August 2019)

United Nations units (5)

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	The Technical Support Unit (TSU) for the Asia-Pacific Regional Assessment for the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)	April 2015- (TSF)
4	United Nations Framework Convention on Climate Change (UNFCCC)-IGES Regional Collaboration Centre (RCC)	September 2015- (BRC)
5	The Technical Support Unit for the Assessment of Invasive Alien Species (TSU-IAS) for 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 (36)

No.	Institute	Scope
International organisations (12)		
1	Asian Development Bank (ADB)	Climate change, wastes, energy, water resources
2	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)	Establishment of and collaboration through the IPBES-TSU for the Asia-Pacific Regional Assessment
3	IPBES	Establishment of and collaboration through the IPBES-TSU for the Assessment of Invasive Alien Species
4	International Council for Local Environmental Initiatives (ICLEI)	City level collaboration for sustainable cities
5	ICLEI Japan	City level collaboration for sustainable cities
6	International Institute for Sustainable Development (IISD)	Knowledge exchange
7	Secretariat of the Convention on Biological Diversity (SCBD)	Implementation of the Capacity building project for the implementation of IPBES Asia-Pacific Regional Assessment
8	United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP)	SDGs, knowledge sharing and mutual support to conferences
9	United Nations Environment (UNEP)	Climate change, wastes, air pollution
10	UNEP-International Environmental Technology Centre (IETC)	Establishment of Collaboration Centre on Environmental Technology
11	United Nations Framework Convention on Climate Change and its Kyoto Protocol (UNFCCC)	CDM data exchange
12	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	Conservation International (CI) and UNU-IAS	Research collaboration on biodiversity
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	Ministry of Forests and Soil Conservation, Government of Nepal	Research collaboration on forest governance standard
8	National Environment Commission (NEC), Royal Government of Bhutan	Research collaboration in the area of climate change and its impact in Bhutan
9	National Institute of Ecology (NIE), Republic of Korea	Research collaboration on ecological management and conservation
10	New York Declaration on Forest (NYDF) Assessment Partner	Collaboration in supporting activities associated with NYDF Progress Assessment
11	PT Sarana Multi Infrastruktur (PT SMI), Indoensia	Research collaboration towards realisation of SDGs
12	Sino-Japan Friendship Center for Environmental Protection	Research collaboration on environmental protection
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 (4)		
1	City of Yokohama (Y-PORT)	City level collaboration for sustainable cities in Asia
2	Kawasaki City	City level collaboration for sustainable cities in Asia
3	Shimokawa Town	Technical cooperation on promotion of SDGs
4	Toyama City	Technical cooperation for decarbonised urban development

Japanese Universities (6)		
1	Hiroshima University	Personnel exchange, research collaboration
2	Nagoya University	Implementation of the IUC-J project at the IGES Tokyo Sustainability Forum
3	Tokyo City University	Personnel exchange, research collaboration
4	Tokyo Institute of Technology	Personnel exchange, research collaboration
5	Yokohama City University	Personnel exchange, research collaboration
6	Yokohama National University	Personnel exchange, research collaboration

Other (membership, etc.) (6)

	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
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