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

(Final version with the revisions and comments proposed and received at the Board of Directors and Trustees meetings in May 2017 incorporated)

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Institute for Global Environmental Strategies

Table of Contents

1.	Introduc	duction						
2.	Underst	anding the current situation	2					
3.	IGES To	S Today						
	3.2. Stra3.3. Stra3.4. Ma	erall Ategic Research for Impact Generation Ategic Operations for Impact Generation An agement	5 7 12					
		ic Principles						
	4.2. Ove 4.2.1.	Strategic operations and impact generation						
	4.2.2.	Research and Publications	18					
	4.2.3.	Strategic management for maximising institutional performance	19					
	4.2.4.	Organisational Structure	24					
	4.2.5.	Strategic Management Office (SMO)	27					
	4.2.5.1.	Knowledge and Communications	27					
	4.2.5.2.	Research and Publications	29					
	4.2.6.	Three Issue Areas	35					
	4.2.7.	Two Functional Centres	38					
	4.2.8.	Three Taskforces	41					
	4.2.9.	Five Satellite Offices	43					
Aı	nnex 1: Fui	ther Elaboration of Strategic Research for IGES	48					
Aı	nnex 2: Ou	tputs-Outcomes-Impacts Continuum of IGES	50					
Aı	nnex 3: Lis	ts of Partners of IGES	51					

1. INTRODUCTION

The Integrative Strategic Research Programme of IGES for the 7th Phase (ISRP7) is a four-year programme which will start in July 2017. Taking into account discussions at the Ninth Meeting of Board of Trustees (BOT) and the Ninth Meeting of Board of Directors (BOD) in June 2016, as well as exchanged views at the Informal Meeting for the Board of Trustees in October 2016, ISRP7 shall ultimately be approved by the BOT in May 2017, after obtaining agreement from the BOD in the same month.

This document builds upon the *Medium-to-Long Term Strategy 2016-2025* (MLS), which was endorsed by the Eighth BOD, and approved by the Eighth BOT held in February 2016. It is also based on the earlier discussions at the Eighth BOT and Eighth BOD on the "Basic Directions of the Integrative Strategic Research Programme for the 7th Phase of IGES." The document also has benefited from comments and suggestions expressed by IGES staff at the All-IGES meetings, monthly senior staff meetings, and other various occasions.

Measures for improving management in this document were developed based on the third party assessment on IGES's operation and management conducted by the Japan Productivity Center (JPC)² in August-September 2016. The assessment was done in three layers, i.e., financial analysis, work volume, staff satisfaction; the latter two analysis were based on the survey by staff. A taskforce made up of members from the Secretariat and Programme Management Office (PMO) presented the assessment results, developed possible countermeasures, and incorporated them into this document. Countermeasures focused on improving the efficiency of internal management including daily operations, and financial as well as human resources matters. The assessment was the first of its kind IGES has ever conducted for institute-wide management.

The MLS states the aspirational goal of IGES becoming one of the top 10 institutes in the world within 10 years as a leading *agent of change* by developing new models to generate value-added knowledge through co-design, co-production and co-dissemination processes. Thus, ISRP7 should set a sound basis for IGES to move towards this long-term overall goal for the institute.

Proposals included in this document, particularly those related to quantitative targets will be implemented and refined as necessary, considering further discussions within the institute and fully taking into account views and instructions provided by the BOT and BOD during the phase.

2. UNDERSTANDING THE CURRENT SITUATION

Deterioration of the global environment status has become further evident in recent years. In 2009, a group of scientists led by the Stockholm Resilience Centre provided an alert³ to the world that three out of nine planetary boundaries examined, namely (i) climate change, (ii) biological diversity, and

 1 As approved by the Eighth BOT and Eighth BOD, in 2016-2017 the business year of IGES is being shifted by 3 months from April-March to July-June, for improved planning and evaluation.

² A non-profit and non-governmental organisation that supports private and public sector organisations in management innovation, modernisation of labor-management relations and human resources development,

³ Rockström, J; Steffen, WL; and 26 others (2009), "Planetary Boundaries: Exploring the Safe Operating Space for Humanity", Ecology and Society 14 (2): 32

(iii) nitrogen input to the biosphere, appeared to have been crossed. With increasing populations, economic development and urbanisation in developing countries, as well as a rapid upward swing in resource extraction, consumption and waste, human activity is ever closer to pushing these planetary boundaries over their tipping points. In fact, even with intended nationally determined contributions (INDCs) submitted by almost all countries, global warming is likely to go beyond the two-degree target upon which the world has agreed; global resource use is still rapidly increasing without any sign of decoupling from economic growth despite a number of international initiatives; and natural resources such as biodiversity, land and water are still declining due to expanding agriculture, forestry and urbanisation, amongst others.⁴

Asia's contribution to this global trend, in terms of anthropogenic activity, is alarmingly high and appropriate responses are considered necessary to ensure global sustainability. The recently published Global Environment Outlook-6 (GEO-6) Asia-Pacific Regional Assessment⁵ summarises the current situation in Asia and the Pacific as follows:

"Unprecedented economic growth, which has lifted millions out of poverty in Asia and the Pacific, is putting heavy pressure on ecosystems. Increasing unsustainable consumption patterns have led to worsening air pollution, water scarcity and waste generation, threatening human and environmental health. Increased demand for fossil fuels and natural resources — extensive agriculture, palm oil and rubber plantations, aquaculture and the illegal trade in wildlife — are causing environmental degradation and biodiversity loss."

2015 witnessed two critical developments to promote global sustainability, i.e. the agreement on the 2030 Agenda for Sustainable Development, and the adoption of the "Paris Agreement" to deal with climate change. It is important to recognise that many Asian countries submitted INDCs prior to the 21st Session of the Conference of the Parties (COP21) demonstrating their will to promote energy efficiency and renewables for low-carbon development based sometimes on the co-benefit approach, and increasing attention is now being paid by many countries in the region to raise resource efficiency as advocated by the Sustainable Development Goals (SDGs).

The 2030 Agenda for Sustainable Development including SDGs, agreed in September 2015, has now set 17 goals and 169 targets as priority until 2030 to promote sustainable development globally. Now that the goals have been established, what matters is effective implementation. As such, various initiatives are being taken at all levels from international to local to elaborate effective means of implementation.

In December 2015, a landmark agreement was reached at the 21st Session of the Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC COP21) in Paris, which was adopted by 195 countries. The Paris Agreement again extensively touches upon key measures for implementation, i.e. requiring each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs), regularly provide information to track progress in implementing and achieving its NDCs, strengthen finance, technology development and

⁴ Climate Action Tracker (an initiative of four climate research institutes) calculates that the current INDCs would likely limit warming to 2.7 C by 2100, and this is one of the more conservative estimates of about a dozen studies now (including MIT projecting a low of 3.1 C and UNEP at 3.5 C). The information for this is at: http://climateactiontracker.org/global.html. WRI reviews and compares the various studies at: http://www.wri.org/blog/2015/11/insider-why-are-indc-studies-reaching-different-temperature-estimates.

⁵ Launched in Nairobi, Kenya, in May 2016 at the second United Nations Environment Assembly.

⁶ http://www.unep.org/newscentre/Default.aspx?DocumnetID=2704&ArticleID-3618, 2016/05/20.

transfer, and capacity building with effective utilisation of market mechanisms, as well as update and enhance Parties' actions and support under five-year cycles to be informed by the outcome of the global stocktake on the implementation of the agreement. The Agreement went into effect in November 2016. Yet the political climate for future climate regime faces uncertainty due to changes in the political situation, including the new US administration which started in January 2017.

Given these two critical developments in the latter half of 2015, the next four years covered by ISRP7 are considered to be critical in working out effective modes of implementation to meet the specific goals set out by the two landmark agreements, which require substantial transformation of the world towards sustainability.

This is particularly true of the Asia-Pacific region, for which the following are identified as important challenges: (i) strengthening environmental governance for effective and efficient implementation; (ii) strengthening collaboration with key stakeholders such as science communities and business; (iii) promoting low-carbon/carbon-neutral and resource efficient societies; (iv) protecting natural capital and ecosystem integrity; and (iv) building resilience to natural hazards and extreme weather events.⁷

3. IGES TODAY

3.1. Overall

During the Sixth Phase, IGES has intensified its efforts to advance impact generation, by shifting its approach from output-based to outcome-based. Operations have been scaled up with increased funds particularly from external sources and an associated increase in human resources. IGES has been recognised as a leading environmental think-tank in the region and the world as indicated by two independent surveys and rankings.⁸

In parallel, IGES has strengthened its collaboration with relevant United Nations (UN) organisations and has been entrusted with operating three new collaboration centres since 2015. Also prominent is involvement in an increasing number of networks and forums, both managed/initiated by IGES and by other partner institutes. This has stimulated IGES to strengthen its collaboration with several partner institutes in various forms, including with the National Institute for Environmental Studies (NIES) of Japan, and the Asian Institute of Technologies (AIT).

However, funding is the most critical element for its sustainable operations, and this is becoming more challenging for the institute than before. The last four years have seen substantial fluctuations in the financial balance. Another challenge is how to secure capable staff members for strategic research and operations. Other management challenges include smooth introduction of the tenure system, and streamlining of internal decision-making processes.

Although IGES has been evolving into an *agent of change* to facilitate a transformation towards global sustainability, it is obvious that continuation of the business as usual (BAU) practice of the Sixth Phase has many limitations, especially in securing funds and in maximising impact generation. Certainly, the BAU practice cannot effectively lead IGES to where it wants to be. There is an urgent need to revisit the activity portfolio against prospective funding situations, align it with the changing

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⁷ "GEO-6 Asia-Pacific Regional Assessment", UNEP, May 2016 at the 2nd UNEA in Nairobi, Kenya.

⁸ IGES is ranked 38th in the 'Top Environment Think Tanks' list by the *Global Go To Think Tank Index Report* by the University of Pennsylvania in 2015 and 2016 and 22nd and 37th best 100 independent think tanks list by the International Center for Climate Governance in 2014 and 2015, respectively.

priorities and needs of society, particularly in view of the need to effectively implement the key international agreements reached in 2015, and to regain financial soundness.

3.2. Strategic Research for Impact Generation

The strategic research of IGES is, according to MLS, a sensible combination of two research approaches: transformative research and transformation research. Transformative research is future-oriented, focusing upon development of scenarios for transformed societies, long-term perspectives backed by future modelling, pathways of getting there, and effective advocacy for change. On the other hand, transformation research examines current situations, which involves monitoring, describing and analysing an occurring transformation, or the lack thereof. Participatory observation, quantitative/comparative analysis of case studies, and recommendations for improvement are basic approaches of such research (See Annex 1 for more detailed discussions).

IGES produces various forms of publications based upon its strategic research and other studies. **The total number** of publications, including peer-reviewed (internally and externally) papers, articles and/or book chapters, contract-based papers, and others has been maintained within a certain range in the last four years (See Figure 1). This is approaching four publications per one researcher.

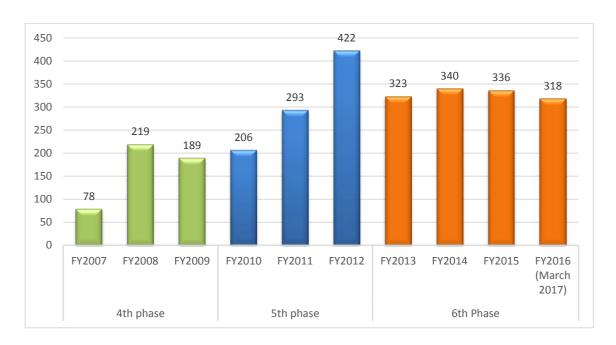


Figure 1: IGES Publications (FY2007- FY2016)

IGES distinguishes <u>"quality"</u> policy publications, which undergo more extensive review procedures compared to others. There include IGES policy briefs, policy reports, and chapters contributed to similar non-IGES publications, excluding peer reviewed journal articles. ISRP6 set a target regarding the overall production of quality policy publications at <u>40 per year, and 160 for the phase</u>. The actual numbers of such publications in the Sixth Phase were <u>46 in FY2013</u>, <u>38 in FY2014</u>, <u>71 in FY2015</u>, and <u>25 in FY2016</u> (as of the end of March 2017), and the total of quality policy publications was 180 in the Sixth Phase. Thus, the overall target set by the ISRP6 on the number of quality publications was exceeded although this was largely due to the results of FY2015, while the annual target fell short in FY2016.

The number of academic journal articles published was 24, 32, 25, and 39 for each of the four years of the Sixth Phase in total 120 (See Figure 2 below). It seems there is certain trade-off between the number of academic papers and policy papers.

A substantial increase in FY2015 of quality policy papers is attributed to the publication of one White Paper and two flagship papers. This indicates the importance of a strong commitment made by the institute to produce such substantial publications in time for major events and key international negotiations.

The decline in FY2016 may be explained by a shift towards other types of IGES outputs, in particular shorter policy papers, which could be produced more quickly such as issue briefs, briefing notes, and commentaries, as well as new types such as videos and e-learning materials. Figure 2 below presents the fact that "written policy and research outputs" which include not only policy papers and policy briefs, but shorter versions such as issue papers, discussion papers and working papers, have been produced 80 per year on average over the last four years.

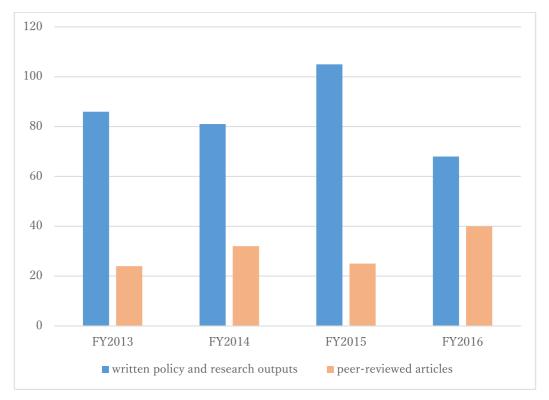


Figure 2: Sixth Phase Written Policy and Research Outputs Compared to 7th Phase Targets

The increased quality of IGES research has been demonstrated by the steady production of peer reviewed journal articles, including some in prominent journals such as the Journal of Cleaner Production, Energy Policy, Applied Energy, Environmental Science and Policy, Journal of Environmental Management, Climate Policy, and others.

IGES has begun tracking citations of peer reviewed journal articles using both the Thompson-Reuters Web of Science (WOS) and Google Scholar. IGES produced a total of 425 peer reviewed articles between 1998 and 2016 which accounted for a total of 5,830 citations according to Google Scholar and 1700 according to the WOS. The yearly increase in the number of citations between February 2016 and February 2017 was 436 as calculated by the WOS and 994 as calculated by Google Scholar, which is an increase of 25.6% and 21.6%, respectively from the previous 12 months. Other types of publications have also received a certain number of citations as calculated by Google Scholar, but it has not been practical to calculate these systematically.

IGES still has too many small-scale separate studies and activities, which have resulted in over-stretched operations, unfocussed, and/or uncoordinated outputs despite increased volume of raised funds. Single-year funding by the Ministry of the Environment Japan (MOEJ) and other organisations continues to make it difficult to plan multiple-year activities and maintain the continuity of the subject research.

IGES has been expanding the "diversity" of its publications and outputs. Indeed, IGES is adding more success cases of working with non-state target stakeholders in particular, including sub-national governments, the private sector, the research community and media, and it is also gaining knowledge about what kind of knowledge products, tools or services are needed by these target stakeholders. It has been producing one of the most reliable databases on the clean development mechanism (CDM), and a similar database developed on reduction of emissions from deforestation and forest degradation, and conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+) in Asia. Furthermore, two years ago, IGES started producing video materials of a few important selected IGES studies. Increasingly diversified products and services are also being made for the private sector and/or media, with which IGES collectively shapes and incorporates into messages to policymakers.

Despite such efforts, it is considered that IGES publications have not yet fully met the various needs of important stakeholders but IGES publications could make more significant contribution to impact generation. Although IGES has been involved in a series of capacity building projects, tools and other knowledge products that can be repeatedly used for capacity development have not yet been produced. Webinars and other internet based products/services are also very limited.

3.3. Strategic Operations for Impact Generation

In the preparation process for the MLS, IGES developed a conceptual diagram on how impacts are generated by clarifying the relationships between outputs, outcomes and impacts. Here impacts and outcomes are depicted as a series of rippled effects on key stakeholders, initiated by IGES outputs, typically IGES policy papers (See the rippled model attached as Annex 2).

On the other hand, IGES has reported 54 cases of impact generation in the last three years 9 of the Sixth Phase. These cases are broken down into five categories according to what kind of products/services IGES provided to generate impacts: (i) through proposals for improved policy/planning/practice; (ii) through provision of guidelines; (iii) through provision of tools; (iv) through network operation; and (v) through pilot projects.

A quick examination of the 54 IGES cases reported reveals that those cases which have reached the stage of "Impacts" are very limited, ¹⁰ while most of the cases remain at the level of "Outcomes". In addition, influences produced by IGES products and services categorised as (iii), (iv), and (v) above tend to remain at the level of "Outcomes" as defined in the Annex attached.

Actually what has happened in most cases was that a timely but modest contribution of IGES helped create a visible outcome or impact within a particular context. Figure 3 below aims to indicate the overall context in which IGES influences have materialised. Here, IGES is located in the middle of three broad key stakeholders: (i) International (international organisations, developed countries, and

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⁹ "Mid-term Review on Integrative Strategic Research Programme of IGES for the Sixth Phase", February, 2015, and "Progress Report for FY 2015", June, 2016.

¹⁰ Table 1 indicates three clear cases where "impacts" were generated.

international processes); (ii) Asia (countries in Asia, regional and sub-regional organisations and networks); and (iii) Japan (Japanese Government particularly MOEJ, cities and private companies concerned). Specific outputs are provided by IGES through utilising its particular expertise and services indicated in the middle circle. However, it is important to recognise that most impacts/outcomes were not generated by IGES alone. Rather IGES has been working closely in between particular stakeholders both on the supply and demand sides. IGES's role has been to push forward the process through providing appropriate intellectual inputs.

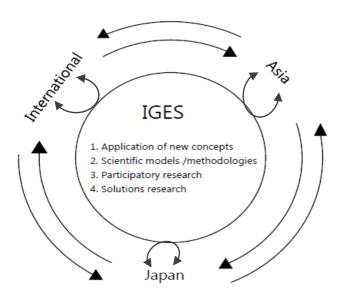


Figure 3: Schematic Diagram of Influence Generation by IGES

Table 1: Selected Cases of Impacts or Outcomes

Impact upon Asian countries by international communities

- MRV on Transport related GHG emissions (2013)
- ILO mapping assessment on green jobs (2014-2015)
- UNFCCC Regional Collaboration Center in Asia (2014-2015)

Impact upon Asian countries by Japan

- Core set of indicators on the 3Rs (2013)
- India SME pilots regarding low-carbon technologies (2013)
- National strategy on food waste management in Malaysia (2014)
- JCM manuals and guidelines (Viet Nam, etc.) (2014-2015)

Impact upon Japan by Asian countries

- Promotion of city-to-city collaboration by ASEAN Environmentally Sustainable Cities program (2013-2015)
- Design of a JICA project on the use of micro-finance for climate change adaptation (2014-2015)
- Impact on Japan by International communities
- Introduction of the "Green Gift" concept into Japanese Tax Reform Package¹¹
- Japan 2050 pathways calculator and its application (2013-2015)
- Long-term negative impacts from coal-fired power plants (2015)
- Policy recommendations from business based upon key international reports such as "We Mean Business" (2015)

Impact upon International communities by Asian countries

- CDM Executive Committee decision to adopt Standardized Baseline (2013)
- Contribution to OECD EPR policy and resource efficiency (2014-2015)
- Incorporation of IGES flagship on SDGs into UNESCAP publication on SDGs (2015)
- Impact on International communities by Japan
- GAN (Global Adaptation Network) launched mainly based upon APAN (2013)
- Leading role in promoting the lifestyle and education programme of 10 YFP (2014)

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¹¹ The "Green Gift" concept was developed by IGES researchers supported by the IGES Strategic Fund. The use of tax to stimulate investment is an idea developed internationally, but the Green Gift concept was developed within the Japanese context.

The cases listed in Table 1 provide some specific outcomes/impacts with IGES acting as intermediary between two of the three broad stakeholders in Figure 2.

What is apparent from the actual cases is the fact that IGES outputs were made at different stages of the rippled effects. In fact, most influences were created through collective efforts by key stakeholders concerned, and IGES contribution was partial, though sometimes critical, acting as one of the partner organisations by mobilising its relative strengths.

From this observation, some important points could be extracted:

- (i) Importance of working closely with key stakeholders concerned and securing a critical niche to influence the process concerned, which reconfirms the significance of the IGES approach advocated by MLS i.e. collective impact generation through co-design, co-generation and co-dissemination.
- (ii) Importance of producing a variety of outputs and services according to specific contexts of the influence process in which IGES is placed. This has resulted in the five broadly different forms of IGES products and services, as explained in the previous section.
- (iii) Importance of utilising IGES's own funds and other resources. In this respect, it is worthwhile to note that a few of the cases listed in Table 1 were supported by the IGES Strategic Fund. Strategic use of the core fund to be discussed below will extend this point further.

This section elaborates how IGES has addressed the points above during the first three years of the Sixth Phase. A comprehensive list of network operations IGES has been involved is attached as Annex 3 of this document.

IGES now hosts four units and collaborating centres with UN organisations and international processes. They are: (i) the IGES Centre Collaborating with United Nations Environment Programme (UNEP) on Environmental Technologies; (ii) the Intergovernmental Platform on Biodiversity and Ecosystem Services Technical Support Unit for Asia-Pacific Regional/Subregional Assessment; and (iii) the UNFCCC-IGES Regional Collaboration Centre, in addition to; (iv) the Intergovernmental Panel on Climate Change Task Force on National Greenhouse Gas (GHG) Inventories Technical Support Unit that has been part of IGES since 1999. They are understood to be a result of the trust IGES has generated over many years, often substantially supported by certain institutes (particularly MOEJ), with the UN organisations concerned.

IGES has been substantially involved in a number of important international as well as regional policy processes and networks. Up to now, IGES has had 13 networks for which it has served as the secretariat or played a substantial role, of which 11 are still operational. Amongst these 11, eight networks have been handled by Areas at the IGES Headquarters, and three by the IGES Regional Centre in Bangkok (BRC). Most of these network operations have been initiated and financed by MOEJ, and only two handled by BRC have been initiated by other stakeholders. There is always an ebb and flow in these kinds of networking operations, and thus it is important to make sure these networks are relevant to addressing critical issues and useful in contributing to meaningful impact generation.

Furthermore, IGES has now over 40 Memorandums of Understanding (MOU) and other agreements, as well as other forms of collaboration with variety of institutions, ranging from Asian Development Bank (ADB), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and other international organisations, the World Resource Institute (WRI), International Institute for Sustainable Development (IISD), Korea Environment Institute (KEI), The Energy Resource Institute

(TERI) and other partner institutes, ICLEI-Local Governments for Sustainability (ICLEI), the C40 Cities Climate Leadership Group (C40) and other networks, local governments, and universities.

This expansion of networking operations of various types reflects the fact that IGES has gained certain trust with these institutions, with whom IGES can jointly achieve greater goals. Some of these operations are quite active, for example, in coming up with joint studies and activities. Indeed, IGES has increased joint publications with key partners in the region, for example. In other cases, however, networking operations are almost dormant, particularly as time passes after the agreement. IGES has even had difficulty in maintaining the level of services or activities for networks where it has served as the secretariat, due to limited or discontinued funds.

Networking has been considerably expanded, yet the level of partnership that enables co-production of knowledge products or leverages additional funds, especially outside MOEJ, may be still limited. This may indicate: (i) the total number of networks IGES is involved is now too many; and (ii) maintaining network operations themselves has become the objective rather than the means.

New developments in networking with key stakeholders continued since 2015. In view of the two key international agreements in 2015, IGES intensified collaboration with the media and the private sector, which had not been priorities before. For example, IGES organised a series of media briefings and seminars for businesses before and after COP21 and COP22, which attracted a substantial number of interested participants and helped not only to inform the media and the private sector, but also to share messages with decision-makers both in governments as well as business. Table 2 and Figure 4 clearly indicate the result of more intensified communications with the media and the private sector.

FY2016 Language FY2012 FY2013 FY2014 FY2015 (as of March 2017) 90 104 199 176 Japanese 117 Other languages 12 22 34 97 33 Total 102 126 151 296 209

Table 2: Total Number of Media Coverage in FY2012 - FY2016

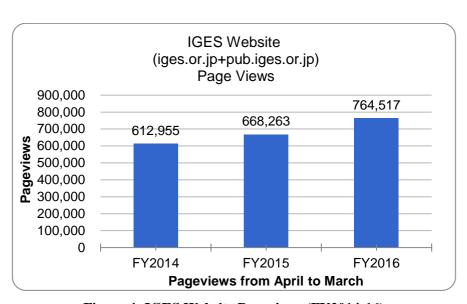


Figure 4: IGES Website Pageviews (FY2014-16)

Network activities should be realigned to co-produce knowledge products with key stakeholders and strategic research partners. IGES will further examine the possible expected impacts/outcomes in return for resource mobilisation for both types of networks – those to which IGES provides secretariat services and those with which IGES collaborates. Decisions may need to be more selective, while IGES maintains communications on topics of mutual interest. In addition, collaboration with new stakeholders such as the media and the private sector should be expanded.

3.4. Management

IGES managed to secure a continued core fund of JPY500 million from the Ministry of the Environment, Japan (MOEJ) and a slightly decreased amount of financial support from relevant subnational governments in Japan. There is, however, no guarantee that these core funds from public entities will remain at the same level in the future. In FY2015, although it successfully raised a larger volume of funds in total, IGES was left with a smaller discretionary portion of raised funds for strategic research activities. This was particularly true for some large competitive project funds from MOEJ due to stiff competition and the nature of projects that require a large portion of outsourcing outside IGES's expertise. As a result, IGES recorded a certain financial deficit in FY2015, despite the increase in the total external funds (Figure 5).

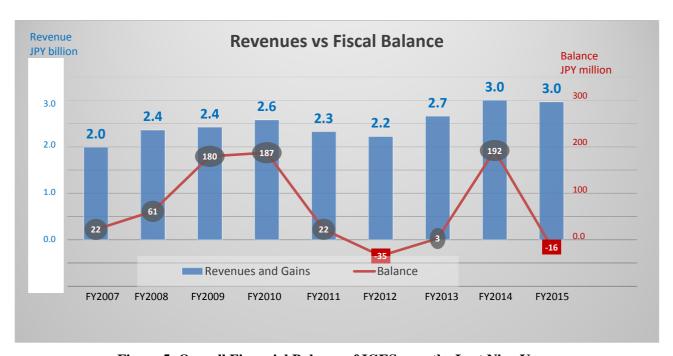


Figure 5: Overall Financial Balance of IGES over the Last Nine Years

The three sections in the Secretariat have made efforts to strengthen institutional management in terms of human resources, financial issues and legal issues.

The Budget Control System (BCS) has become an integrative system not only for accounting but also for human resources management and milestone management. In addition, the Finance Committee was set up in FY2014 to promote transparency in decision-making on important financial issues, which contributed to strengthening IGES overall governance. However, the institute-wide systems to manage key resources (human and financial) still remain weak, slow and partial. BCS also may not be fully utilised yet and needs continuous improvement. Financial management is still weak due to

uncertainty and low predictability of resource availability, differences in financial performance among Areas, immobilised personnel costs and other reasons.

In the past years, IGES created a substantial number of multiple-year contract positions, which helped stabilise the human resources within IGES. For FY2010 and FY2011 when IGES commissioned several large projects from the MOEJ, the number of single-year contract positions increased to respond to the specific needs of these projects. However, the fixed human resources could not respond to dynamic funding situations or new opportunities, and remained inflexible in assigning tasks both for researchers and supporting staff across different Areas. This became obvious as IGES increased its non-research activities such as organising workshops/conferences, translating works, and coordinating often as part of commissioned work, and resulted in a mismatch between existing capacity and required services. In the second year of ISRP6, a few positions for Programme Officers were newly established as a trial to deal with increasing amount of non-research work.

The staff composition of the institute during ISRP5 (FY2010-2012) and the first three years of ISRP6 (FY2013-2015) is shown in Figure 6 below. The percentage of research staff has been gradually decreasing, from 64% in FY2010 to 60% in FY2015 (local staff at BRC in Bangkok and Beijing Office are excluded), while the percentage of administrative staff and research support staff has been continuously increasing. This is a worrying trend, as it indicates bureaucratisation of the institute, and inefficient resource allocation to non-substantial matters.

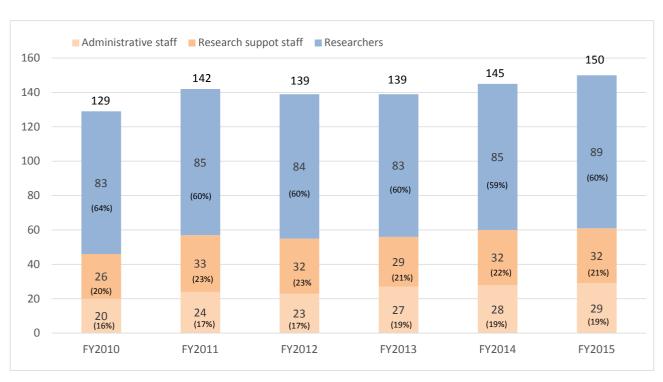


Figure 6: IGES Staff Composition since 2010

The results of the assessment conducted by the Japan Productivity Center (JPC) in 2016 unfolded the following challenges and room for improvement:

(1) Financial analysis results (FY2011 - FY2015)

- Along with a decrease in contributions from the Ministry of the Environment ('core fund') as well as subsidies from local governments and an increase in external funds, the ratio of external funds out of the total income increased from 56% in FY2011 to 70% in FY2015, the ratio of the core fund and subsidies per person among all staff has decreased.
- It is necessary to secure a balance between income and expenditure within external funds financed projects, considering all operational costs, personnel costs and general administrative costs.
- In the meantime, effective utilisation of core funds becomes more important, and there is an increasing need to have strict management on the performance of IGES own projects and other investment activities.
- The project financial value-added (FVA) ratio of external funds (Box 1) improved over the past five years (from 30.8% in 2011 to 43.4% in 2015), but this declined from 2014 to 2015. The institute will probably reach a limit for any improvement if using only the current measure of cost reduction.
- The productivity of project FVA for all staff has improved twofold over the past five years (labour share, which is the reciprocal side of productivity), but declined from 2014 to 2015. The institute will probably reach a limit for any improvement, using only the current measures.
- Although the general administrative costs ratio has decreased gradually over the past five years (from 22.4% in 2011 to 20.7% in 2015), further reduction will require to develop a more efficient administrative structure, which does not directly link with business volume.
- In order to strengthen the institute so as to withstand the possible reduction of the core fund, it is necessary to increase the project FVA ratio of external funds, and gradually reduce the administrative costs ratio.

Box 1: Definition of IGES 'project financial value-added (FVA)'

IGES applies the concept of a "value-added" which is commonly used for corporate financial management, to the project or group level (when aggregated) financial management (namely "project financial value-added" or 'project FVA'). Its ratio to the total project revenues (project FVA ratio) is used as an indicator of fund availability for IGES's strategic activities.

Project FVA is calculated as: revenue less project operating expenditure such as outsourcing and travel costs available for personnel and general administrative expenditures.

(2) Work volume survey¹² results

- Looking at work hours throughout the institute, only 67% is spent on direct work. 33% is spent on indirect work, which should be reduced substantially. For instance, referring to an excellent private company's case, the indirect work ratio could be reduced reasonably to 25%.
- Among researchers, the ratio of core work, ¹³ which directly contributes to impact generation, is only less than 50%, so it is necessary to explore measures to increase this ratio.

 $^{^{12}}$ Staff responded to the questionnaire on how much time they think they spent on various activities and procedures at IGES in the past one year.

¹³ Consists activities such as research, networking, capacity building, knowledge management, and outreach.

- In addition, it is necessary to review the breakdown of general administrative work which accounts for 18% of administrative staff's work, and to explore measures to reduce that work.
- The same project management and other management work are handled one time and again by a few staff members. Clear distinction of responsibilities has to be developed for each position to avoid duplication and any other inefficient situations.

(3) Staff satisfaction survey results

- Relationships with other colleagues, workplace environment, and worthwhileness of work show high satisfaction, and efforts to maintain these high evaluation points are required.
- Satisfaction with the system of personnel evaluation and treatment is relatively low, and it is necessary to improve them in terms of fairness.
- Satisfaction with lack of personnel against work volume seems also relatively low, and it is necessary to review the work volume and personnel allocation in order to balance the workload.

4. PROPOSED BASIC OPERATIONS IN ISRP7 AND STRATEGIES FOR IMPLEMENTATION

4.1. Basic Principles

The ultimate goal of IGES is to create impacts in various ways to promote transformation towards a sustainable society. IGES defines impacts as tangible societal changes resulting from outcomes created by IGES and other stakeholders, often in partnership (See Annex 2; an extract from the supporting document to MLS). The basic approach for IGES to create impacts is the effective combination of: (i) outputs generated by strategic research; and (ii) interactions with key stakeholders.

The basic principles underlying specific operations during ISRP7 should be based upon future goals and key strategies contained in MLS. The future goals are developed as a set of key messages started from the vision, through the mission, then to the value proposition. The two strategies are related to effective partnership and fund raising.

Future Goals

Vision:

Transition to a sustainable, resilient, shared, and inclusive Asia-Pacific region and the world, where planetary boundaries are fully respected, a green economy is flexibly implemented, and the wellbeing of people is steadily improved.

This is understood as the need for a wholesale paradigm change, not only in relation to politics and economy, but society, culture, and all other essential elements for modern civilisation. The Paris Agreement calls for global decarbonisation in the latter half of this century, which in fact requires complete transformation of the global society.

Mission:

Act as an Agent of Change through conducting strategic research and operations, for generating impacts to move society towards a more sustainable and resilient future, especially in Asia and the Pacific.

IGES intends to be a prominent institute in the region to champion new models to generate value-added knowledge through co-design, co-production and co-dissemination. In this respect, IGES aims to evolve into a facility for interactive knowledge generation with key stakeholders, in which practical knowledge is obtained and disseminated, and further gained from experience.

Value proposition:

A strategic research institute located in Asia, experienced in generating and disseminating practical knowledge for problem solving, through strategic networking/partnership with key stakeholders in the world, for global transition to sustainability and resilience.

This value proposition is underpinned by two fundamental assets IGES has generated over the last 18 years: (i) capacity to carry out strategic research; and (ii) trust gradually generated with key stakeholders through networking and collaboration. Although such assets need to be further developed and refined, it is important to recognise that the basis is already built within the institute to draw upon for further improvement.

Two Overarching Strategies

MLS sets out two important strategies: (i) Constructive relationship with key stakeholders; and (ii) Securing sufficient funds.

Strategy 1: Constructive relationship with key stakeholders

The main idea behind this is "Collective impact generation". For that to be realised, IGES should flexibly provide useful services for those stakeholders in a timely manner. Such services could take various forms ranging from strategic policy research to capacity building, timely introduction and translation of key documents, organising timely briefing sessions, and development of useful databases and analytical tools, which cannot be supplied by the private sector on a sustainable basis.

Strategy 2: Securing sufficient funds

The core message advocated here is the further promotion of "diversity" and "flexibility" of the funds to be obtained. The first clear message is the immediate need to fully utilise the core fund for strategic research and essential operations of the institute. The second message is the need to carefully examine potential commissioned works against the institutional goals, so that a broad alignment is always kept between externally-funded projects and IGES directions. The third key message is to consider extending its fundraising horizon outside Japan to diversify funding sources. The results of financial analysis administrated by JPC also support the above strategies along with the increased efficiency to create room for engaging value-added work and fund raising, and exploring the possibility of forprofit activities that are in line with the institute's mission and status.

4.2. Overall Directions

The overall directions of ISRP7 are set out below, taking fully into account the above basic principles contained in MLS. Whenever considered appropriate, quantitative targets are proposed.

The overall target of IGES in the 7th Phase is to <u>raise its international presence such as indicated in the world environmental think-tank ranking</u> by more than 10, to become one of the top 20 institutes

in the world as a result of its actions. ¹⁴ With institute-wide efforts, IGES will try to report as many cases as possible where it could attribute observed influence or impacts to IGES's actions and services to the varied extent; and register higher ranking in the global think-tank surveys – top 10 within 10 years as an aspiring target. In doing so, IGES will revisit and learn from the experiences to develop a suitable strategic impact-making framework/approach to for IGES.

4.2.1. Strategic operations and impact generation

What could be drawn from the analysis above on current impact generation is a need for the sound combination of strategic research and strategic operations for IGES to generate even larger impacts. It is still challenging to report cases that have clear influence due to difficulties in capturing the impacts (attribution, time-lag, and the intrinsic nature of the work that IGES is commissioned to undertake). An IGES study, in fact, found out that 'for research institutes working to create social impact and facilitate systemic change towards sustainability, the lack of such performance measurement is not just a concern for accountability, but it can also be a significant hindrance to effective management' (Elder, et al. 2016). ¹⁵ Nevertheless, IGES should continue reporting cases where impacts and outcomes that could potentially be attributable to IGES, and collaboration between IGES and partner institutes.

For effective influence generation, networking operations involving various key stakeholders are essential, and improvement of such operations continues to be important for IGES. In general, relatively successful networks have a few common sustainability elements in their operations such as funding arrangements (multiple and stable parties or funders), organisational arrangements (interested committed members that can continue with relatively small resources, encouraging or imbedded mobilisation of in-kind contribution), or maintaining relevancy (changing focus areas in response to the surrounding needs, seeking collaboration with other similar networks, etc.). IGES can improve operations of a number of networks involved by considering following these elements:

(1) Improved Networking:

(i) Make relationships with key stakeholders more strategic so that IGES can capture critical niches by which meaningful impacts are effectively generated. Those networks considered important need to be selectively strengthened.

- (ii) Revisit existing networking operations and collaboration arrangements in which IGES plays a major role, and examine how such operations could lead to more cases that generate influence. Some existing networks which have become less relevant have to be scaled down or closed down.
- (iii) Explore possibilities of collaboration with three IGES's associated organisations, i.e., the IPCC-TSU, the Japanese Center for International Studies on Ecology (JISE), and the Asia-Pacific Network for Global Change Research (APN), to develop joint studies or activities in relevant areas such as climate change and biodiversity conservation.
- (iv) Continue to closely associate with international organisations, the government of Japan and other governments, both in developed and developing nations, and regional and subregional institutions and networks, as collaboration with them is considered essential in generating influence.

¹⁴ Attaining a higher rank itself is not an objective as the Board cautioned at the meeting in 2015.

¹⁵ Mark Elder, Robert Didham, Daisuke Sano. 2016. 'Process Indicators to Measure Intermediate Progress of Social Impacts of an Individual Organization's Transition-Related Research' presented at the International Sustainable Transitions Conference IST 2016, Wuppertal, Germany, September 6-9, 2016.

(2) Substantial Engagements with Non-State Actors:

Expand strategic relationships with non-state actors such as the private sector, cities and sub-national governments, financial institutes, and media and civil society organisations (CSOs). This is because the most important issue in the coming several years is effective implementation based very much upon the "global partnership", in which roles of non-state actors are increasingly substantial.

(3) Enhanced Deliverables and Services:

- (i) Enhance capacities to carry out solution-oriented studies and analyses by properly understanding problems faced by major stakeholders.
- (ii) Further, expand opportunities for capacity development with partner institutes, and develop tools and methodologies and other services required by key stakeholders.
- (iii) Develop appropriate capacities to curate critical information for strategic decision-making by business, media, and other key stakeholders, translate key documents for local dissemination, and organise timely events for information-sharing and substantial discussions.

Overall Target for Impacts

As stated in Chapter 3.3 above, IGES has been reporting 54 cases for outcomes/impact generation for the last three years up to FY2015. IGES will further focus upon generation of outcomes and impacts in the 7th Phase; we would like to set a target of **reporting 20-25 cases of impacts or outcomes every year** to BOD/BOT.

Continuous reporting will make our definition of impacts/outcomes much clearer and more accurate, thereby not only reporting but also how effectively IGES could produce impacts and outputs are to be further elaborated.

4.2.2. Research and Publications

IGES intends to be a leading agent of change in Asia through intellectual inputs, mainly based upon its strategic research. Given the two important international agreements that have been agreed, strategic research in 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 such study.

IGES is an institute whose value is based upon analyses and recommendations, utilising the latest scientific research, tools and methodologies. IGES itself may not be engaged singlehandedly in the development of tools and methodologies, but it should partner with relevant institutions in this respect, and make utmost efforts to utilise them for actual policy analysis and policy recommendations. In addition, IGES has strong access to gaining exposure to new concepts and perspectives, and in some cases has developed its own databases. All of these assist in facilitating the preparation of academic papers.

In this connection, it is critical to strategically use the core fund to invest, focus/select and continue identified activities that can run throughout the phase for developing expertise within IGES, in-depth analysis and sending out influential messages. Utilising the core fund, a more programmatic approach

should be explored where pooled resources can leverage/mobilise collaborating partners' resources for larger impacts, and the most effective forms of knowledge products or activities can be identified, where IGES has advantages over other organisations, to induce impacts.

Results of strategic research should be published in a timely manner through appropriate channels so that target stakeholders become interested. Therefore, IGES set the targets for outputs below based on recent achievements presented in Figure 2 above.

Overall Targets for Outputs

- <u>The IGES White Paper</u>, which has become a traditional IGES flagship output, should be produced <u>once every two years in time for ISAP</u>. This is considered to be an institute-wide output, and groups and individuals related to the topic should contribute to it.
- Two flagship publications a year on average during the 7th Phase, mainly in time for critical meetings on climate change, on SDGs and other key sustainability challenges. An open process is to be set up to encourage and support bottom-up proposals.
- About 100 written policy and research products should be produced every year during the 7th Phase, which is vital for IGES as a leading agent of change. Figure 2 in Section 3.2 above shows the number of such papers on average in the last four years is around 80, thus this target is intended to increase that number by 20%. These policy products take various forms depending upon the context in which they are produced, ranging from issue briefs (basically synthesis), policy reports or discussion papers and working papers (policy analysis), and policy briefs (policy recommendations). Sometimes these outputs are produced jointly with researchers in partner institutes and as products of networks of partners.
- A total of about 30 peer-reviewed journal papers are to be published every year, given the number of researchers is to be maintained during the 7th Phase broadly at the same level as the previous phase. Again, Figure 2 indicates the average number of journal papers in the last four years is about 30, thus this target intends to maintain that level during the 7th Phase. Every IGES researcher is encouraged to prepare academic paper(s) either as a lead author or as a contributing author. Senior IGES researchers are expected to assist fellow researchers in writing papers in their joint publication as mentors.
- Since IGES's priority is on policy papers for impact generation, the citation number associated with journal papers should be understood with care. Citation numbers currently available are in fact a small portion of IGES influence, representing only a part of "Outcome 1" of the outcome-impact continuum. IGES will continue to report the number of citations every year, but given the potential concerns mentioned above, at this point in time, we do not set a particular target on citation numbers.

IGES will track the production of outputs every half year (Jan-June and July-Dec.) so that the annual total can be reported according to both the academic a reporting cycle (calendar year) and the IGES the fiscal year (July-June).

4.2.3. Strategic management for maximising institutional performance

Results of the assessment on IGES operations and management conducted by the JPC, as mentioned above, indicate strongly the need for IGES to improve its management system significantly. Attention has to be given to the fact that as much as one third of IGES staff time is spent on indirect work, and the ratio of core work amongst researchers is less than 50%. It also points out the need to reduce administrative costs and to improve internal profit margin of externally funded projects.

To counter the above, amongst others, the overall governance of the institute should be improved, based upon the four basic principles, <u>efficiency</u>, <u>effectiveness</u>, <u>accountability and fairness</u>, as advocated by MLS. It should ensure effective planning and evaluation, development of institute wide strategies from short-term through to long-term perspectives, sound financial management, efficient and fair human resources management, and prompt decision-making.

Given the above, the following overall targets for strategic management are set for the 7th Phase. The past or recent records used as a reference in setting targets are presented in figures and tables placed under each of the specific targets stated below.

Overall Targets for Strategic Management

(Finance)

Revenue side

• Maintain <u>the core fund</u> from MOEJ <u>at least JPY500 million a year</u> throughout the 7th Phase. The core fund has been maintained at the same level since FY2010 (Figure 7).

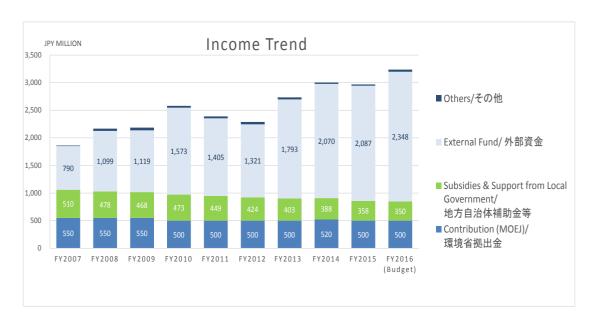


Figure 7: Sources of Revenues (Core Fund from the Ministry of the Environment, Subsidies from the Local Governments and Other, FY2007- FY2016)

- Maintain the volume of <u>external funds at around JPY2 billion a year.</u> An aspirational target is set at about 2.5 billion during the 7th Phase (Figure 8 below). Thus, the rate of the core fund in the total external funds will remain between 20 and 25%.
- Increase the <u>percentage of international funds</u> targeted at over <u>25%</u> by the end of the 7th Phase. The annual total revenues have been maintained in the range of JPY 2 billion since FY2014 and the ratio of those from overseas sources has been gradually increasing (Figure 8).

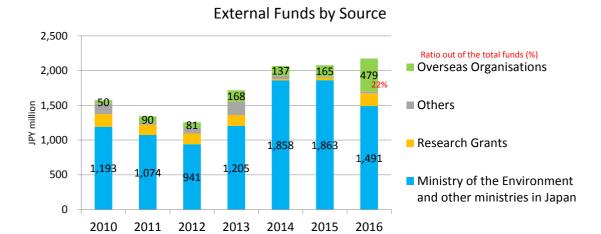


Figure 8: Sources of Revenues (Domestic and Overseas Sources and Others, FY2010- FY2016)

Expenditure side

- Increase the ratio of the 'extended core fund' (Box 2) spent on substantial matters (strategic research and/or strategic operations) towards 80%. Table 3 presents the analysis of FY2017 budget against this target. If JPY800 million spent on personnel cost of the externally-funded projects is considered as part of the strategic use of the institute, the ratio of the strategic use of the extended core fund has already reached 78%. However the reality is that a considerable part of JPY800 million is actually used in accordance with the intentions of funding agencies concerned. Thus even if a half of JPY800 million was assumed to be strategically used by IGES, the ratio of the extended core fund for strategic use reaches only as high as 51%. This tentative analysis, therefore, reconfirms the following three points as key actions for IGES to become truly strategic.
 - (i) Need to further reduce administrative costs;
 - (ii) Need to further strengthen IGES's own initiatives, and
 - (iii) Need to select and make externally funded projects more in line with IGES strategies.

Box 2: Definition of IGES 'extended core fund'

Defined as the sum of the discretionary portions of available funds, calculated as the sum of the following:

- the contribution from MOEJ ('IGES core fund');
- the discretionary portion of subsidies from local governments (Kanagawa and Hyogo Prefectures, and Kitakyushu City);
- IGES's deposit for Promoting Strategic Initiatives; and
- the sum of the total project FVA less consumption tax

Table 3: Ratio of the extended core fund for strategic use in FY2017

	Total	General Administrative Cost (Institution-wide)	Administrative Cost at Satellite	Personnel Cost [Administrative staff]*	Personnel Cost [Non-administrative staff]	Operating Cost for Own Initiatives	Contingency for transition**	For Administrative Use	For Strategic Use
Extended Core Fund	1,517	130	43	155	1,039	130	20	338	1,179
(Included in the above)									
Project FVA for earmarked personnel cost	800				800			0	800
Ratio between Administrative Use and Strategic Use								22%	78%
	In case 50% of earmarked personnel cost to be utilised for strat							egic use	
Ratio between Administrative Use and Strategic Use								49%	51%

• Increase the project financial value-added (FVA) ratio of external funded projects **from 45% to 49%** at the end of the 7th Phase. The project FVA ratio was marked at 45.1% in FY2016, improving from the average of previous years (Figure 9).

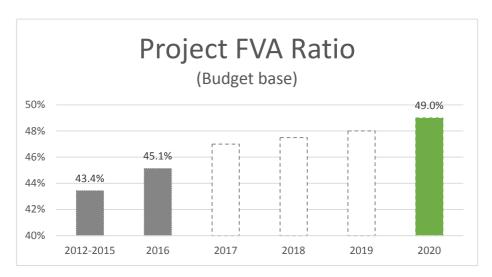


Figure 9: Project FVAs in the Past and Target in 2020

• Reduce general <u>administrative costs</u> (excluding HQ facilities subsidised by Kanagawa Prefecture) <u>from 13.6% to 12.0%</u> of the overall expenditure by the end of 7th Phase. IGES will make efforts to reverse the trend of increasing general administrative costs observed in the Sixth Phase (Figure 10).

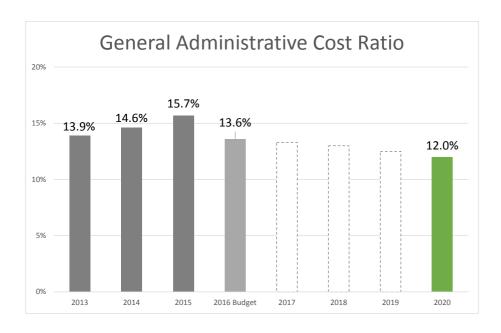


Figure 10: General Administrative Cost in the Past and Target in 2020

(Human resources)

• For a lean and nimble management, reduce the <u>percentage of administrative staff</u> (Box 3) from the current <u>28% to close to 15%</u> of the total staff members during the 7th Phase. IGES will make efforts each year during the 7th Phase (Figure 11) to meet this target.

Box 3: Definition of IGES 'administrative staff'

Administrative staff members correspond to the staff in the Planning and Management section of the SMO and those who are engaged in administrative work in satellite offices.

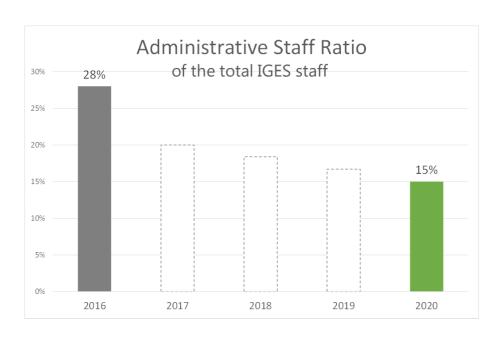


Figure 11: Administrative Staff Ratio in 2016 and Target in 2020

• **Reduce overtime** of supporting staff **by 90%** by the end of the 7th Phase, and eliminate it soon thereafter. IGES will make efforts to reduce the persistent overtime observed in the Sixth Phase and improve the work-life balance of the staff (Figure 12).

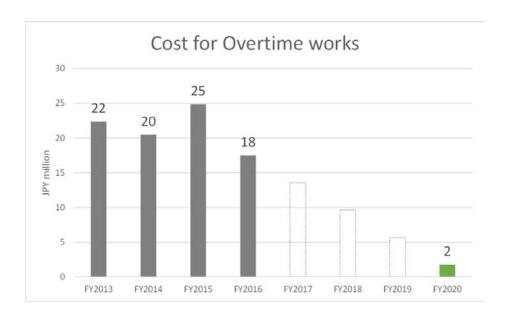


Figure 12: Cost of Overtime in the Past and Target in 2020

(Decision-making)

• The current <u>paper-based internal approval system</u> will be <u>reduced and eventually replaced</u> by a more swift and simple decision-making system. Every year, about 850 cases are currently processed under the paper approval system, which will be reduced by 80% or more by the end of the 7th Phase.

4.2.4. Organisational Structure

A basic strategy set by MLS that <u>"the next 10 years are considered to be the "Decade of Action" to substantially transform the world towards sustainability"</u>, will be fully reflected in considering major focuses of IGES research and operations, which is also reflected in how IGES will be structured in the 7th Phase, as elaborated below.

First, The PMO and Secretariat will merge to create the <u>Strategic Management Office (SMO)</u> to be <u>fully accountable to BOD/BOT in terms of impact generation</u>, <u>outputs and sound governance</u>. First, <u>Knowledge and Communications</u> will be responsible to ensure <u>impact generation</u>. Second, <u>Research and Publications</u> is responsible for ensuring <u>research/policy papers and other outputs</u> planned every year, and third, <u>Planning and Management</u> will be responsible for <u>strategy</u> <u>development as well as sound management of finance and other key resources</u> of the institute. With the creation of the SMO, IGES will take a more integrated approach from the institute's planning

to conducting strategic policy research, developing stakeholders engagement and communicating with them. The SMO will provide facilitation services to other IGES units, and provide IGES-wide functions such as White Paper production and ISAP.

Second, IGES will continue and strengthen its activities to address three key sustainability issues: (i) climate change; (ii) biodiversity including forests and terrestrial ecosystems as well as freshwater. (iii) sustainable consumption and production; and IGES will address "oceans" flexibly when specific projects of IGES for the three key environmental issues mentioned above make it necessary. The current three areas, i.e. CE (Climate and Energy), NRE (Natural Resources and Ecosystem services) and SCP (Sustainable Consumption and Production), each responsible for the three above issues respectively, analyse various international processes, promote collaboration with international organisations and national governments concerned.

Third, IGES will set up two new functional "Centres" within the Headquarters to establish a basis for essential research capabilities and services to address the substantial challenges IGES will face in transforming itself into a full-fledged agent of change. The two centres are: (i) Centre for Strategic and Quantitative Analysis, which is broadly responsible for Transformative Research, and (ii) Centre for Sustainability Governance, which is broadly responsible for Transformation Research. These two centers are expected to further develop IGES's comparative advantages in policy research. Collaboration with academic institutes is addressed by these functional centres, while internally close coordination with Research and Publications in the SMO should be maintained.

Fourth, to substantiate full collaboration with key stakeholders, three Taskforces are to be set up within the Headquarters. As all of them are closely linked to specific operations of IGES. Taskforces to be established are: (i) City Taskforce, (ii) Finance Taskforce, and (iii) Business Taskforce. All of these three non-state actors are considered critical for effective implementation of the Paris Agreement and SDGs. Internally these three Taskforces are expected to have close coordination with Knowledge and Communications in the SMO, while substantial collaboration should be sought with the three areas mentioned above.

Fifth, IGES satellite offices will fully utilise their geographical advantages strategically. <u>The Kansai Research Centre (KRC)</u> will strengthen its focus on business and technology, through full collaboration with CE. <u>The Kitakyushu Urban Centre (KUC)</u> will be strongly linked to the City Taskforce, to continue to take a leading role in city-to-city collaboration. <u>The Bangkok Regional Centre (BRC)</u> should transform into a body to be able to utilise full advantages available in Bangkok, i.e. international funding opportunities, and engagement of locally capable experts. <u>The Beijing Office</u> continues to work with the Chinese Government, shifting its focus to air pollution-related initiatives based more on the co-benefit approach. The Tokyo Office will develop itself into <u>the Tokyo Sustainability Forum</u>, in which key stakeholders get together occasionally or on a more sustainable basis to help substantiate collaboration with key stakeholders.

Summarising the above, the proposed organisational structure is illustrated in Figure 13.

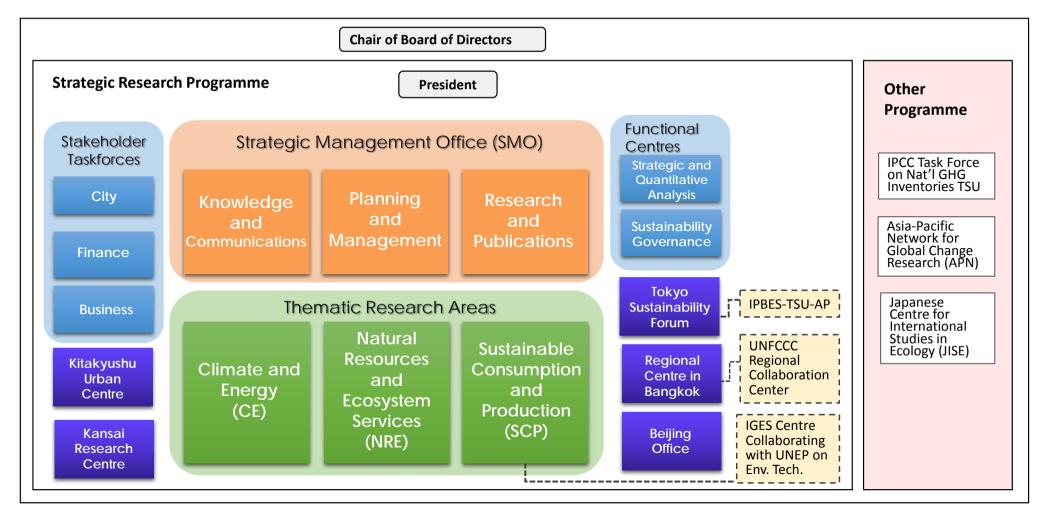


Figure 13: Organisational Structure of IGES in the ISRP7

4.2.5. Strategic Management Office (SMO)

The PMO and Secretariat will merge to create the *Strategic Management Office (SMO)* to be fully accountable to BOD/BOT, through serving for three key institute-wide responsibilities, i.e. impacts, outputs and sound governance in three functions: (i) *Knowledge and Communications*, (ii) *Research and Publications*, and (iii) *Planning and Management*, respectively. With the creation of SMO, IGES will take a more integrated approach to realising the institute's strategic planning, sound resources management, and swift decision-making, thereby ensure strategic policy research, substantial stakeholders engagement and effective communications. At the same time, the total financial and human resources allocated to the PMO and Secretariat together will be reduced, and lengthy and divided decision-making will be eliminated.

4.2.5.1. Knowledge and Communications

Knowledge and Communications will be responsible for ensuring impact generation by working together with Taskforces and issue Areas, in particular. SMO Knowledge and Communications plays a key role engaging with stakeholders and as an interface between IGES and its target audiences. The section will improve the transmission and communication of IGES's expertise and provide institutional leadership in knowledge and capacity building services. Overall, this section will lead in establishing appropriate environments and networks for effective knowledge collaboration, co-learning and co-generation among strategic partners and coordinating IGES's impact/outcome generation 'accountability' (monitoring, reporting, and improvement of the process itself at IGES) with all groups while implementing section's own activities. The section will be structured around four pillars of impact: (i) Communications, (ii) Stakeholder Engagement, (iii) Capacity and Knowledge Services, and (iv) Overall coordination in impact accountability effort.

For (i), this section will act as a focal point within the institute to manage IGES's outreach activities, which is essential for IGES to generate impacts with various stakeholders The IGES products and key messages will be effectively shared and delivered from IGES's unique existing networks, IGES's website, and other IT means.

For (ii) and (iii), this section will undertake analysis and development of opportunities for IGES to offer profit-oriented services and explore establishing a business arm in IGES. As a means to reduce the leakage of resources and maximise IGES's in-house service provision, as well as to develop a base for our own business, concrete steps should be taken to create a business arm to provide knowledge services and operational management, such as development of training and capacity building materials, networking operations, business consulting, expert dispatch, and document translation. The section could also provide conference services for a variety of international gatherings organised by IGES (including International Forum for Sustainable Asia and the Pacific (ISAP)), and by other organisations. The section will further ensure the engagement of stakeholders and strategic partners through the development and management of co-learning and co-generation practices.

Overall for (iv), it is important to recognise that knowledge management/sharing and communications are important for IGES to generate impacts by: i) strengthening the practical abilities of key actors to implement and carry out relevant policy recommendations and practical solutions; ii) broadening the overall opportunities for IGES's impact generation; and iii) increasing the profile of IGES as a change agent through the facilitation of substantive and practice-based solutions for achieving a sustainable society.

The following are priority subjects and actions:

For Communications –

- Develop and oversee the institutional Communication Strategy;
- Develop internal and external communication materials specifically tailored for different target audiences and assist with document preparation for key stakeholder consultation events:
- Ensure consistent branding and profiling of IGES through its knowledge products, services and communications; and
- Enhance the external profile of IGES by drawing increased visibility to the institute's mandate, activities and achievements, including by: (i) deepening and expanding relationships with international media and other key stakeholders; (ii) supporting the institute in leveraging its capabilities through the promotion of research findings, especially via participation in prominent national/international events; (iii) coordinating with IGES groups in enhancing the capacity of key beneficiaries; and (iv) sharing news, findings and synopses of relevant knowledge products by partner institutions.

For Stakeholder Engagement -

- Development, support and manage networks of strategic partners in order to create opportunities for knowledge collaboration, co-learning and co-generation.
- Strengthen stakeholder relations through effective outreach and partnership activities.
- Provide conference services including ISAP, whenever necessary, for its own events, and events organised by other stakeholders through contracts.
- Facilitate multi-governmental policy processes through effective coordination and organisational support.
- Serve as a liaison between national and international policy processes and between national and regional multi-lateral processes.

For Capacity and Knowledge Services -

- Delivering capacity building, learning tools and practical trainings targeting key stakeholders.
- Engage in capacity development activities in collaboration with IGES groups concerned on climate change mitigation and adaptation through providing key skills, tools and methods for capacity building such as facilitation, textbook preparation, and video-production.
- Help produce video-materials, interviews, and other visual products to disseminate IGES expertise and support capacity development of target stakeholders in close coordination with other units of IGES, and put them on the IGES website for easy access by IGES partners.
- Enhancing institutional capacity to improve effective roles in transformative research.

4.2.5.2. Research and Publications

<u>Research and Publications</u> is responsible for ensuring <u>IGES outputs including research/policy papers</u> included in the annual publication plan. This section will develop and manage a research and publication strategy for key knowledge products (publications), including policy analysis, that are effective in generating impacts. This includes management of the publication policy in order to strengthen the quality of research outputs. The Strategic Research Fund (SRF) and the library will be managed by this section in order to support IGES's own research activities. For some important priority outputs, this section will take the lead, especially for those outputs which may require coordination among different groups, or short publications in response to new political developments. In particular, this office will facilitate coordination between the two Centres and other groups. It will also facilitate coordination of joint outputs with other organisations. The Library will also be managed by this section.

- A publication plan will be developed for major publications to ensure the institute-wide productivity and identify milestones at the group level. The publication process will be monitored utilising the institute's updated publication database system (Enviroscope). Types of publications include not only those produced by IGES, but also include those produced in cooperation with other organisations, translations of key documents produced by other organisations, video products, interview pieces, brochures, etc. These could be very instrumental in generating impacts and building trust with target stakeholders. As IGES intends to increase its engagement in stakeholder consultation, a greater variety of outputs should be prepared, taking fully into account the importance of such products and the availability of funds and human resources.
- Between 50 and 100 contract-based papers are being produced by IGES each year due to the rapid increase in the number of contracts with various organisations. Such papers have to be of good quality, easy to understand, and in full compliance with the terms of reference (TORs). It should be understood that in many cases these contract-based papers contribute to generating specific impacts relating to target stakeholders.
 - The section will oversee policies and procedures to avoid academic misconduct (plagiarism), relating to outputs created by IGES and as well as those produced by others for IGES (e.g. based on a contract). In addition, as needed, this section will coordinate the Publication Committee and consider possible revisions to the publication policy as needed.
- The section will oversee and provide advice on research proposal writing.
- The Strategic Research Fund (SRF), which supports IGES's own research activities, will be managed by this section. Since its establishment, the SRF has supported a number of important research and generated innovative ideas originated from IGES, contributing to unique impact generations. IGES will continue this Fund to the largest possible extent that financial circumstances allows. The involved researchers will be evaluated internally and present the final results.
- The section will take the lead in producing some important priority outputs especially those which may require coordination among different groups, such as White Papers, or short and timely publications such as policy briefs or commentaries in response to new political developments, which may be difficult for other groups to manage. In particular, this office will facilitate coordination between the two Centres and other groups. It will also facilitate the coordination of major outputs with other organisations such as UNEP and ESCAP. The section will oversees the publication process and ensure the quality of the final products.
- This section will oversee the IGES Library, including journal and online database subscriptions.

4.2.5.3 Planning and Management

<u>SMO Planning and Management</u> will be fully responsible <u>for sound governance</u> of the institute by, among others, streamlining procedures for planning, evaluation and decision-making simultaneously, taking into consideration appropriate management of resources (financial and human). In so doing, the section will lead not only developing annual business plans and reports but also revising and preparing the longer-term IGES strategies and plans as well as conducting the mid-phase and final evaluations of ISRP7. SMO will aim to provide efficient corporate management services by, for example, reducing the amount of indirect work such as various administrative procedures and accounting settlements, and make every effort to reduce unnecessary costs through regular review and improvement. It is essential to make <u>Planning and Management fully international</u> including <u>English communications</u>, given that internal operations will be more substantial for the institute in the 7th Phase. There are five major responsibilities in <u>Planning and Management</u>, <u>SMO</u>: (i) Planning and Evaluation, (ii) ICT Systems, (iii) Financial Management, (iv) HR Management, and (v) General Administration.

(1) Planning and Evaluation

The section will coordinate the IGES-wide goal setting and evaluation. Prior to the beginning of IGES fiscal year (July-June), each unit will develop an annual plan in the form of specific "projects" (impacts, outputs, and financial and human resources), which will serve as group milestones. SMO will review and compile it for BOD/BOT meetings for approval in May each year. Based on the approved group annual plan, each individual staff will set milestones, which will serve as the basis of the mid-term and year-end group and individual performance reviews.

Group milestones will include, amongst others, a set of impact generating activates, a list of expected outputs, and availability of external funds. Group leaders are responsible for managing resources, including mobilising human resources and assigning tasks to them as well as outsourcing services when needed and ensuring the quality of their deliverables to achieve group milestones. All individual staff are responsible for developing their own individual milestones and securing necessary workdays from funded projects ('charging rate') in consultation with group leaders.

SMO Planning and Evaluation is responsible for helping to develop institute-wide strategies for its medium-to-long term operations. Thus, it is responsible for revision of the IGES "Medium-to-Long Term Strategy (MLS)," and preparation and development of the Integrative Strategic Research Programme of IGES for the 8th Phase (ISRP8). Thus, *Planning and Evaluation* will receive inputs from each unit to produce the annual report detailing achievements in the previous fiscal year and table it for BOD/BOT meetings for approval in September. *Planning and Evaluation* will also develop a summary report in Japanese and submit it to the Cabinet Office and other authorities as required. *Planning and Evaluation* will carry out a mid-term evaluation two years after the start of the 7th Phase, and upon completion of the four-year research phase, it will conduct IGES-wide evaluation with external experts.

Key elements of milestone setting and evaluation are as follows:

Individual milestones will include those for the group work/projects that each staff belongs to, for contributions to other groups, for all-IGES activities; and for their own initiative that is related to the assignments of the staff concerned (up to 5% of their total work time). The portfolio of individual milestones varies depending on the nature of funded projects and/or fund availability.

- All milestones must have clear funding sources and each staff is primarily responsible for developing individual milestones for supervisors' review. There will be clear reporting lines for each staff.
- Cross-unit collaboration is encouraged to generate new ideas and expand the capacity of both individual staff and the institute as a whole. All-IGES activities include ISAP, research activities funded by IGES's own research fund (Strategic Research Fund) and IGES-wide publications approved in the annual plan with identified specific outputs or services.
- Evaluation will be made both quantitatively and qualitatively using a unified milestonesevaluation form (under development) and interviews with supervisors. Productivity (publications and other knowledge products) and fundraising efforts will be considered in a more quantitative manner, while specific impact/outcome generation and management skills will be evaluated in a more qualitative manner. Secured work-days from funded projects ('charging rate') and work time records will be also used as a reference for evaluation.
- Results of the evaluation will be used for determining annual bonus and/or continuation of employment (handled by Human Resources Management).

The section also coordinates monthly senior staff meetings (MSS) and other strategic decision/consultation processes with top managers for institute-wide coordination, along with the existing committees on financial management, human resources management, and publications.

(2) Financial Management

Key functions of Financial Management are: (i) achievement of sound financial balance, and (ii) securing increasing and diversified external funds to promote strategic research and operations. Strategy, planned actions/ procedures and targets are presented below:

Address risks and uncertainties

Given the uncertainty involved in securing the core fund IGES receives from MOEJ and support from sub-national governments, financial resource management should be further strengthened not only to absorb the fluctuations and risks but also to maximise the performance within the available resources. A change in the business year cycle from April-March to July-June is one measure that has been taken for refining budget management.

• *Utilise the core funds strategically*

The institute will make **strategic efforts to secure the core funds** – contributions from MOEJ and subsidies from local governments which have high flexibility of usage. Based on those funds, it can provide deliverables and services focusing on activities and impact generation that cannot be achieved without IGES.

The institute will allocate the core fund strategically as investment facilities such as the Strategic Research Fund (SRF). SRF has supported important institutional developments of IGES, which include the establishment of the Regional Collaboration Centre of UNFCCC in FY2015, for example, and should be expanded further to promote strategic IGES research and operations. Specific projects supported by investment facilities should be reviewed in the same way as externally-funded projects.

• Expand externally funded projects

Efforts should be doubled in selective fundraising for strategic research and operations by identifying potential collaborators and funders, thereby creating a positive cycle of fundraising - strategic research/operation cycle. Sources of external funds should be also substantially diversified to include

multi-year research funds and international funds, so that such funds are continuously utilised without any disruptions.

Necessary support is provided for externally-funded projects, from fundraising to implementation of projects, including preparing institutional documents for application, providing advice on budgeting and contracts, organising training sessions together with manuals to support project accounting for externally-funded projects, guiding financial reports, etc.

• Introduce project/division-level financial management

To secure the necessary project financial value-added (FVA) throughout the institute, there will be a more comprehensive and transparent financial management system by considering all the costs (not only operational costs but personnel and indirect costs) involved. Each unit will have a healthy portfolio, which consists of diverse projects funded by both core funds and external funds so as to achieve a balance of all the costs and income under the responsibility of each unit.

Screening for externally-funded projects will be strengthened so that those causing deficits to IGES without covering all the necessary costs properly will be discouraged, unless they are identified as having particular importance, for example, in generating significant impacts.

Outsourcing should be properly considered by examining the appropriateness in terms of cost efficiency, and internal outsourcing should be promoted more for both research and other activities. All efforts continue to be made on cost reductions on outsourcing, conferences and international travelling, for example, based on the established practices of the institute.

• Provide corporate services with minimal costs

Every effort should be made to reduce management costs. The focus will be on the "controllable items" which are not subsidised by local governments. Initial target items will include building/facilities maintenance costs, subsidy for lunch fee at Headquarters cafeteria, banking charge for overseas remittance, etc.

• *Streamline the accounting procedures*

The current computer-based financial management system should be fully mainstreamed within the 7th Phase, thereby eliminating paper-based approval procedures, and also removing unnecessary barriers between Headquarters and all satellite offices. This system should be more efficient, simpler but robust, helping each unit to achieve financial balance, while maintaining mobilisation of resources among areas/divisions.

(3) <u>Human Resources Management</u>

Key functions of the Human Resources Management Section (Team) are: (i) securing human resources with required capacities; (ii) supporting capacity building and upskilling of staff members; (iii) maintaining sound and healthy work environment; and (iv) keeping human resources data updated for the top management for their decision-making.

IGES will introduce an improved human resources management system based upon the basic principles laid out by MLS: i.e. "flexibility in meeting the changing needs of expertise, long-term sustainability of human resources management, resilience against potential risks surrounding IGES, capacity to provide opportunities to develop relevant expertise, and fairness among those with phase-based contracts and those with life-long contracts".

• Secure human resources to create added-value

The institute will take a positive approach to securing diverse human resources, who could not only conduct strategic policy research, but deliver other various skills including those related to networking, capacity development, and knowledge management. IGES will employ such experts as "professional staff," and conditions for their services will basically be determined not by their age or experience, but by their responsibilities and capability. IGES will also consider employing necessary supporting staff who assist professional staff in delivering their tasks. To increase the ratio of professional staff within the institute, a target of 85 % is set as an initial target for the 7th Phase. Conversely, this means the ratio of supporting staff will be reduced *to* 15%.

• Take flexible approaches to secure necessary expertise

To secure diverse personnel with high motivation of implementing strategic research backed by necessary expertise and skills, the institute will provide flexible employment opportunities including project-based positions, and design measures to support staff members with specific family needs such as raising small children or taking care of family members. At the same time, the institute will continue to invite diverse human resources by promoting personnel exchanges with international organisations, government agencies, research institutes, and private companies both in Japan and overseas fully utilising the IGES fellowship system and the IGES internship programme.

• Develop human resources with high motivation and commitment

It is important to establish an environment where each staff member recognises that they are integral part of IGES, and to be motivated to improve his/her own results to achieve the objectives of the institute, and envisage his/her possible career path within the institute. To this end, the institute introduces a *Tenure Appointment System* aiming to nurture a certain number of professional staff who are committed to the IGES mission for a longer period of time, while maintaining the current fixed-term contract system to maintain the dynamism of the research environment at IGES.

• Promote operational efficiency

The institute aims to improve operational efficiency, amongst other measures, by scrutinising and rationalising the need for supporting staff. A tentative target has been set to reduce the percentage of administrative staff at least to 13% of the total staff number. As the institute becomes more international in its operations, even supporting staff should be capable in handling business in English. Also important is to drastically reduce overtime amongst supporting staff members, for which 90 % reduction is proposed by the end of the 7th Phase.

• Provide opportunities for capacity and career development

To enhance potential and improve individual performance, on-the-job training opportunities will be provided. In addition, personnel exchanges with other organisations will be promoted for further career development of IGES staff members. For the career development of supporting staff members, an encouragement system will be introduced, in which those staff members of useful capabilities are ranked in higher categories of that system.

• Securing fairness and equity among staff members

The current quasi-governmental salary system (seniority system) will be abolished and a new salary system based on responsibilities and capabilities will be introduced. Consideration will be given to providing a fair treatment between longer employment contracts and fixed-term contracts including project-based contracts.

• *Improve the performance evaluation system*

The institute will improve the evaluation system that evaluates the performance of individuals and teams, and introduce a mechanism to reflect the results of the performance evaluation into the year-end bonus.

• Promote a lean and nimble management

The percentage of staff engaging in administrative work will be reduced to 13% of the total staff members during the 7th Phase, to promote lean and swift management. A staff pooling system will be introduced in an effort to maximise staff time as well as to develop their capacities.

(4) ICT Systems

Adjusting staffing ratios to put more funding towards research will require significant improvements to internal efficiency. Areas for improvement in relation to the ICT systems are identified below:

- Streamlined procedures and implementing new systems will improve speed, transparency, and compliance with applicable regulations.
- Empower internal communication/collaboration and ensure effective knowledge capture.
- Improve IGES publication database: quality, compliance with procedure, and dissemination.

The following measures will be planned and implemented in collaboration with respective units:

- Provide services to research areas improving the efficiency and coherence of systems for knowledge dissemination. Standardise procedures for acquisition of IT-related services to increase institutional control and understanding of our various online endeavours, streamline costs, and improve security.
- Provide a range of IT and media production services for external contracts, increasing percentage of revenue that IGES can claim.
- Improve IGES knowledge dissemination/audience engagement capabilities/mechanisms through systems that manage content and enhance dissemination options.
- Contribute to information and systems security.

In some areas, investment will be needed to improve/introduce systems to meet stated objectives. All avenues will be considered, including outsourcing.

Specific actions include:

- Achieve paperless approvals and decision-making process, where possible. Approve transparency of approval systems, and maintaining a record of changes in requests.
- Establish ICT Service acquisition guidelines and standard operating procedures for new websites.
- Establish an official IGES Information Security policy.
- Launch an online approvals process for publications.
- Achieve some cost recovery for its hosting infrastructure through external contracts.
- The IGES website becomes a dynamic, database-driven website.

(5) General Administration

General Administration will manage efficient institute-wide systems and administrative support as follows:

- The current paper-based internal approval system will be replaced by other lean and swift decision-making systems. A weekly CEOs meeting system could be a feasible option to be supported by easy-to-use IT support systems to be developed by the ICT Systems. Every year, about 850 cases are currently processed under the paper approval system, for which significant time and resources have been spent every year. This paper-based system should be reduced by 80% or more by the end of the 7th Phase, and eventually eliminated.
- Help organise the BOD/BOT meetings and fulfill the requirements to the relevant authorities (Cabinet Office, local governments from which IGES receives subsidies, etc.) for maintaining IGES's status and public-interest activities;
- Ensure the quality and process of organisational contracts, procurement and other legal documents and various transactions to protect IGES's legal status and interest.
- Ensure staff safety on duty stations and mission;
- Maintain and improve working environment (office facilities) and manage assets and continue implementing EcoAction 21 and maintain its status which upholds environmental practices at IGES and gives an advantage in project bidding;
- Provide other necessary services including receiving interns.
- Reduce substantially building maintenance and other indirect costs that are directly managed by the institute, while maintaining staff's general utility.

4.2.6. Three Issue Areas

(1) Climate and Energy (CE)

The overall focus of research and operations of this area for the 7th Phase will be broadly placed on contributions to: (i) operationalisation of the Paris Agreement; (ii) development of appropriate NDCs by selected countries in Asia; and (iii) promotion of key stakeholders' engagement in climate actions, taking fully into account the Strategic Goals set out by MLS

The following are priority subjects and actions:

- Five-year cycle for ratcheting up: Contribute to design and implementation of this ratcheting up system, including details of an international mechanism to be developed. Join international partner institutes to review NDCs of major economies in relation to the long-term temperature target stipulated by the Paris Agreement, which include political economic analysis of phasing-out of coal, development of indicators for measuring progress of mitigation policies, and review of national long-term low-emission development strategies. Quantitative analysis will be a joint effort with the Centre for Strategic and Quantitative Analysis to be established.
- Operationalisation of the Carbon Market Mechanism under the Paris Agreement: Contribute to elaboration of Article 6 of the Paris Agreement, which stipulates both cooperative approaches and the Sustainable Development Mechanism, and analyse market mechanisms under the UNFCCC before and after 2020; contribute to enhance implementation of the Joint Crediting Mechanism (JCM) in partner countries, and propose guidelines for the cooperative approaches defined under the Article 6.2 of the Paris Agreement based mainly on the implementation experiences of the JCM.

- Building capacity for NDCs Readiness: Contribute to assisting selected countries in Asia to become domestically ready for NDCs implementation, which includes assistance to develop long-term low-emission development strategies. Equally important will be contributions to build capacities in developing countries in Asia ready for the transparency framework. Propose effective modalities, procedures and guidelines under the UNFCCC process, and launch the "Coalition on Paris Agreement Capacity Building", consisting of institutes and international experts, to implement capacity building activities by providing, for example, country in-depth reviews and consultations and on-line training courses and tools, and development of policy framework. This component would be a joint activity with the Centre for Strategic and Quantitative Analysis to be established.
- Engagement of Non-State Actors: Contribute to promoting engagement of key non-state actors in climate change mitigation and adaptation, by providing strategic information and through networking. Assist, among others, leading actors to be involved in the processes and mechanisms set up under UNFCCC and facilitate access to various financial and technical resources to advance their actions. Full coordination will be made with the Business Taskforce and the City Taskforce to be established.

(2) Natural Resources and Ecosystem Services (NRE):

NRE will promote landscape, nexus and other holistic, integrated approaches to realise synergies in the management of land and natural resources between biodiversity conservation, livelihood generation, climate change mitigation and adaptation, disaster risk reduction, as well as water, food and energy security. The existing four sub-groups – Forest Conservation, Water Resources, Adaptation, Biodiversity Conservation and Ecosystem Services – will work closely to promote these synergies. A co-design and co-production approach to research that engages strategic partners and key stakeholders will be adopted. Research inputs into key international and regional networks and processes, including Water Environment Partnership in Asia (WEPA), Asia Pacific Adaptation Network (APAN), Low Carbon Society (LCS), RAFT, and the International Partnership for the Satoyama Initiative (IPSI), as well as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) will be strengthened for impact generation.

- Landscape level analysis and interventions: Support for Socio-Economic Production Landscapes
 and Seascapes through the Satoyama Initiative and related research; promoting implementation
 of REDD+ under the Paris Agreement; projects and research supporting integrated watershed,
 river basin or lake management at critical sites; mainstreaming ecosystem-based approaches to
 climate change adaptation and disaster risk reduction
- Sectoral integration: Integrating adaptation and mitigation into government planning especially
 at the local level under the new context generated by the Paris Agreement; case study research
 for integrating adaptation and disaster risk reduction; elaboration of the nexus approach to
 mitigate and manage competing demands for food, water and energy in the context of the SDGs;
 promoting integrated governance of groundwater and other water resources through WEPA
 activities.
- Building local institutions, capacities and services: Researching guidance and incentives for community/locally-based natural resource management; research promoting financial inclusion insurance, savings, credit and non-financial services to build adaptive capacity.
- Science-policy interface and multiple evidence base approaches: Contributing to and promoting IPBES assessments; research on strengthening the policy-science interface; engaging with

indigenous and local knowledge (ILK) for natural resource management.

- Sustainable supply chains: Strengthening and supporting implementation of policies for responsible trade (linking sustainable resource management with corporate social responsibility and responsible purchasing), especially for trade in legal and sustainable wood.
- Governance: Developing and promoting ecosystems governance and governance standards.
- Development and uptake of appropriate technologies and systems: Research and capacity building for the development and uptake of appropriate technologies and systems that increase incentives for natural resource management, reduce and treat waste, etc.
- Risk mitigation and management: Analysis of climate-fragility risks; Research on instruments that assist vulnerable households mitigate and manage climate change risks.

(3) Sustainable Consumption and Production (SCP)

IGES will help promote a shift in policy discourse from pollution control to efficiency, and then from resource efficiency to sufficiency. This approach indicates also a shift of policy focus from downstream such as solid waste disposal to upstream issues such as sustainable consumption and lifestyles. SCP views a phased approach important, taking different priorities and order for necessary changes in economies towards SCP in the region.

- IGES carries out policy research on addressing ways to deliver well-being, utilising fewer resources/environmental impacts, and leads discussions on the sufficiency approach. IGES is leading a research consortium focusing on "Policy Shift Towards Sufficiency Approach Aiming to Satisfy Needs under Environmental and Resource Constraints in Asia" under S-16 Project. Partner institutes include Tokyo University and NIES as well as the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Chulalongkorn University, which could contribute to strengthening research networking on SCP in the region.
- Considering a rapidly industrialising and maturing Asian economy, IGES tries to develop a few feasible models of SCP through conceptualisation and operationalisation of long-term sustainability lifestyles fitting into Asian context. IGES continues to be engaged substantially in the Sustainable Lifestyle Component of SCP 10-Year Framework of Programmes (10YFP), and IGES's contribution to Asian SCP networks including Asia Pacific Roundtable for Sustainable Consumption and Production (APRSCP), Association of South-East Asian Nations (ASEAN) SCP Forum, SWITCH-Asia and International Green Purchasing Network (IGPN) will be further strengthened. IGES plays a leading role in developing a renewed roadmap of SCP for Asia.
- IGES continues to play the role of knowledge catalyst on resource efficiency and the 3Rs in different policy forums such as the Regional 3R Forum in Asia and the Pacific, Organisation for Economic Co-operation and Development (OECD), UNEP International Resource Panel, and Group of 7 (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States) (G7) Alliance on Resource Efficiency. The institute will contribute together with experts in the region to the creation of policy-relevant knowledge products such as "the State of the 3Rs in Asia and the Pacific".
- IGES continues to elaborate practical tools and materials to help various stakeholders apply to analyse effects of their solid waste management initiatives for climate change mitigation, from lifecycle perspectives.
- The Centre Collaborating with UNEP on Environmental Technology will continue to support development of national and city waste management strategies in collaboration with UNEP/

International Environmental Technology Centre (IETC). This is an important conduit for impact generation, and thus IGES will, in collaboration with Kitakyushu Urban Centre, fully engage in strategy and capacity development in waste management associated with the Centre and its network with cities in this region.

4.2.7. Two Functional Centres

(1) Centre for Strategic and Quantitative Analysis

The Centre for Strategic and Quantitative Analysis aims to contribute to strengthening the science-policy interface by providing science-based and evidence-based quantitative and practical research products and analytical tools. In December 2014, UN Secretary-General pointed out in his report on the Post-2015 Agenda the need for data revolution, based upon recommendations made by an Independent Expert Advisory Group 16 on this issue. It was basically understood that one of the reasons the Millennium Development Goals (MDGs) were successful in making tangible progress was the adoption of a quantitative Plan-Do-Check-Adjust (PDCA) cycle MDGs. We have already entered this data revolution, in which rapidly developing information and communications technology (ICT) enable the world to produce an exponentially increasing amount of data and information on many subjects. However, there are still serious challenges in terms of quantity, quality and timeliness of such data in its application to policy issues. Data and information on environmental issues are more scarce and scattered compared to those on social and economic matters. In view of this, UNEP and other leading environmental institutions launched an initiative entitled the "Eye on Earth" in September 2015 to strengthen, among others, data gathering and analysing capabilities for the world on environmental issues, including in SDGs in particular.

SDGs and the Paris Agreement have both adopted basically the same quantitative PDCA cycle which assumes effective reporting, monitoring and evaluation and for tracking progress made against targets and indicators. Indeed, progress made by countries or other stakeholders is expected to be reported periodically to a relevant international arena to ensure accountability and transparency. Thus, when a government plans and monitors the impact of its policies, it must be able to benchmark data and see year-on-year progress. Comparing progress across countries has become also critical, and this requires shared indicators and statistical frameworks to help countries see how they are doing in comparison to others.

The challenges are huge, but as the MLS has already pointed out, IGES can contribute meaningfully to the Global Stocktake under the Paris Agreement and regular review on the progress made on SDGs, if it effectively works in collaboration with various partner institutes and networks in and outside Japan.

This Centre will be operating in full collaboration with NIES in particular. The Centre is to be built internally based on the current Green Growth and Green Economy (GE) and extensive networking among research institutes in Japan and other countries on scenario-based modeling, i.e. International Research network for Low Carbon Societies (LCS-RNet) and Low Carbon Asia

¹⁶ This group submitted its report titled "A World That Counts" in December 2014 to the UN Secretary General. In that report, they made concrete recommendations on bringing about a data revolution in sustainable development, in which they made a point to develop data and tools needed to support the mainstreaming of SDGs.

Research Network (LoCARNet). It is also important for this Centre to strengthen its linkage with the Intergovernmental Panel on Climate Change Technical Support Unit (IPCC TSU) on National GHG Inventory, as development of a national inventory is a central part of any quantitative analysis for working out mitigation strategies.

Focus actions include the collaborations with international organisations or knowledge and policy platforms, including UNEP, ILO, UN Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDG), the World Bank, ADB, Global Green Growth Institute (GGGI) and GGKP Green Growth Knowledge Platform (GGKP), etc., with other research institutions (NIES, IIASA, and WRI, etc.) and with other thematic groups at IGES, namely Climate and Energy, Natural Resources and Ecosystem Services, Sustainable Consumption and Production, Centre for Sustainability Governance, City Taskforce and Finance Taskforce. The following are priority subjects and actions:

- Create value-added knowledge through strategic research and quantitative policy assessment so
 as to provide comprehensive policy recommendations and roadmaps, and also to help national
 governments and other stakeholders in formulating low-carbon/carbon-neutral development
 strategies and policies,
- Support policy assessment in developing countries in Asia by identifying appropriate indictors, applying quantitative analysis tools and models, including geographic information system (GIS) to critical topics such as those covered by SDGs, including water-energy-food nexus, low-carbon and green growth pathways, green investment and green jobs, in collaboration with key partners.
- Expand collaboration between researchers in Japan (such as NIES) and key Asian countries, various stakeholders and policymakers including those in Asian cities to assist science-based policymaking in transitioning to low-carbon/carbon-neutral, resource efficient and resilient societies through organising knowledge-sharing networks and forums.
- Develop and provide businesses and cities with practical tools and methodologies for their strategic planning and analysis, in full collaboration with relevant international forums and partner institutes.
- Provide strategic data management and analysis composed of a three-step process: i) data collection and management; ii) data analysis and evaluation; and iii) data reporting to support evidence-based decision-making.
- For data collection, continue development/improvement of databases by establishing appropriate data collection and management systems, in collaboration with other institutes, at various governmental levels including national, sub-national and local, as well as more systematic means for the collection of essential external data sources.
- For data analysis and evaluation, help other areas within IGES to utilise collected data in regular research programmes and activities that aim to analyse status/progress, successes, and failures. This large-scale data analysis and evaluation aims to provide a strong evidence base for research findings and policy recommendations. In this sense, the Centre will serve for training purposes within the institute for those staff members to be involved in quantitative analysis.
- For data reporting, continue to develop innovative reporting tools, calculators and navigators that allow stakeholders to better assess options, identify priorities and understand both potential tradeoffs and synergies.

(2) Centre for Sustainability Governance

A core competence of IGES has been recommending forms of governance needed for a sustainable future. The Sustainable Development Goals (SDGs)—with an emphasis on a "global partnership"—have highlighted the critical role of social inclusion and sectoral integration in achieving that future. There is nevertheless a growing need for pragmatic policy-relevant research on how to make governance more inclusive and integrated in Asia. Much of the Centre for Sustainable Governance's work will therefore aim to address that need.

The Centre will not only focus much of its research on inclusion and integration; it will also put these ideals into practice by actively partnering with groups across IGES. The will help to ensure IGES sectoral/stakeholder research is enriched by governance expertise, while governance research is grounded in sectoral knowledge. The Centre will grow out of the current Integrated Policy for Sustainable Society (IPSS) area and respond to MLS suggestions for a group concentrating on "Governance and Capacity for Inclusive Development." It will further feature the SDGs in its research and strategic operations—and serve as a hub for information on the SDGs and the 2030 Development Agenda.

The Centre will organise its work around the three complementary methods—comparative case studies, action research, and data analysis.

Comparative case studies:

• The Centre will conduct national and local case studies comparing progress in the national and subnational governance of the SDGs. The case studies will highlight progress and challenges with social inclusion and sectoral integration on the SDGs (particularly SDG 6, 7, 11, 12, 13, 15, 16 and 17).

Action research:

• The Centre will develop need-based training programmes to help policymakers take more integrated and inclusive approaches to implementing the SDGs. The training programmes will offer an opportunity to co-design and co-produce knowledge at different levels of governance.

Data analysis:

- The Centre will collect, analyse, and report data related to the governance of the SDGs (and possibly climate change) in collaborate with the Centre on Strategic and Quantitative Analysis. Not all of the data the Centre gathers will be quantitative in nature; qualitative data will be analysed and assessed more systematically.
- The Centre's research will be shared at high-profile events (such as the Asia-Pacific Forum on Sustainable Development 2016) and through relevant networks. The Centre will also organise regular knowledge-sharing activities on the SDGs within IGES and Japan. By the end of the 7th Phase, the Centre aims to help policymakers from at least two countries and three cities take more integrated and inclusive approaches to governing the SDGs.

4.2.8. Three Taskforces

(1) City Taskforce

Cities and other sub-national governments are one of the most important actors to put into action various policies and initiatives to transform societies into more low-carbon/carbon-neutral, resilient and smart. This was apparent prior to and during COP21, when leading cities in the world got together and appealed to push the climate change agenda forward. IGES has been promoting city-based initiatives for many years with Kitakyushu City and its partner cities in Asia, and on this basis IGES plans to further strengthen city-related activities across areas and Centres of the institute. This Taskforce will be an internal hub to coordinate various city-related operations within IGES. As the internal hub, it will be directly involved in key city-related activities of IGES, promote collaboration with ICLEI and other city-related national as well as regional and international networks, and help city-related initiatives by providing practical knowledge and learning opportunities, and by developing and providing tools and methodologies needed for leading cities.

The following are priority subjects and actions:

- Develop practical tools and methodologies to develop plans for low-carbon/carbon-neutral (e.g. AIM low-carbon society scenario has been developed at Iskandar Malaysia, Putrajaya, Ho Chi Minh, Da Nang, Hai Phong) and sustainable cities (e.g. City SDGs guideline in collaboration with Japanese FutureCity (Kitakyushu, Yokohama, Toyama, Shimokawa, Higashimatsushima, Kamaishi).
- Make platform operations for cities and supporters (including mentors) more strategic to promote
 horizontal expansion through identification of synergies and addressing capacity and other needs
 of leading cities (e.g. Know-how Transfer from Tokyo Metropolitan Government to Iskandar
 Malaysia/Putrajaya about building energy/GHG monitoring and reporting scheme)
- Support vertical integration between cities and various stakeholders (citizen, business, media, Non-Governmental Organisations (NGOs)) in cities, as well as national governments and international organisations (e.g. IGES co-organised G7 Toyama Environment Ministers' Meeting parallel session "Role of Cities" on 15 May 2016 in Toyama with MOEJ and Toyama city).
- Compile and share innovative showcases amongst cities concerned to promote mutual learning, for example, through twinning arrangements (e.g. ESC (Environmentally Sustainable City) programme will be upgraded to highlight scaling-up of showcases and conducting capacity development of city management for ASEAN cities).
- Develop guidelines/e-learning course how to make sustainable policies in cities (e.g. develop FutureCity webinar for ALP2017).
- Create open space for stakeholders to get together in real and virtual for experience sharing (continue to support ASEAN High-Level Seminar on Sustainable Cities and organise ISAP city session, COP/SDG city session and provide our case studies for international knowledge hub such as UNFCCC database, SDG knowledge hub).

(2) Finance Taskforce

Finance is the driving force for effective implementation, which enables key elements for implementation such technology development/transfer and capacity building for key stakeholders. The economy is moving further toward globalisation, and the global financial system has been responding to this trend. Financial risks imposed by climate change such as 'stranded assets' are being discussed by the Carbon Tracker Initiative and others, and analyses

are actually taken into consideration by investors in their decision-making. There are still many challenges as seen in crisis situations like the Lehman Shock and the recent leaks of the Panama Papers. In Asia, establishment of the Asia Infrastructure Investment Bank (AIIB) has generated a high political agenda not only in this region, but globally. Climate change mitigation and adaptation, resource efficiency, sound natural resource management, and other sustainability issues seem to have been understood as potential significant risks and at the same time emerging opportunities for investment, if they are addressed appropriately. Under these situations, the financial sector has already taken a number of important actions, which include establishment of the Equator Principles, promotion of the environmental, social and corporate governance (ESG) investment (socially responsible investment), establishment of the Green Climate Fund (GCF), as well as a more recent initiative by the Financial Stability Board chaired by the Governor of Bank of England to set up the Task Force on Climate-related Financial Disclosure (TCFD), and a China/UK initiative under G20 to establish a new Green Finance Study Group. It is important to recognise the fact that most of these actions have been taken by the global financial sector itself, which is clearly shown by the case of the Addis Ababa Action Agenda adopted in parallel to, and separated from, the adoption of SDGs September 2015.

The following are priority subjects and actions:

- Follow up the overall policies of the financial sector regarding how it has been dealing with climate and other sustainability issues, through analysis on major policy trends of the World Bank, IMF, regional Banks such as ADB, as well as major policy shifts in official development assistance (ODA) policies coordinated for example by OECD.
- Analyse development and implementation of specific policies and practices to deal with climate
 and sustainability issues, such as the Equator Principles and the Principles for Responsible
 Investment (ESG investment), and the role played by international networks such as the UNEP
 Finical Initiative.
- Analyse challenges and opportunities of green finance, and identify specific areas to propose some methodologies or tools, such as, for example, quantifying environmental impacts, to be useful for financial institutions and investors to scale up its financing.
- Collect information about various forms of the blended finance where private capital will be leveraged by development finance, other international funding like GEF and GCF, or philanthropy grants to help promote SDGs in developing countries, and analyse any effectiveness and implications.
- Analyse motivations by financial institutions and investors to shift to decarbonising, resilient, greener and socially benefitted investment, which may include information disclosure, accounting rules, human resource development and financial incentives.

(3) Business Taskforce

Businesses played perhaps the most significant role in the adoption of the two key global agreements in 2015 for sustainability. Their voices were very influential in political decision-making in major countries. Businesses are diverse and flexible, and they are not uniform, for example, in responding to climate change. However, IGES sees that an increasing number of private companies are finding opportunities, not constraints, in pursuing climate change and other sustainability agenda. Against this background, IGES has gradually expanded collaboration with leading businesses in Japan and other countries. Thus, the broad objective of this Taskforce is to contribute to climate and other sustainability policies and initiatives through supporting proactive business actions. Considering that the private sector has: i) an influential voice on climate and other policy formulation; ii) the capability of driving innovations; and iii) a responsibility for its

own environmental impacts, business is regarded as an essential player in the transition to a low-carbon/carbon-neutral, resource efficient and resilient economy.

The following are priority subjects and actions:

- Support responsible policy engagement by businesses.
- Support developing corporate business strategies toward decarbonisation and more sustainable business practices, and proposing policy recommendations.
- Help expand, and activate proactive business coalition in Japan, (i) by serving as a secretariat of Japan Climate Leaders' Partnership and (ii) by closely associating with the Global Compact Network Japan (GCNJ).
- Communicate to businesses (including business media), in their business language, risks
 opportunities and other implications associated with climate change and other sustainability
 issues.
- Enhance engagement of business leaders in climate actions and enhance investors' engagement with companies on climate risks and corporate competitiveness.
- Engage with international business groups and coalitions, organising high-level dialogue meetings, participating in important forums such as Conference of Parties (COP) and other key international and regional events and processes.

4.2.9. Five Satellite Offices

(1) Kansai Research Centre (KRC)

With its focus on business and technology, KRC has developed its strengths and expertise over several years, through improving access to technology by facilitating its development and transfer in addressing challenges identified in issue areas with special focus on low-carbon technology transfer. It has carried out two substantial projects in the Sixth Phase: one a feasibility study on technology transfer supported by the Japan Science and Technology Agency (JST) and JICA; and the other, an assessment of technology transfer associated with the JCM. KRC has involved several private companies in these projects, thereby strengthening partnership with them.

The Paris Agreement re-confirms the critical role of technology development and transfer as one of the three essential means of implementation, and has strengthened its institutional set-up by adding technology views and framework to complement already existing technology mechanisms under UNFCCC. Given the above, KRC is expected to further strengthen its research and networking operations, in close collaboration with CE.

- "Seeds" and" needs" of low-carbon technologies on both supply and demand sides will be assessed and mapped in terms of specific technologies, finance and policies. Geographical focus will be expanded to cover several other countries in the region, and the scope of target technologies will also be expanded not only to energy efficient technologies but to cover renewable technologies.
- An "on the ground" matching mechanism will be built to link stakeholders through arrangements between Business-to-Business (B2B), Business-to-Financial Institutions (B2F), and Business-to-Policymakers (B2P).

- The best practices and lessons learned from IGES studies and others will be compiled in collaboration with our partner institutes, drawing upon cases under JCM, and those promoted by key supporting organisations in Asia, ADB and JICA.
- Analysis will be carried out on the effectiveness of the technology mechanisms to be implemented under the Paris Agreement, together with CE, and make recommendations, for consideration, based upon the analysis made above.

(2) Kitakyushu Urban Centre (KUC)

KUC plays a catalyst role to support sub-national governments or cities to take a transition path toward low-carbon and resilient, resource efficient, and green growth in achieving SDG11 (sustainable cities and communities) and other goals that are addressed at the city level such as SDG6 (clean water and sanitation), SDG7 (affordable and clean energy), and SDG13 (climate action). In order to tackle the city's complicated challenges, an integrative and inclusive approach is essential. Therefore, KUC will continue to work with cities to provide effective assistance to them through conducting practical research and on-the ground activities in close partnership the City of Kitakyushu.

Building partnership among local governments and other key stakeholders (civil society, private, and academic), KUC has conducted capacity development programmes and supported the development of local and national policies, strategies and action plans in order to promote low-carbon and resilient, resource efficient, and green growth in Asian cities. Based on the assets developed, KUC in the 7th Phase will focus four action areas stated below upon the following three subjects: i) low-carbon and resilient cities; ii) sustainable urban waste management; iii) urban environmental management and green growth. KUC, as the advanced capability to promote city-to-city collaboration, will work closely with the City Taskforce at HQ.

The following are priority subjects and actions:

- Facilitation of translating and transferring knowledge to promote understanding of local stakeholders: KUC will facilitate knowledge transfer utilising city-to-city cooperation frameworks by conducting training programmes, developing deliverables (e.g. guidebooks, case studies), organising seminars and webinars.
- Supporting institutional development to promote actions: KUC will support policy planning and capacity development to facilitate local actions in close cooperation with key stakeholders including local governments, civil societies and private sectors.
- Playing a catalytic role to make 'changes' at subnational level: KUC will support local stakeholders in policy implementation and actions including fund-raising support.
- Strengthening links with existing networks: KUC will strengthen and explore links with existing regional and international networks on areas such as climate changes, sustainable development goals, and sustainable lifestyles in order to reach out to a wider audience.

(3) Regional Centre in Bangkok (BRC)

BRC functions as an external wing of IGES to engage and collaborate with other supporting organisations based in Thailand and other ASEAN countries, including UN agencies, ADB, U.S. Agency for International Development (USAID), Deutsche Gesellshaft für Internationale Zusammenarbeit (GIZ) GmbH, Swedish International Development Cooperation Agency (SIDA), JICA, and ASEAN Secretariat, among others. BRC also functions as an outreach wing of IGES to disseminate research outputs through the media and other means. BRC teams up with

research groups in the Headquarters and satellite offices to synergise the work and occasionally provides logistical support for organising events in Thailand. Collaboration with the UNFCCC Regional Collaboration Centre and the Regional Resource Center for Asia and the Pacific (RRC.AP), AIT has special importance to IGES in terms of joint project development and operation.

BRC focuses on the following three sectors:

Climate Change Mitigation and Adaptation

- Build the capacity of government officials and national experts to prepare bankable proposals to
 implement mitigation and adaptation projects by organising training courses in cooperation with
 Climate Change Asia at Asian Institute of Technology. Prepare relevant training modules with
 focused areas on urban resilience, economics of climate change, project preparation, NDCs and
 low-carbon technologies.
- Continue to host, update, and maintain the APAN web portal with the latest news, publications and countries' adaptation activities in Asia and the Pacific. Continue to organise and conduct regular community of practice e-discussions using the APAN Exchange Series as a modality to stimulate conversations on key adaptation topics and capture practical adaptation knowledge and experience. Support ASEAN Member States in strengthening institutional capacity and policy frameworks for effective implementation of disaster risk reduction and climate change adaptation.
- Continue to host the UNFCCC Regional Collaboration Centre (RCC) in Bangkok in leading the discussion on markets and mechanisms that contribute to the mitigation of GHG emissions in line with Article 6 of the Paris Agreement; assisting countries in putting in place approaches that create a price on carbon for implementing their Nationally Determined Contributions; supporting efforts to substantially scale up climate and SDG aligned finance and investment; tapping the potential of CDM in underrepresented countries and alleviating the barriers to CDM project development and implementation; and collaborating with the UNFCCC Global Climate Action Support Unit to play a key role in facilitating both participation of relevant stakeholders and management of follow-up actions in the region.
- Continue to promote and facilitate low-carbon technology (LCT) transfer in the Southeast Asia region and to assist countries to achieve their emission reduction targets through the increase of resource-efficiency.

Environmental Compliance and Enforcement

- Creation of the Asia Environmental Impact Assessment Network (AEIAN) within AECEN as an Established Regional Body with potential support from MOEJ, ADB, GIZ, Middle Income Countries and other parties. In line with this, MOEJ will support AEIAN as a regional platform to strengthen EIA implementation in Asian countries through the promotion of information sharing and exchange as well as possibility for twinning arrangements.
- Explore funding opportunities for long-term collaboration in environmental compliance and enforcement as well as environmental social safeguards areas, starting with US Environmental Protection Agency (EPA), Environmental Protection Administration of Taiwan, ADB and other potential partners.

Sustainable Cities

Through the new phase of the ASEAN ESC Model Cities programme, BRC will promote the SDGs to a selected group of frontrunner cities and help them map their local policies/actions to all 17 SDGs and draw up a plan of action. An online hub for 'SDGs and ASEAN Cities' (Sourcebook) will be established, which will showcase data and experiences from supporting those cities in the past eight years. BRC will guide and benchmark the performance of frontrunner cities with the use of quantitative indicators and promote city-to-city learning for scaling similar practices.

(4) Beijing Office

The Beijing Office continues to work with the Chinese Government to promote basically bilateral cooperation initiatives between Japan and China. The focus is now shifting very much to air pollution-related matters as domestic as well as international attention is increasingly paid to the serious impact on health. Substantial collaboration has been designed and implemented in the form of city-to-city collaboration, in which the IGES Beijing Office has played the central role. The performance has been appreciated by both the Chinese and Japanese Governments. This could further develop into a co-benefit project in the future, given a strong commitment made by the Chinese Government to its INDCs submitted to COP21.

The following are priority subjects and actions:

• The country-specific research and operations spearheaded by the Beijing Office will be further promoted, by mobilising the South Asia Desk in India and the Indonesia Desk. Possibilities to further expand country-specific operations continue to be reviewed by Headquarters.

(5) Tokyo Sustainability Forum

The Tokyo Office moved to its current location two years ago to expand office space to accommodate the IPBES Technical Support Unit for the Asia-Pacific Regional Assessment (IPBES-TSU-AP) as well as the office of ICLEI Japan. Since then, the utility of the new Tokyo Office has significantly improved, whereby key stakeholders often get together to help IGES substantiate collaboration with them. As stated in the MLS, IGES intends to evolve into a facility for interactive knowledge generation, with which practical knowledge is obtained, gained, and disseminated. Taking advantage of its location, the office will become the "Tokyo Sustainability Forum" of IGES from the 7th Phase of IGES to continue facilitating impact generation with various stakeholders particularly based in Tokyo.

IPBES-TUS-AP will continue to accomplish its mandates. In 2016, the Japan Biodiversity Fund (JBF) IPBES Capacity Building Project was formally established in April and the project team was established at IGES Tokyo Office. To date, three sub-regional level Indigenous and Local knowledge (ILK) dialogue workshops have been organised and the meeting reports were published and provided for the use of authors of IPBES Asia-Pacific Regional Assessment (APRA) to better reflect ILK to the assessment report. The Second Workshop on Scenarios and Modelling for IPBES Assessments was also organised as a part of the project in November, 2016 at IGES HQ.

IGES City Taskforce will continue its collaboration with ICLEI Japan for impact making at the sub-national government (see City Taskforce section).

- The Forum will maintain and improve its facility to facilitate interactions with key stakeholders;
- IPBES-TSU-AP will continue to provide comprehensive support for the regional assessment and successful achievement of its goals;
- The Forum will lead the implementation of the JBF IPBES Capacity Building Project and share knowledge and expertise with IBPES-TSU-AP and NRE biodiversity team.

Annex 1: Further Elaboration of Strategic Research for IGES

This section intends to provide workable understanding within IGES about transformative research and transformation research. The points and overall understanding of these two different research approaches given below are based upon IGES's internal discussions reported and covered by the "MLS Supporting Document"

TRANSFORMATIVE RESEARCH

This is a future-looking, normative and model based approach, and understood as research to clarify what kind of future we envisage if the world is moving towards global sustainability. It seems there are two major types of research in this approach, according to the past IGES experience.

Application of new concepts and perspectives

- Engendering new paradigms and regimes to create new modes of operation, and
- Diffusion of new socio-cultural values, norms, beliefs and behaviours.

New concepts and new perspectives are generated through, for example, international initiatives and negotiations. To apply these newly-coined ideas appropriately to actual situations particularly in Asia would be important first step. A number of essential factors are to be identified, which create either synergies or trade-offs in promoting new concepts and perspectives. Then, the original concepts and perspectives are to be elaborated, modified and refined through this kind of research. The work of IGES in this respect actually aims at enriching new policy ideas (concepts and perspectives) in the context of Asia and the Pacific.

Systematic and quantitative policy analysis

- Integrated and trans-disciplinary research, and
- Systemic thinking and analysis, including future modelling and scenario building.

Result orientation based upon quantified targets and the PDCA cycle is now the international norm. This approach has been fully adopted by SDGs and the Paris Agreement. Quantitative visions and targets set by governments and key stakeholders are examined in a transparent manner, implemented, and regularly monitored to check the progress, then bottlenecks are identified for improved implementation. For this kind of process to be operated in a way all participating countries and stakeholders can trust, fair and objective tools and methodologies need to be shared by all parties concerned. Collection, processing, comparison, and interpretation of data and information are critical, backed by science-based analytical and modelling tools. Such tools are mostly developed and owned by institutes in developed countries, and thus they need to be fully shared with counterparts in developing countries. It is important to understand that the common denominator in most of quantitative analyses is monetary value, thus economic analysis plays in most cases a critical role.

TRANSFORMATION RESEARCH

This is a type of research to examine current situations, in a more empirical and process-oriented way. Focus is very much on examining current policies and practices, identifying good practices/policies, analysing success factors, or discussing synergies and trade-offs among policies, and considering how success cases could be scaled up and replicated. It seems again there are two different types of research in this approach.

Participatory research

- Addressing systems of governance and decision-making,
- Participatory observations and analyses, and
- Effective capacity development for stakeholders.

For solutions to be sustainable, participation of stakeholders is considered critical. However, such collective decision-making for change towards sustainability is always a challenge. Full understanding of the governance system is a must, and the way decisions are made needs careful consideration. It is important to recognise that conclusions are in most cases subject to compromises, and long-term objectives are to be introduced in a phased manner. Parallel to that is the importance of capacity building, without which any decision made could be overturned anytime in the future. Collective decision-making, which is sound and sustainable, depends very much upon how key stakeholders understand the issue in question.

Solutions research

- Case studies for pragmatic knowledge generation,
- Proposing and piloting innovative policies, models and approaches, and
- Effective monitoring and evaluating for lesson-learning.

There is no one-fits-all solution. Solutions are different from country to country, and from one stakeholder to another, reflecting specific social, economic, cultural and political conditions surrounding stakeholders concerned. A single discipline-based analysis or recommendation hardly comes up with a final solution. Multiple criteria analyses are essential and value judgement to decide the significance of each criterion has to be made by stakeholders. Sharing and learning of good policies and practices in similar countries, for example, could therefore be quite useful.

Overall Observations

Actual outputs from these four types of strategic research take various forms, ranging from academic papers and development of tools and methodologies to various policy products such as policy briefs, policy guidelines, and pilot studies. This seems to reflect different contexts in which such IGES products have been produced. Although diversification of products is to a certain extent inevitable, it is important to make IGES publications visible at least to our key stakeholders.

Annex 2: Outputs-Outcomes-Impacts Continuum of IGES

A 'Framework of IGES Impact Generation Strategy', together with working definition of *output*/*activity*, *outcome* and *impact*. The framework intends to illustrate how we create *influences* (i.e. outcomes and impacts) external to IGES, through a step-by-step approach creating relevant outputs, outreaching to key stakeholders, and achieving different levels of outcomes and impacts.

In short, *output* is defined as a tangible product based on IGES strategic research. Output is also something that IGES can control. *Outcome* is defined as positive actions taken by key stakeholders in response to IGES outputs and relevant activities, for which IGES can actively interact and facilitate. *Impact* is defined as real changes following the outcomes created by IGES and others. Therefore, impacts are usually not solely due to IGES efforts, but rather generated through collective efforts of relevant stakeholders.

Figure 1 shows an image of the rippled effects starting from IGES outputs through achieving impacts in society. From the figure, it is obvious that generating value-added products (outputs) cannot be the end, but rather is just the beginning of the chain of **influences**. Coupled with relevant activities, the outputs can lead to higher levels of influences, namely outcomes and impacts.

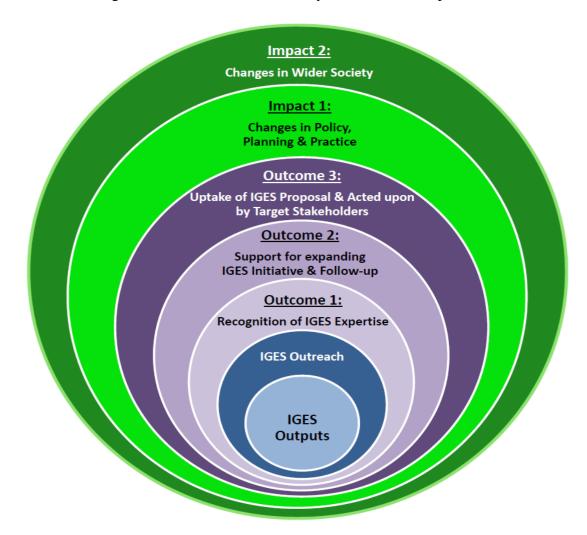


Figure 1: Results Chain of IGES Impact Generation Strategy (i.e. outputs, outcomes and impacts) – Image of rippled effects of IGES outputs with outreach activities

Annex 3: Lists of Partners of IGES

The names of the United Nations units, international networks/initiatives or organisations that IGES hosts, serves as secretariat for, or has collaborative agreements with are summarised below (as of March 2017)

United Nations units (4)

	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- (Tokyo Office)
4	United Nations Framework Convention on Climate Change (UNFCCC)-IGES Regional Collaboration Centre (RCC)	September 2015- (BRC)

Networks to which IGES serves as the secretariat (11, ongoing)

	Name of the network	Year (hosting division at IGES)	Main function
1	Regional 3R Forum in Asia and the Pacific	2008- (HQ)	Forum to promote 3R in the Asian developing countries in corporation with the governments, international organisations and donor communities, endorsed at the East Asia Environment Ministers Meeting 2008.
2	Clean Asia Initiative (CAI)	2008- (HQ)	Initiative to help economic development in Asian countries to leap over environmental degradation by passing on Japan's experiences of technologies, organisations, and systems.
3	Sustainable Development Planning Network for Asia- Pacific (SDplanNet-AP)	2008- (BRC)	Network of professionals involved in development planning to share innovative approaches for integrating sustainable development into plan and strategies launched with support from IISD.
4	International Research Network for Low Carbon Societies (LCS- RNet)	2009- (HQ)	Researchers' network dedicated to governmental policymaking processes to promote low-carbon societies. Initiative the G8 Environment Ministers' Meeting.
5	Knowledge Hub of the Asia-Pacific Water Forum	2009- (HQ)	One of the regional water knowledge hubs to generate and share water knowledge and building capacity in the Asia-Pacific region.
6	Asian Co-benefits Partnership (ACP)	2010- (HQ)	Network to support the mainstreaming of co-benefits into sectoral development plans, policies and projects in Asia launched at the Better Air Quality 2010.
7	International Institute for Applied Systems Analysis (IIASA) Japan Committee Secretariat	2011- (HQ)	Research collaboration currently focuses on solving global scale problems mainly in the field of systems analysis.
8	Low Carbon Asia Research Network (LoCARNet)	2012- (HQ)	Asian Researchers' network to facilitates science-based policies for low-carbon development in the Asian region, launched by LCS-RNet
9	Asian Environmental Compliance and Enforcement Network (AECEN)	2012- (BRC)	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.
10	ASEAN ESC Model Cities and High Level Seminar on ESC (HLS ESC)	2010- (BRC)	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.
11	Japan Climate Leaders' Partnership (Japan- CLP)	2012- (GE)	Support Japanese private-sector network to promote the transition to sustainable and low-carbon society.
	The Kitakyushu Initiative	2000-2010 (KUC)	Initiative to improve urban environment in Asia and the Pacific region under the direction of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) in collaboration with Kitakyushu city.
Completed	The Asia-Pacific Forum for Environment and Development (APFED)	2001-2010 (HQ)	Regional group of prominent experts to address critical issues and propose new models for equitable and sustainable development.
eted	Asia Pacific Adaptation Network (APAN)	2010- 2015 (BRC)	Asia-Pacific region's network with special emphases on the management of climate change adaptation knowledge and capacity building. Part of the Global Adaptation Network (GAN) by UNEP.
	USAID Adapt Asia- Pacific	2010-2016 (BRC)	Knowledge management support to USAID's climate change adaptation project preparation facility for Asia and the Pacific.

Collaborative agreement (30)

	Institute	Year	Scone	
14		Tear	Scope	
	nternational organisations			
1	Secretariat of the United Nations	May 2008- Dec. 2017	Climate change (CDM, market mechanisms)	
	Framework Convention on Climate			
	Change and its Kyoto Protocol (UNFCCC			
_	Secretariat)			
2	United Nations Environment Programme (UNEP)	Dec. 2010- Dec. 2018	Climate change, wastes, air pollution	
3	United Nations Economic and Social	Apr. 2016 – Dec. 2020	SDGs, knowledge sharing and mutual	
	Commission for Asia and the Pacific		support to conferences	
	(UNESCAP)			
4	Asian Development Bank (ADB)	Dec. 2010- Mar. 2020	Climate change, wastes, energy, water	
			resources	
5	International Council for Local	Apr. 2015- Apr. 2018	City level collaboration for sustainable cities	
	Environmental Initiatives (ICLEI)			
6	ICLEI Japan	Apr. 2015- Jul. 2018	City level collaboration for sustainable cities	
7	Intergovernmental Science-Policy	Jun. 2015- Mar. 2018	Project Cooperation Agreement (PCA) on	
	Platform on Biodiversity and Ecosystem		the establishment of and collaboration	
	Services (IPBES)		through the TSU for the Asia-Pacific	
			Regional Assessment for the IPBES	
8	International Labour Organization	Jan. 2015 –Dec. 2017		
9	UNFCCC Secretariat	Jul. 2015- Dec. 2017	Agreement on the establishment of and	
			collaboration through the UNFCC Regional	
			Collaboration Centre (RCC)	
10	Asia-Europe Environment Forum	Sep. 2015- Dec. 2016	Forum to foster inter-regional cooperation	
	(ENVforum)		between Europe and Asia on sustainable	

			Г
			development and its environmental dimensions.
11	UNEP-International Environmental	Oct. 2015- Oct. 2017	Project Cooperation Agreement (PCA) on
	Technology Centre (IETC)		the establishment of Collaboration Centre
			on Environmental Technology
12	International Institute for Sustainable	Sep. 2016- Jul. 2018	Collaboration on knowledge exchange
	Development (IISD)		
13	Secretariat of the Convention on	Apr. 2016 – Jun. 2019	Project Cooperation Agreement (PCA) on
	Biological Diversity(SCBD)		the implementation of the Capacity
			building project for the implementation of
			IPBES Asia Pacific Regional Assessment
Res	earch collaboration	_	
1	Korea Environment Institute (KEI)	Jul. 2014 – Jul. 2019	Research collaboration
2	Ministry of Forests and Soil	Feb. 2015- Feb. 2020	Research collaboration on forest
	Conservation (Government of Nepal)		governance standard
3	Institute of Microfinance (InM)	Aug. 2015- Jul. 2018	Research collaboration on inclusive finance
4	Conservation International (CI) and	Sep. 2015 –Jun. 2019	Research collaboration on biodiversity
	UNU-IAS	·	,
5	National University of Laos	Oct. 2015- Oct. 2018	Research collaboration on natural
	•		resources management
6	International Centre for Integrated	Nov. 2015 - Dec. 2019	Research collaboration on natural
	Mountain Development (ICIMOD)		resources management
7	The Energy and Resources Institute	Jul. 2016 - Mar. 2017	Research collaboration on launching Japan-
	(TERI)		India Stakeholders' Matching Platform
Citie	, ,		9
1	Kawasaki City	Aug. 2013-	City level collaboration for sustainable cities
	•	(automatically renewed)	in Asia
2	City of Yokohama (Y-PORT)	Mar. 2015- Mar. 2018	City level collaboration for sustainable cities
	, , ,		in Asia
3	C40 Cities Climate Leadership Group	Jan. 2016-Dec. 2017	Collaboration at the city level activities
	(C40)		,
Japa	anese Universities		
1	Yokohama National University	Mar. 2007-	Personnel exchange, research collaboration
	,	(automatically renewed)	, , , , , , , , , , , , , , , , , , ,
2	Hiroshima University	Jun. 2010-	Personnel exchange, research collaboration
	,	(automatically renewed)	3 2, 222
3	Yokohama City University	Jul. 2011-(automatically	Personnel exchange, research collaboration
	, , , , , , , , , , , , , , , , , , , ,	renewed)	3 2, 222
4	Tokyo Institute of Technology	Dec. 2011 -	Personnel exchange, research collaboration
	lenye mentate er reenmenegy	(automatically renewed)	The second of th
5	Keio University and Asian Institute of	Jul. 2012- Jul. 2017	Personnel exchange, research collaboration
_	Technology		
6	Tokyo City University	Oct. 2016 – Sep. 2019	Personnel exchange, research collaboration
7	Nagoya University	Feb. 2017 –Jan. 2020	Implementation of the IUC-J project at the
_		. 35. 252. 36111 2020	IGES Tokyo Sustainability Forum
Oth	ers: Under discussion		
-	China-ASEAN Environmental	Under discussion	Research collaboration on green economy
	Cooperation Center (CAEC)	Orider discussion	nescaren condoration on green economy
_	Green Growth Knowledge Platform	Under discussion	Knowledge partner to the platform on
	(GGKP)	2.146. 4.564551011	green growth and green economy
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Other (membership, etc.) (6)

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