Special Session 1.3.: A Discussion about frameworks for promoting innovation, mutual learning and collaboration among donor agencies

Policy Framework, Design and Implementation of STI for Sustainable Development beyond the Boundaries

- Japan's Recent Development -

October 11 , 2017

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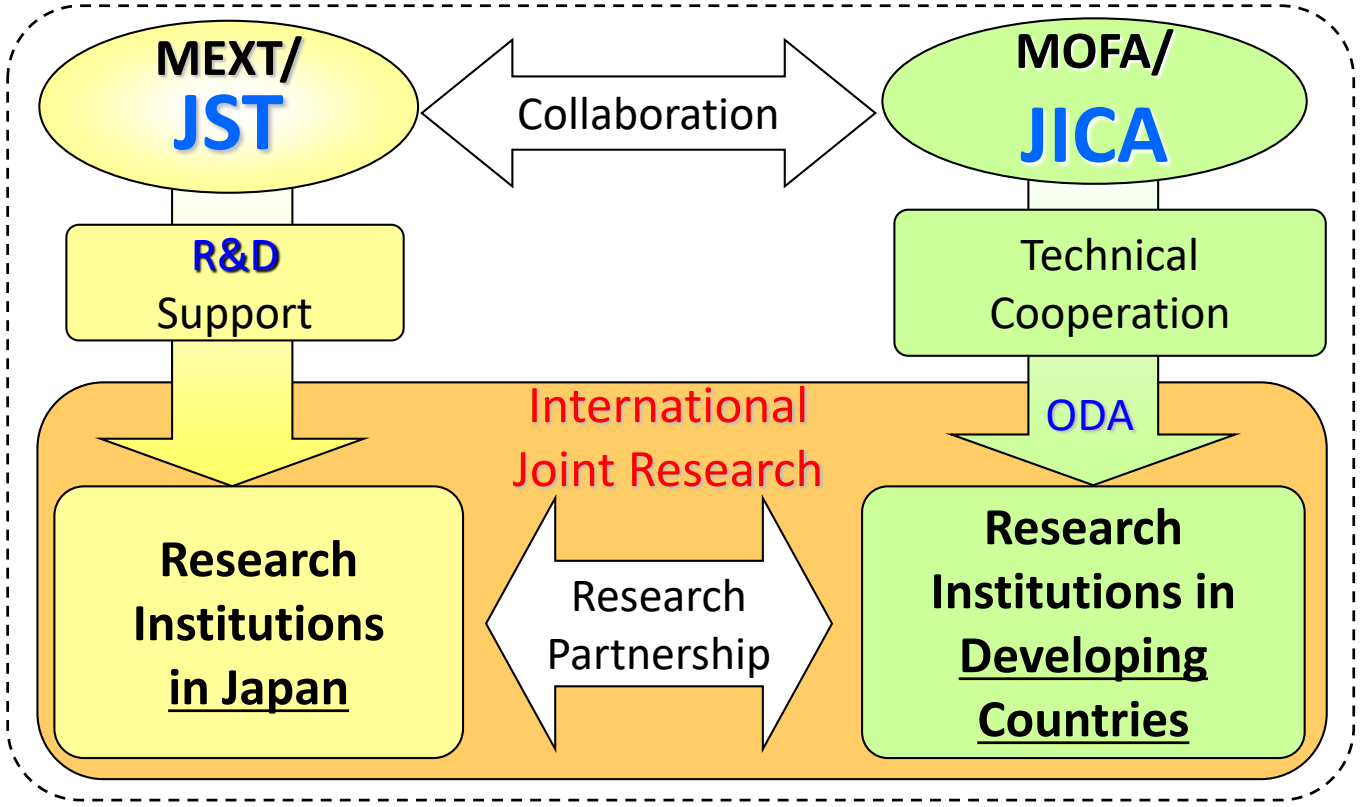
Contents

1. SATREPS : JICA-JST Joint Funding for Sustainable Development
2. New Trend : STI for SDGs and S&T Diplomacy - Japan's Approach -
3. Bridging National Policy (Society 5.0) and UN SDGs - Combining top-down and bottom-up -

New Funding Mechanism for Sustainable development
SATREPS: JST & JICA joint funding program

Japanese Government's S&T Funding Agency

Japanese Government's ODA Agency



Research proposal

ODA request

via ministry or agency

In total (since 2008) : 101 projects in 43 countries

Research Period : 3-5 years

Research Funding

Approx. 1 million USD / project / year (JST + JICA total)

MEXT: Ministry of Education, Culture, Sports, Science and Technology
MOFA: Ministry of Foreign Affairs

Science and Technology Research Partnership for Sustainable Development- SATREPS -

Enhancing cooperation in science & technology

～Building win-win relationships between Japan and developing countries ～

Addressing global issues through STI

～ Addressing global/local issues and advancing/customizing S&T

～

Capacity Development

～ Boosting self-reliant R&D capacity and sustainable research systems, training human resources and coordinating networking among stakeholders～

Practical utilization

～Expecting outcomes to make a real contribution to society ～

Co-design, Co-production and Co-delivery

SATREPS Research Areas

In total (since 2008) : 101 projects in 43 countries

■ Environment and Energy

- Global-scale Environmental Issues

  Climate change mitigation & adaptation, Safe water supply, Biodiversity conservation..

- Low-carbon Society

  Biomass energy, Energy efficiency, Renewable energy..

■ Bioresources

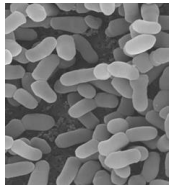
Breeding and cultivation technology, Bio resource management..

■ Disaster Prevention and Mitigation

Disaster mechanisms (Earthquakes, Volcanic..), Disaster mitigation..

■ Infectious Diseases Control

Diagnostic tool, Vaccines, Therapeutic products development
(Avian influenza, HIV/AIDS, Dengue fever..)



Climate Change Data Center in Thailand ; for floods and droughts

IMPAC-T

Integrated study on Hydro-Meteorological Prediction and Adaptation to Climate Change in Thailand

2009-2014

โครงการบรูณาการศึกษาการพยากรณ์ด้านน้ำและอุตุนิยมวิทยา และการปรับตัวต่อการเปลี่ยนแปลงสภาพภูมิอากาศในประเทศไทย

SATREPS

During the past decade, weather patterns in Thailand have fluctuated from severe droughts to severe floods.

In 2008, the population suffers from severe drought , million people in 71 provinces were affected by water shortages.

Intense rainfalls in 2011 resulted in the worst floods in Bangkok's recent history.

Outcomes of SATREPS projects

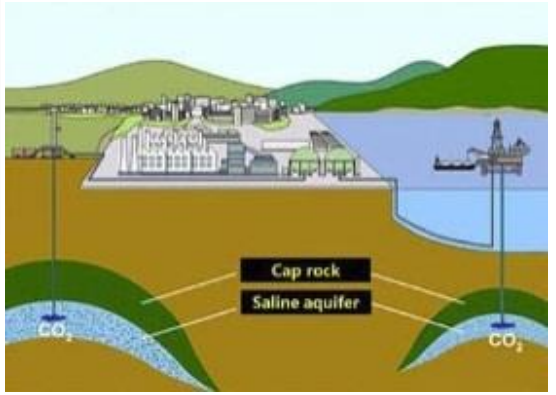
Returning outcomes to society with the support of the Asian Development Bank (ADB)

【Low Carbon Society / Energy】

A drilling in preparation for natural gas production

The MoC signing ceremony

PERTAMINA's Gundih Central Processing Plant



"Pilot Study for Carbon Sequestration and Monitoring in Gundih Area, Central Java Province
Adoption Fiscal Year 2011 Indonesian project

Examples of Outcomes

Creating Rice Varieties and Cultivation Technology Tailor-made for Kenya's Environment

【Environment and Energy (Global - scale Environmental Issue

Adoption FY 2012 Kenya project
'Rice Research for Tailor-made Breeding and Cultivation Technology Development in Kenya'

Standing Up to Earthquakes and Tsunamis: Joining Hands with Peru across the Pacific

【Disaster Prevention and Mitigation】

Adoption FY 2009 Peru project
'Enhancement of Earthquake and Tsunami Disaster Mitigation Technology in Peru'

Study of the earthquake resistance of buildings

Elucidated the status of Leptospira infection and developed prototype diagnostic kit

【Infectious Diseases Control】

Adoption FY 2009 Philippines project
'Prevention and Control of Leptospirosis in the Philippines'

Science Diplomacy and UN SDGs

STI for SDGs and S&T Diplomacy

Presented "**recommendations**" on

how STI can be leveraged for achievement of SDGs

to the Minister for Foreign Affairs

(May 12, 2017)

Recommendation for the Future

STI as a *Bridging Force* to Provide Solutions for Global Issues

Four Actions of Science and Technology Diplomacy to Implement the SDGs

12 May 2017

Advisory Board for the Promotion of Science and Technology Diplomacy

This recommendation is a product of the Advisory Board for Promotion of Science and Technology Diplomacy, chaired by the Science and Technology Advisor to the Minister for Foreign Affairs of Japan.

Recommendation for the Future
STI as a Bridging Force to Provide Solutions for Global Issues
Four Actions of Science and Technology Diplomacy to Implement the SDGs

Introduction

- This recommendation aims to clarify what contributions Japan should make to the achievement of the Sustainable Development Goals (SDGs) through science, technology and innovation (STI) (**"STI for SDGs"**) in its future international cooperation.
- STI can contribute to the implementation of the SDGs as a deciding factor for making the best use of the limited resources.

1. Change through Innovation: Global Future Creation through Society 5.0

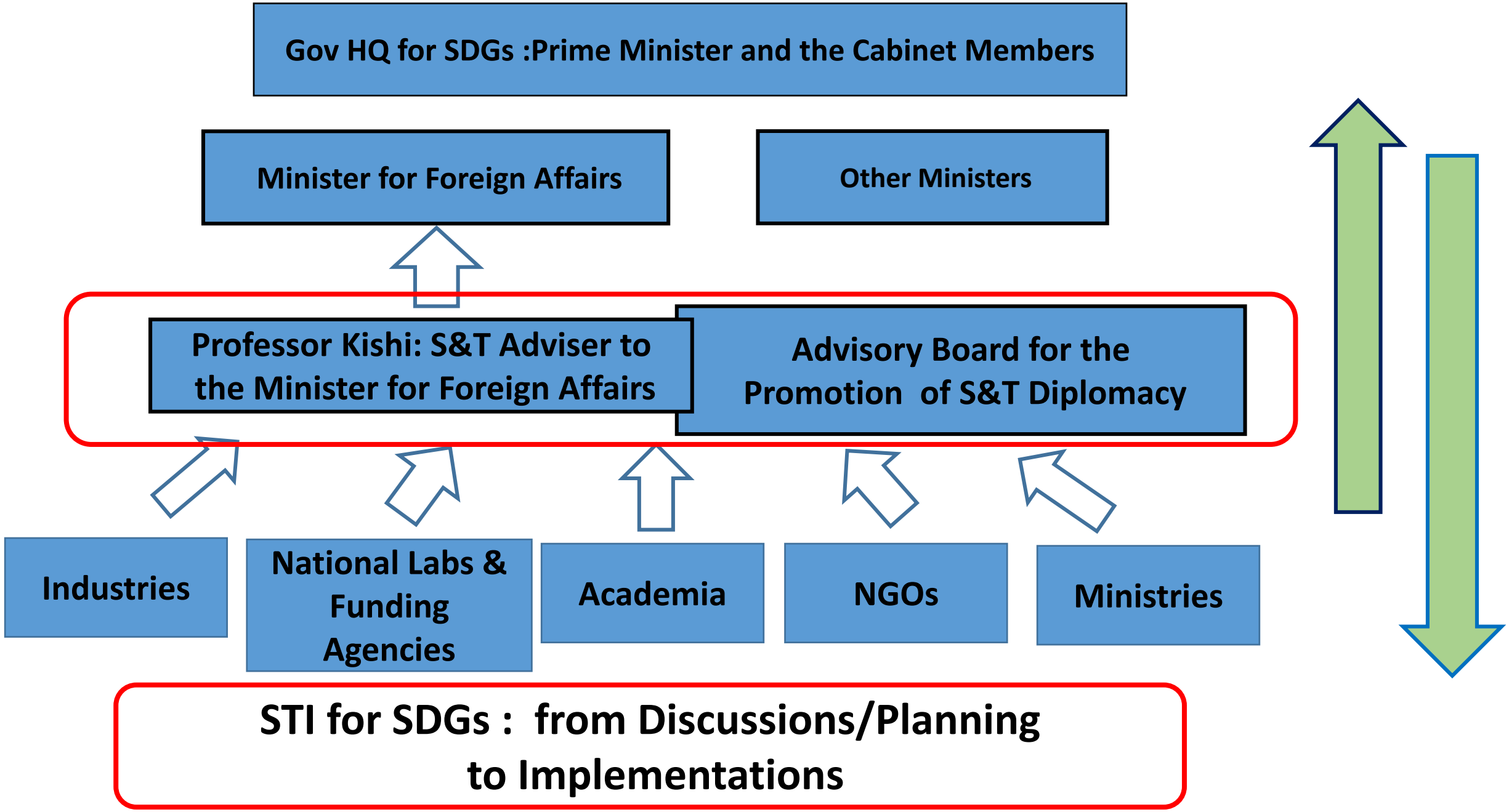
2. Grasp and Solve: Solution Enabled by Global Data

3. Link across Sectors, Unite across the Globe

4. Foster Human Resources for "STI for SDGs"

Conclusion: Core Message

- STI can contribute to the achievement of the **SDGs as a "bridging force"** which unites different **sectors, countries and regions**, thereby opening a path to create a society for the future generation.
- Japan's diplomacy should vigorously play a leading role in implementing the SDGs across the world through STI with these four actions as the pillars of its initiative.


Gov HQ for SDGs :Prime Minister and the Cabinet Members
Minister for Foreign Affairs
Other Ministers
Professor Kishi: S&T Adviser to the Minister for Foreign Affairs
Advisory Board for the Promotion of S&T Diplomacy
Industries
National Labs & Funding Agencies
Academia
NGOs
Ministries
STI for SDGs : from Discussions/Planning to Implementations

STI forum 2017 Program

15 May

Conference Room 4

10:00-10:30 Welcome address and opening segment

10:35 – 10:40 Video mes

10:40 – 11:50 Session 1: ssing STI for the SDGs –the key to unlocking STI potentials

11:50 – 13:00

Co

Panel a) K
STI for en
everywhe

15:00 – 18:00

Co

15:00 – 1
for engag
lives and
at all ages

16:30 – 1
for engaging STI for achieving gender equality and empower all women and girls (Goal 5)

engaging STI for building resilient infrastructure, promote
sustainable industrializa
innovation (Goal 9)

16 May

Conference Room 4

10:00-11:00 Session 3: Lesson
improving the impact of STI on
highlighting the cross cutting na

11:00 – 12:00 Session 4: Natio
and policies for achieving the S

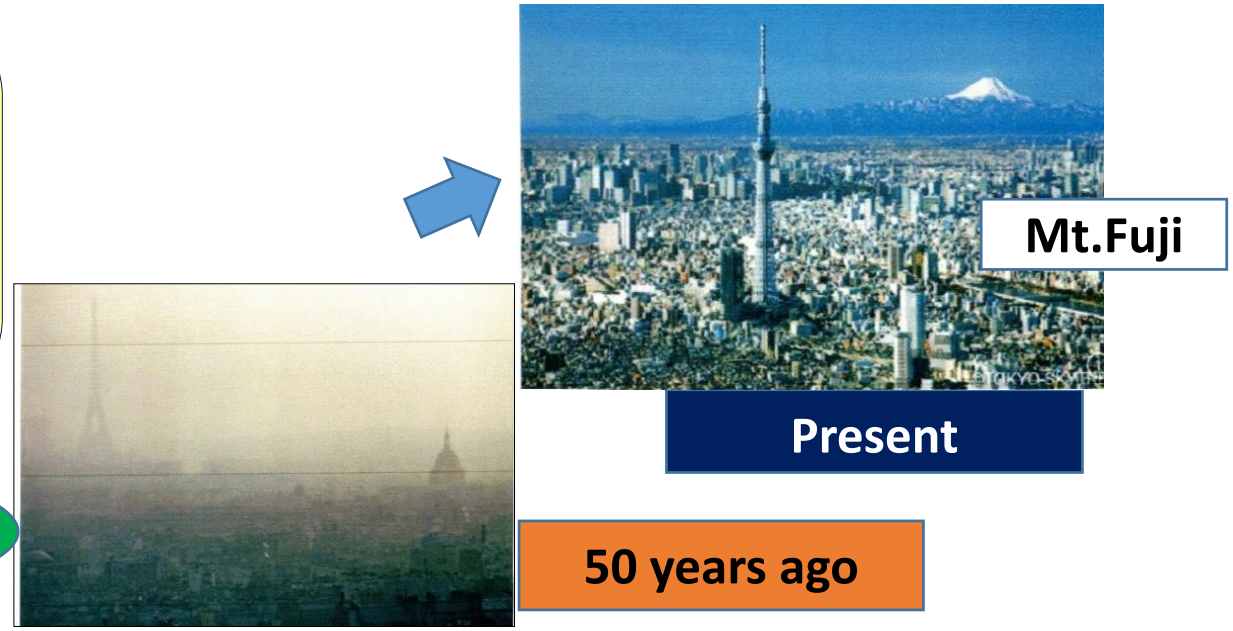
12:00 – 13:00 Session 5: STI cap
building for achieving the SDGs

15:00 – 16:00 Session 6: Emerg
Evolving STI developments with
for SDGs

16:00 – 17:30 Session 7: Supporting the implementation of the Technology Facilitation Mechanism

Here are examples by Japan' efforts in the past decades for SDGs. We can <u>transform our society by combination of technological innovation & social innovation</u>.

SDGs Goals : #2,3,6,7,8,9,11,12,14,15
social cohesion, stability & peace

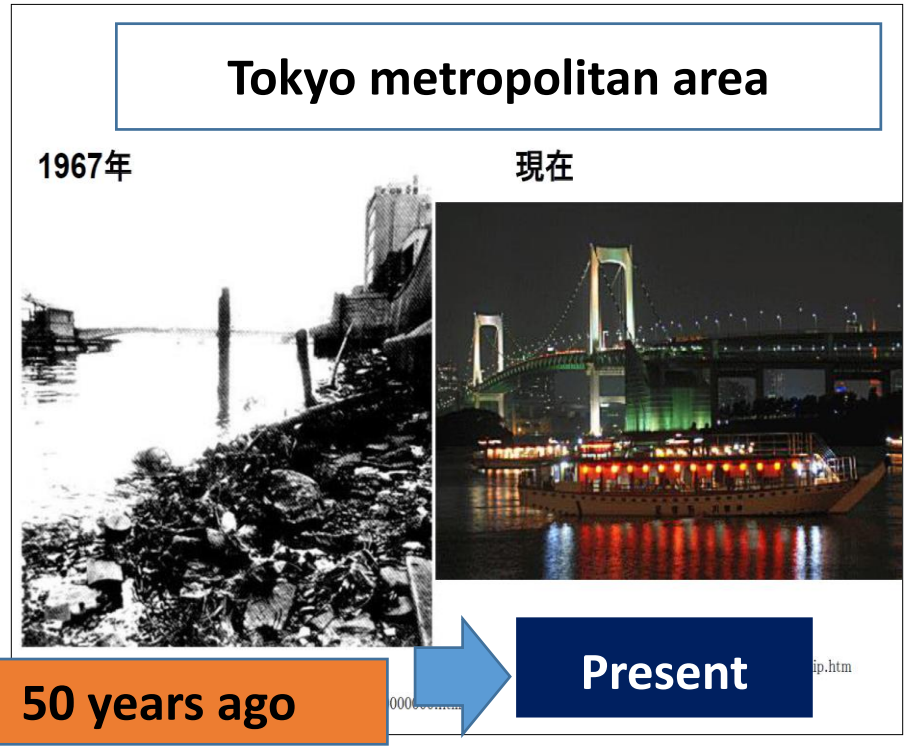


Industrial area in Kyushu

50 years ago

Present

Tokyo metropolitan area



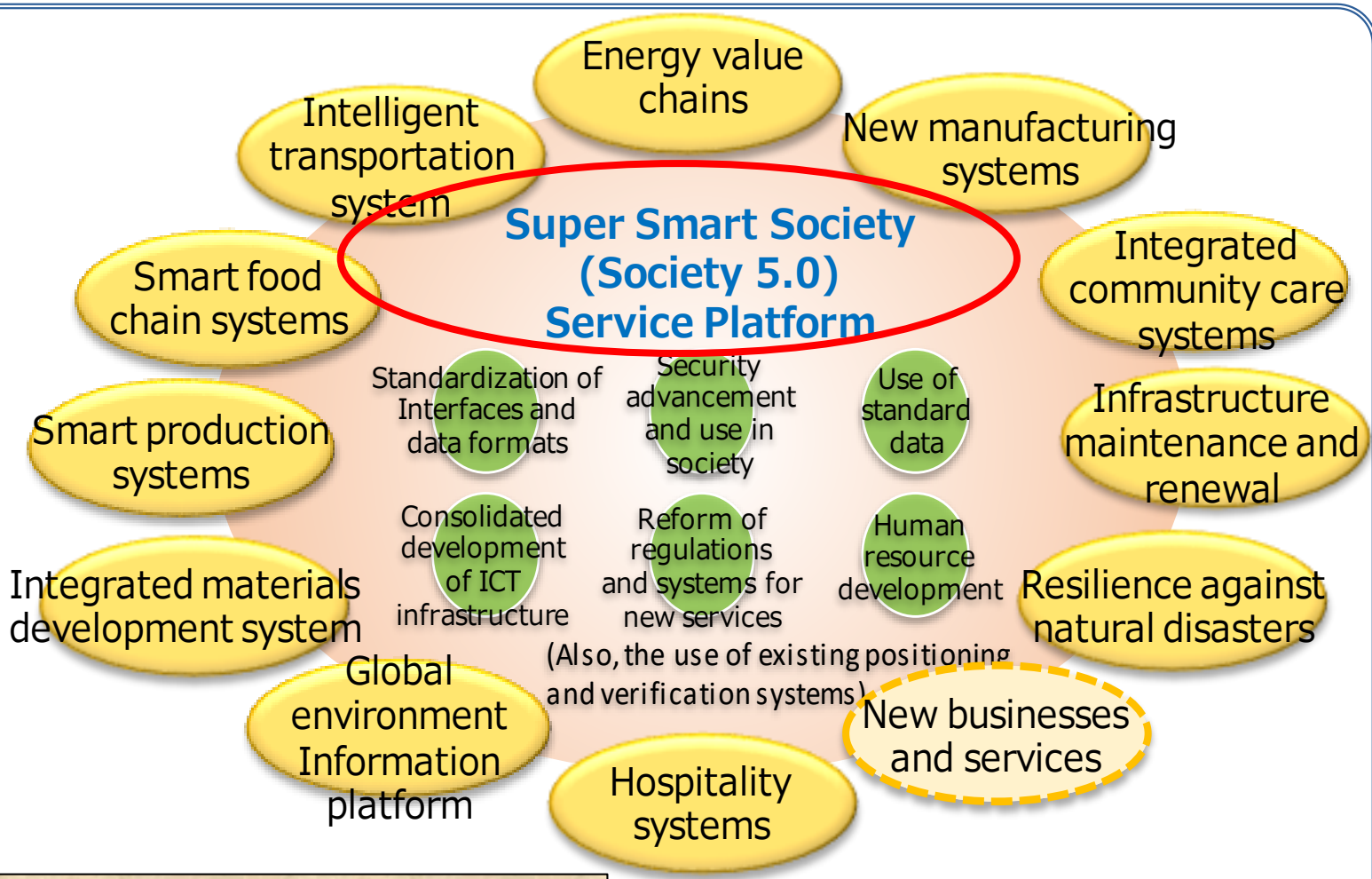
50 years ago

Present

Bridging national STI policy and UN SDGs

Japan' s new STI policy : "Society 5.0"*

○**Society 5.0 : A society where the various needs of society are finely differentiated and met by providing the necessary products and services in the required amounts to the people who need them when they need them, and in which all the people can receive high-quality services and live a comfortable, vigorous life that makes allowances for their various differences such as age, gender, society, nation.**

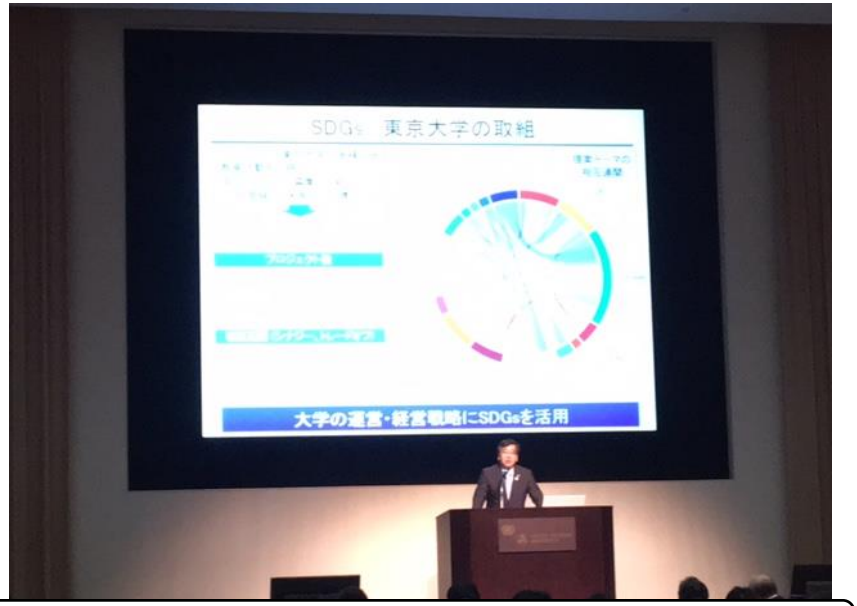


○ **Integration of cyber-physical systems will transform socio-economic structure: business & gov services, production, healthcare, energy, food, traffic, infrastructure, disaster, finance.**

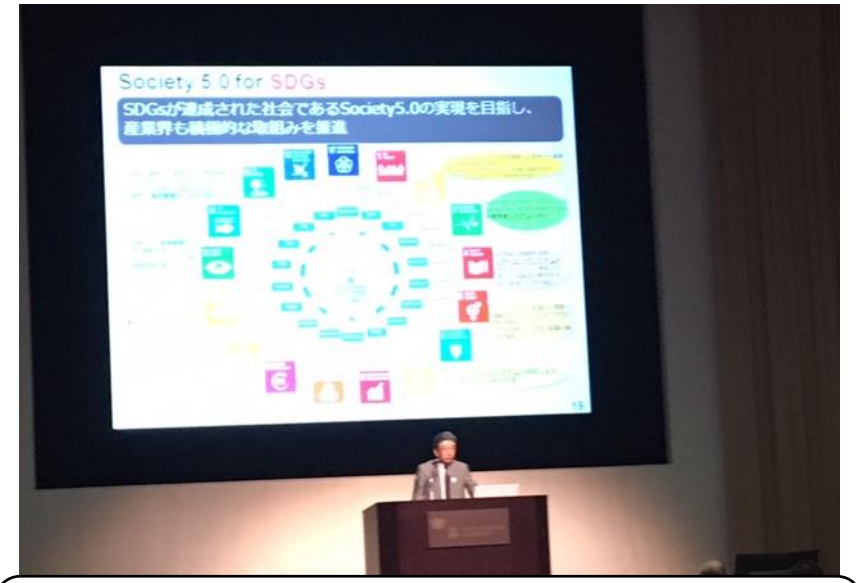
*①**hunter–gatherer society, ②agricultural society, ③industrial society, and ④information society**.

STI for SDGs : From plan to action;
Combining top-down and bottom-up

STI for SDGs Symposium – Academia,Industry,NGO and Gov on September 5 2017, at the United Nations Univ in Tokyo



President of the University of Tokyo



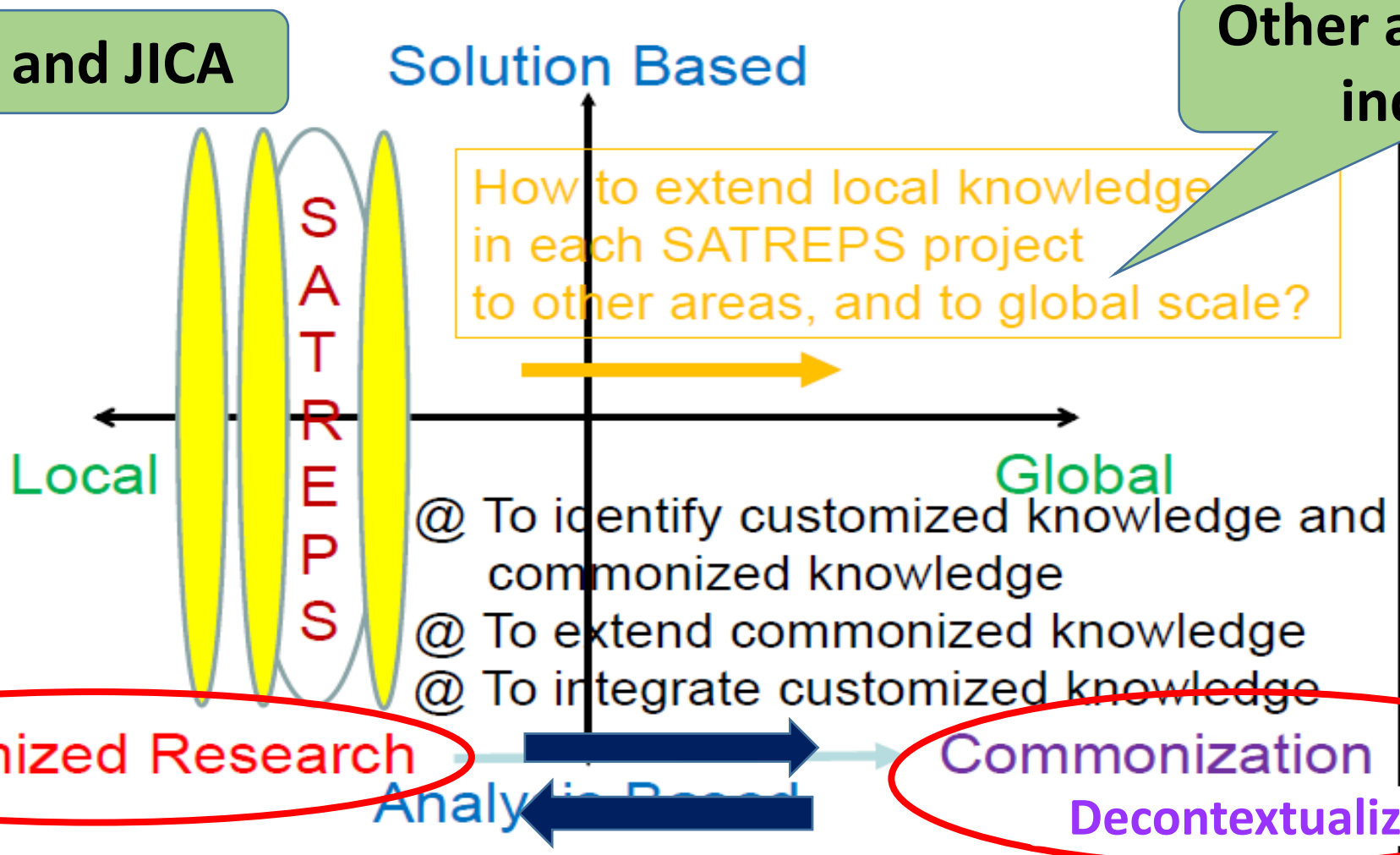
VC of Japan Business Federation & Chairman of Mitsubishi Electric

<u>Japan Business Federation's Strategy;</u>
<u>Bridging Dometice Policy(Society 5.0) and SDGs</u>

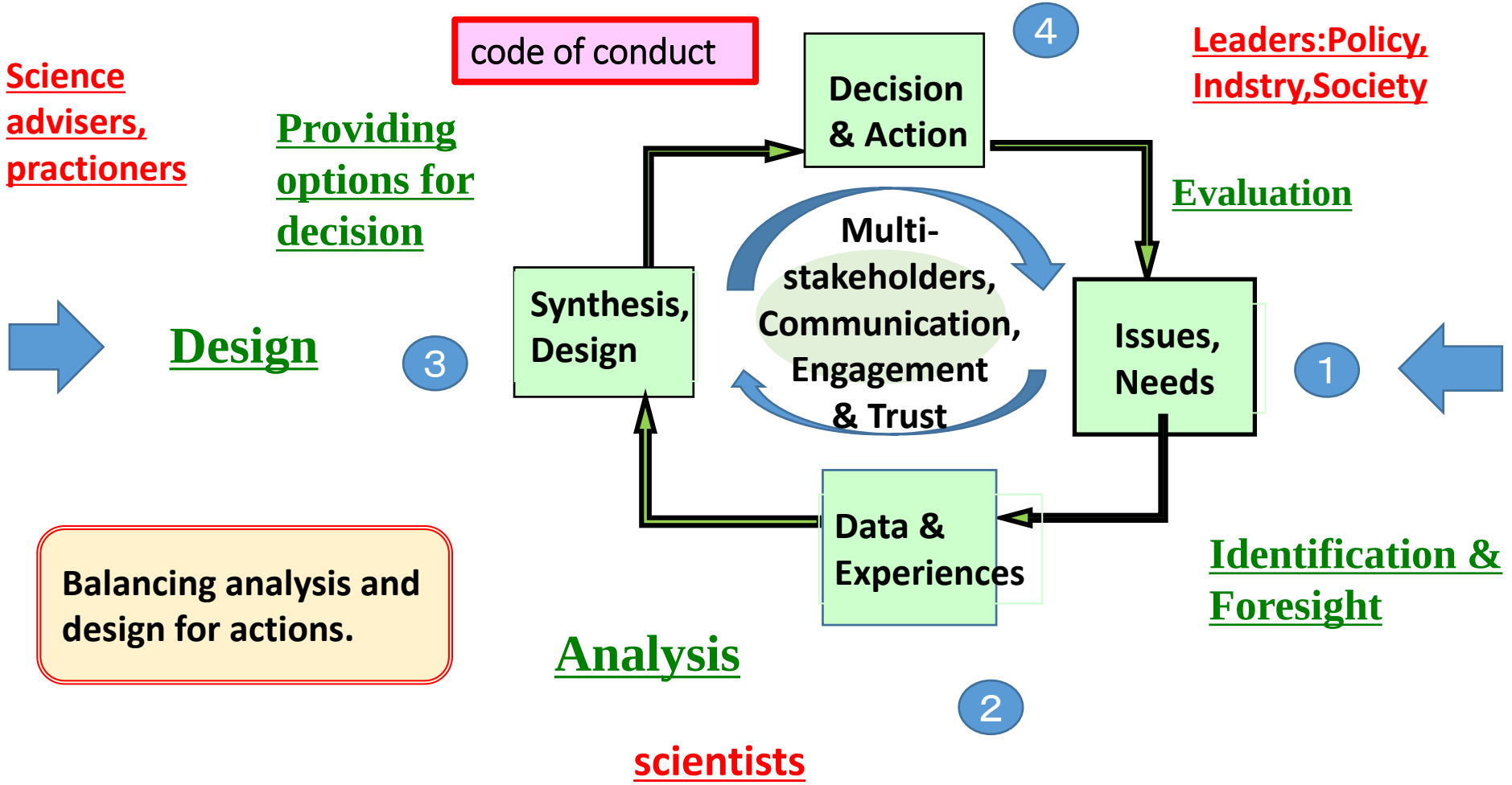
Extension of SATREPS Local Knowledge to Global

JST and JICA

Other agencies and industries



Dynamic Cycle of Use of Knowledge for Sustainable Development ;
Issues → Data & Experiences → Analysis → Design → Action → Evaluation →・・・



Ref. Prof. H.Yoshikawa

Thank you very much
for your attention

Questions:
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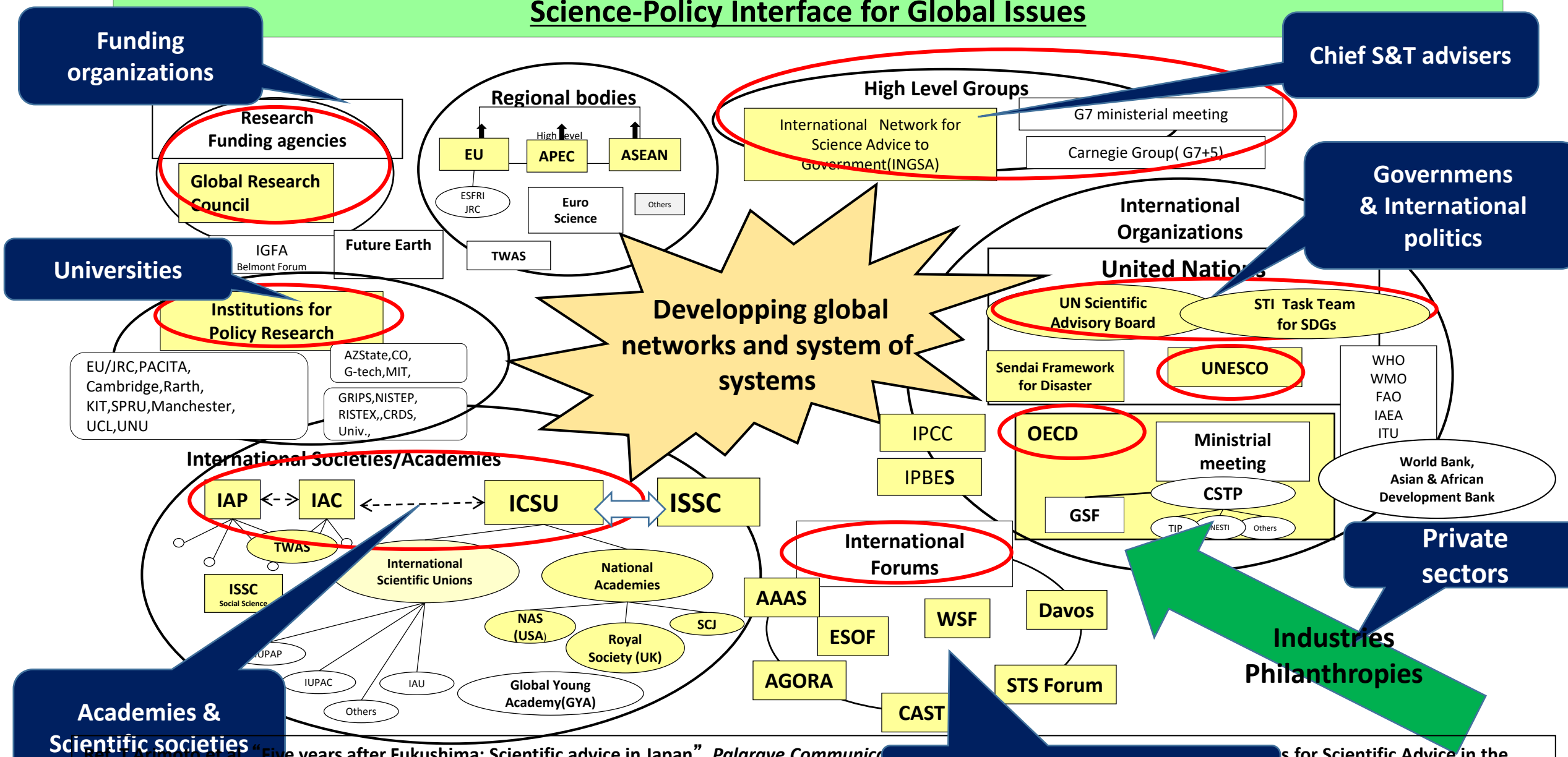
The International Landscape of Science-Policy Interface for Global Issues



Ref. T.Arimoto et al. "Five years after Fukushima: Scientific advice in Japan", *Palgrave Communica* s for Scientific Advice in the International Context," *Science & Diplomacy*, September 2014

Japan Business Federation's Strategy; Bridging Dometice Policy(Society 5.0) and SDGs

The new grand model with a view of "solving social issues" as well as "creating a better future".

Using remote sensing and oceanographic data for monitoring and management of water quality, forests, land degradation, biodiversity, etc.

Resolving climate change issues with the simulation based on the analysis of meteorological and other observation data by using High Performance Computing

Creating smart cities where convenience, safety and economic efficiency are made compatible

Building global innovation ecosystems by connecting industries, academic institutions and other related stakeholders

Building resilient infrastructure and promoting sustainable industrialization by using i-Construct

Boosting food production by smart agriculture utilizing IoT, AI and Big Data Improving nutritional status with smart food by cutting-edge biotechnology

Developing early warning alert system for the prevention of infectious diseases by combining different types of monitoring data

Making high quality education affordable for everyone on the earth with e-learning systems utilizing state-of-the-art technologies

Empowering women with access to education and information through the Internet. Providing women with opportunities for startups by utilizing ICT

Making electric power supply and demand in a sustainable way by constructing smart grid system

Corporate social responsibility(CSR) ⇒ Corporate shared values(CSV)