2014;
Japan' 50th Anniversary
as a Member of OECD

Bridging Science, Society & Politics for Sustainable Innovation

- Better Policies for Better Lives -

November 19, 2014

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Past, Present and Future

Environmental Pollutions Overcome by Technological Innovation & Social Innovation

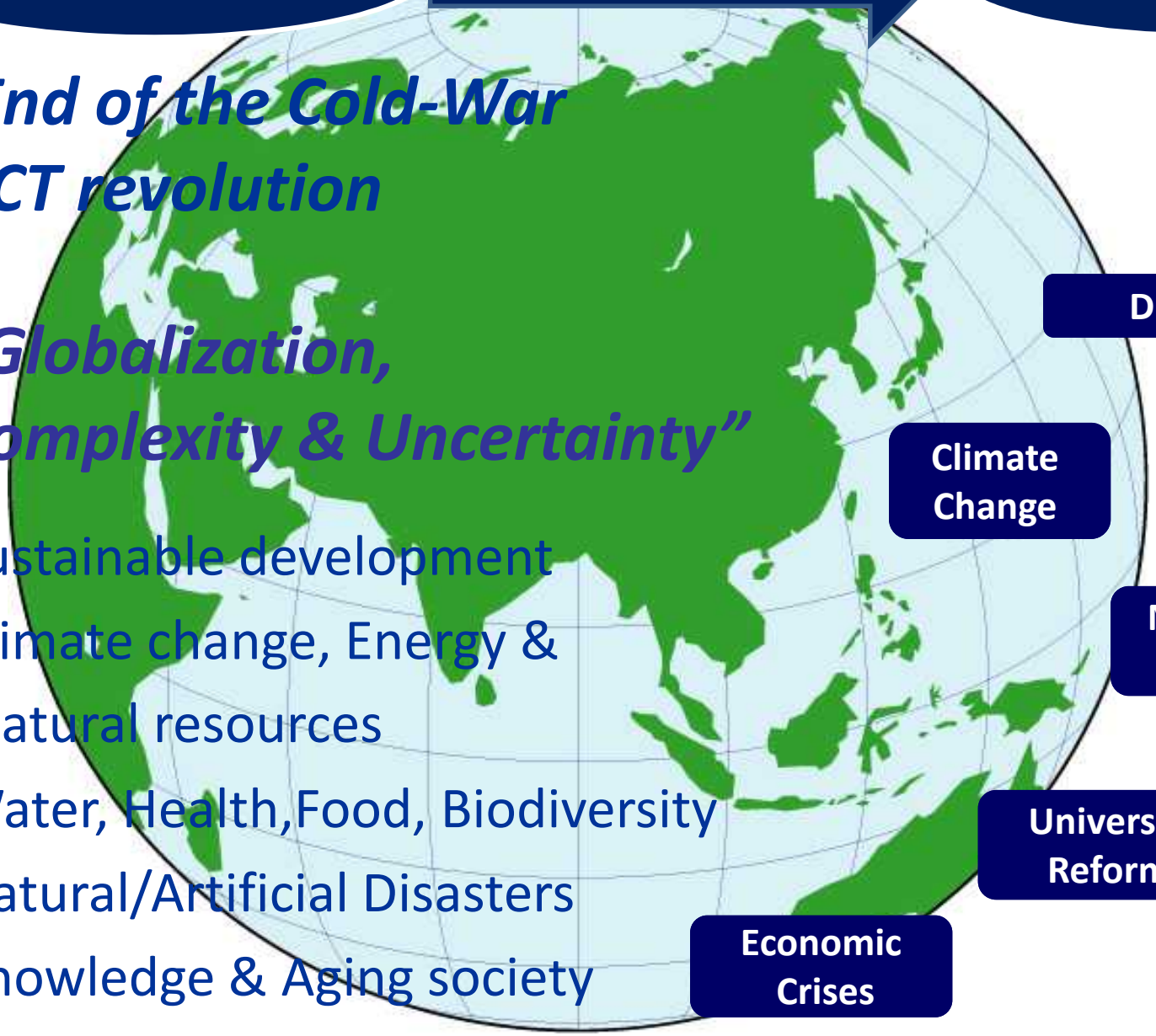
Photos provided by Prof. Komiyama

Since 1989 → Great Transformation → Now 2014

End of the Cold-War
ICT revolution

"Globalization,
Complexity & Uncertainty"

- Sustainable development
- Climate change, Energy & Natural resources
- Water, Health,Food, Biodiversity
- Natural/Artificial Disasters
- Knowledge & Aging society



Disasters

Climate Change

New World Order

University Reform

Economic Crises

Since 1989

Great Tr

4

The Rules of games are rapidly changing !!
Politics, Economy, Life style, Company,
University, Media, Science etc.

Shaping the new values, new models
Innovation, Inclusive, Sustainable, People

Converging natural, social science and humanities
Technological and Social Innovation

Redesigning science system
Trust, Integrity, Reproducibility, Engagement

Bridging science, society and politics
local – national – regional – global

- N
- W
- Natural/A
- Kno

Economic Crises

University Reform

New World Order

“The Age of Transformation”

Reconceptualising science and Science System

WSC 1999 : Budapest Declaration- Science for the 21st century–
”Science for Knowledge“ and
“Science in Society and Science for Society”

OECD 2010 : “The OECD Innovation Strategy”

WSF 2011 : ”The Changing Landscape of Science
- Challenges & Opportunities ”

WSF 2013 : "Science for Global Sustainable Development ”

AAAS 2012 : “Flattening the World -
Building a Global Knowledge Society”

AAAS 2014 : “Meeting Global Challenges-Discovery and Innovation”

Davos 2012 : "The Great Transformation-Shaping New Models"

Davos 2013 : “Resilient Dynamism”

Davos 2014 : “The Reshaping of the world-Consequences for Society, Politics and Business”

EU-Japan Policy Forum 2014 : “Science 2.0 – Science in Transition”

Rethinking S&T system

Global Research Council : 2012-

IAC 2012 : "Responsible Conduct in the Global Research Enterprise"

ICSU : "Future Earth" 2013-

EU, Vilnius Declaration 2013 : The Value and Benefits of Integrating Social Science and Humanities into Horizons 2020"

World Social Science Report 2013 : "Changing Global Environments"

Science, Nov 2011: "Rethinking the Science System"

Nature, Oct 2012 : "The Changing Map of Science – Science on the move, Global Research"

Building Science Advice System

OECD GSF 2013- : "Scientific Advice for Policy Making -The Role and Responsibility of Scinetists"

United Nations Science Adv Board , 2013 ～

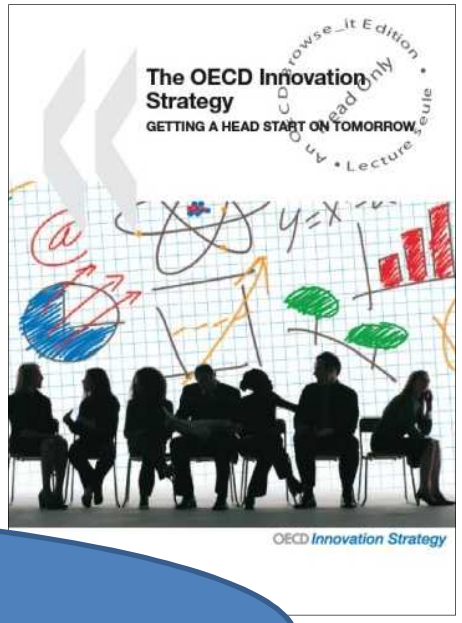
Global meeting of Chief Science Advisers, 2014 ～

The OECD Innovation Strategy *: Getting A Head Start On Tomorrow (May 2010)*

・・・・ In the post-crisis world, and with a still fragile recovery, **we are facing significant economic, environmental and social challenges**. While **no single policy instrument holds all the answers, innovation is the key ingredient** of any effort to improve people's quality of life. It is also **essential for addressing some of society's most pressing issues**, such as climate change, health and poverty.

・・・・Innovation today is a pervasive phenomenon and **involves a wide range of actors** than ever before.

・・・・**policies to promote it should be adapted to today's environment and equip a wide variety of actors to undertake innovative actions and benefit from its results**.



New Version 2015 New Concept: Inclusive, Sustainability, People・・・, Since "Science, Growth and Society"(Brooks Report,1971)

・・・ The last few years have seen a burst of interest in steering research and innovation to address social challenges. This interest reflects **the rise of social innovation**, the use of innovation to address social problems. Many of today's social challenges, such as those associated with ageing populations and environmental sustainability, as well as longstanding problems such as poverty, education and migration, **have resisted conventional government or market solutions**. ……

・・・this will require changes to the way policy makers promote innovation, for example **by involving stakeholders so as to link social demands with research agendas**.

・・・**Given the multidisciplinary nature of many social problems, research to address them must bring together the natural and social sciences.**

・・・ **Effective mechanisms for international co-operation** in science, Technology and innovation will also need to be put in place in order to **make innovation an engine for development and growth.**

5th EU-Japan Science Policy Forum: Oct 4, 2014 in Kyoto

"Science 2.0: Science in Transition"

'Science 2.0' describes the on-going evolution in the modus operandi of doing research and organising science. These changes in the dynamics of science and research are enabled by digital technologies and driven by the globalisation of the scientific community, as well as the need to address the Grand Challenges of our times. They have an impact on the entire research cycle, from the inception of research to its publication, as well as on the way in which this cycle is organised (European Commission 2014).

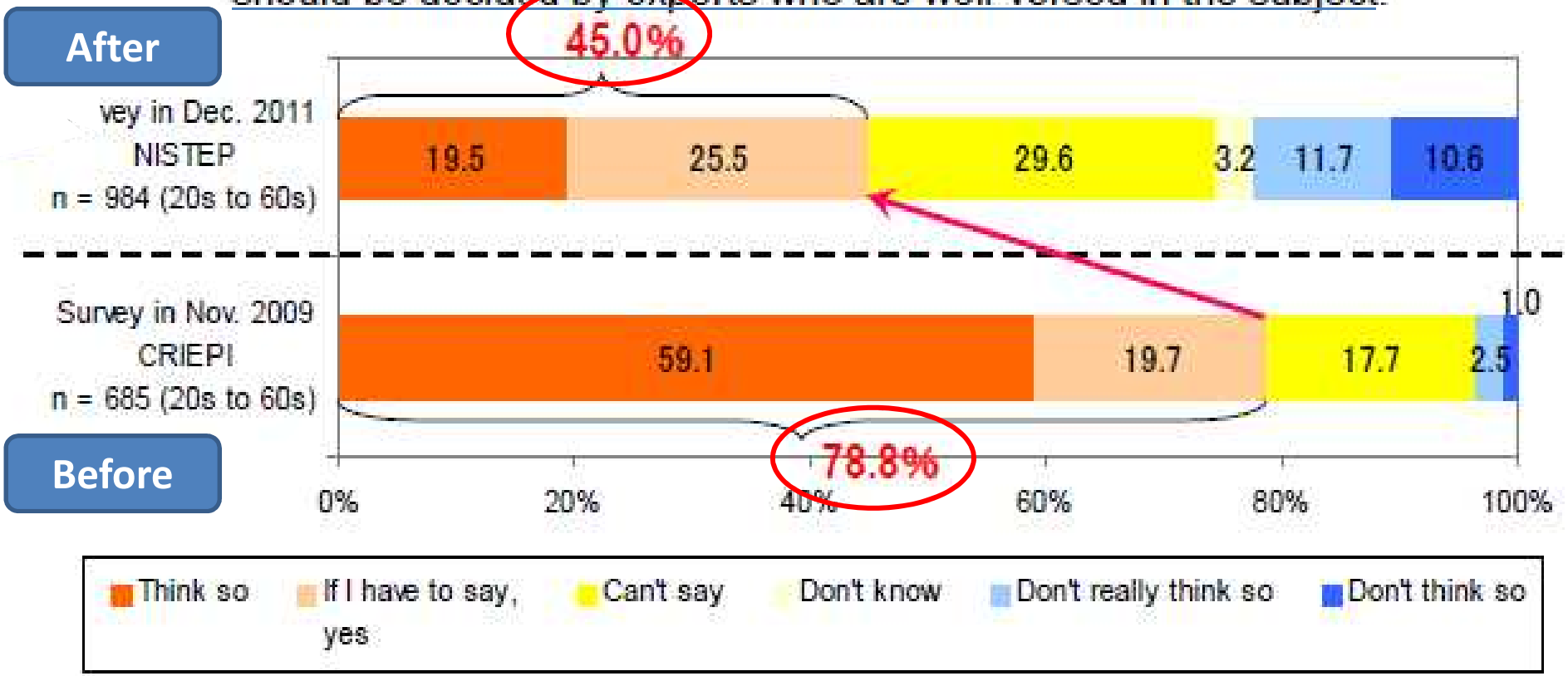
The historical centrality of the printed page in communication has receded with the arrival of digital technologies. Large scale data collection and analysis creates challenges for the traditional autonomy of individual researchers. The internet provides a conduit for networks of professional and amateur scientists to collaborate and communicate in new ways and may pave the way for a second open science revolution, as great as that triggered by the creation of the first scientific journals (Royal Society 2012).

March.11 2011
Earthquake,
Tsunami,
Fukushima

Should experts decide the direction of S&T ?

Question: What do you think of the following opinion regarding science and technology?

The direction of research and development in science and technology should be decided by experts who are well-versed in the subject.



Even Japan's political leaders struggle to get answers regarding the Fukushima disaster. It is just the latest example of the government's lack of independent scientific advice.

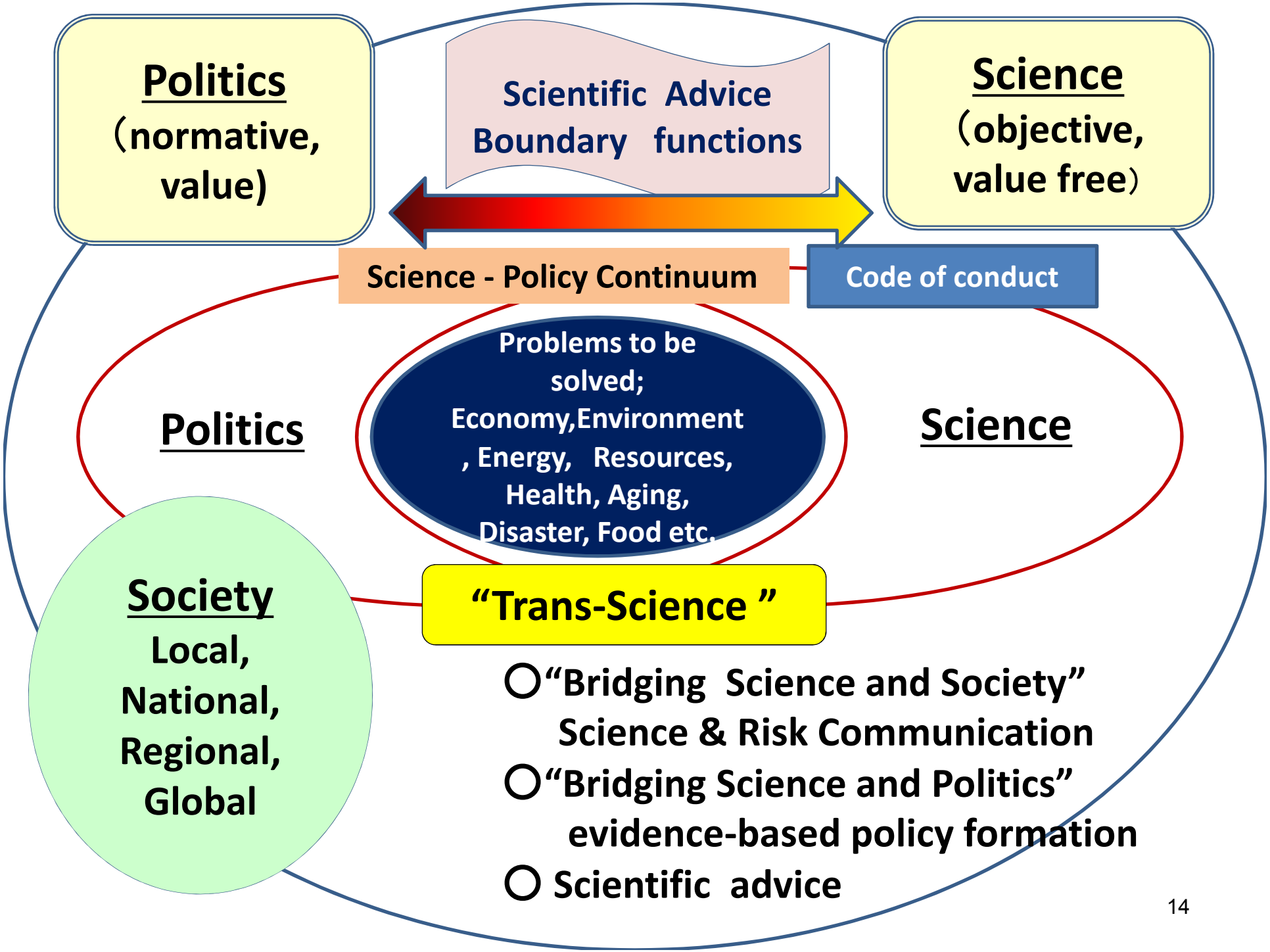
"Politicians fumble for answers, while spokespeople tell confused stories."

15 DECEMBER 2011 | VOL 480 | NATURE | 291

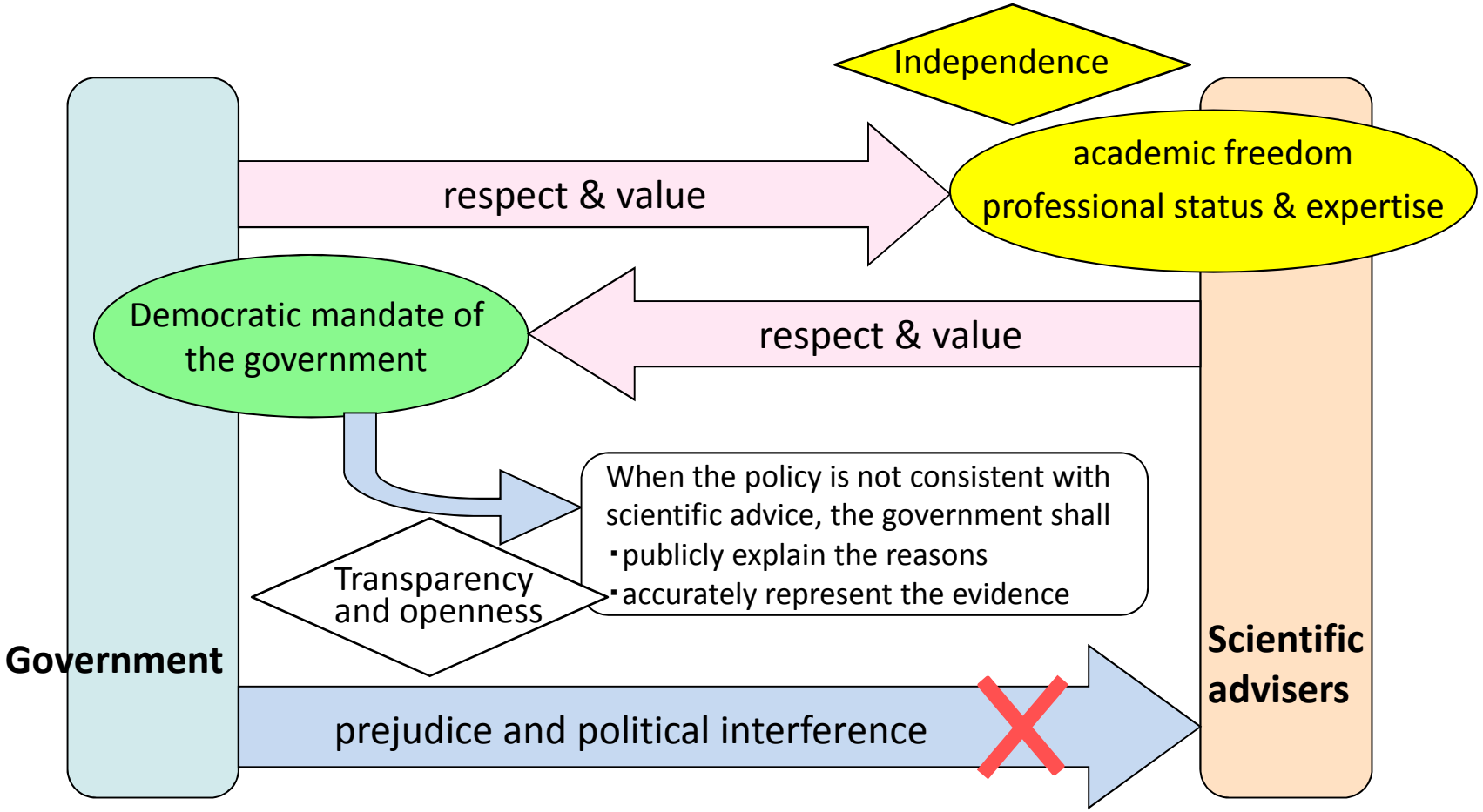
Joint Symposium
By
British Embassy Tokyo and GRIPS, 30 May 2011

"Science Advice in a Crisis : Fukushima and its Aftermath"

Prof. Sir John Beddington


Politics
(normative, value)
Scientific Advice
Boundary functions
Science
(objective, value free)
Science - Policy Continuum
Code of conduct
Problems to be solved;
Economy,Environment
, Energy, Resources,
Health, Aging,
Disaster, Food etc.
Politics
Science
Society
Local,
National,
Regional,
Global
“Trans-Science ”
○“Bridging Science and Society”
Science & Risk Communication
○“Bridging Science and Politics”
evidence-based policy formation
○ Scientific advice

UK Department of Business, Innovation, and Skills, "Principles of Scientific Advice to Government"（March 24, 2010）.



“ Scientific advisers should respect the democratic mandate of the Government to take decisions based on a wide range of factors and recognize that science is only part of the evidence that Government must consider in developing policy.”

"Code of Conduct for Scientists"
Science Council of Japan, revised January 25, 2013

I Responsibilities of Scientists
II Research Integrity
III Science in Society

(Dialogue with Society)

11. Scientists shall participate actively in dialogue and exchange with citizens, for better mutual understanding between society and the scientific community. As well, in order to resolve various issues and realize welfare in society, they shall also work to provide scientific advice effective for policy making to persons involved in the planning and determination of policies. On such occasions, scientists shall aim to give advice based on consensus among scientists, and, when differences of opinion exist, shall offer explanations that are easy to understand.

(Scientific Advice)

12. Scientists shall conduct research activities with the objective of contributing to public welfare, and offer fair advice based on objective and scientific evidence. At that time, they shall be aware of the gravity of the impact and of their responsibility that their statements may make on public opinion building and policy making, and shall not abuse their authority. As well, scientists shall make maximum efforts to ensure quality in their scientific advice, and at the same time clearly explain the uncertainty associated with scientific knowledge as well as the diversity of opinions.

(Scientific Advice to Policy Planners and Decision Makers)

13. When scientists offer scientific advice to persons who plan or decide on policy, they shall recognize that while scientific knowledge is something to be duly respected in the process of creating policy, it is not the only basis on which policy decisions are made. In the event that a policy decision is made that diverges from the advice of the scientific community, scientists shall request, as necessary, accountability to society from the policy planner and/or decision maker.

POLICY FORUM

SCIENCE AND SOCIETY

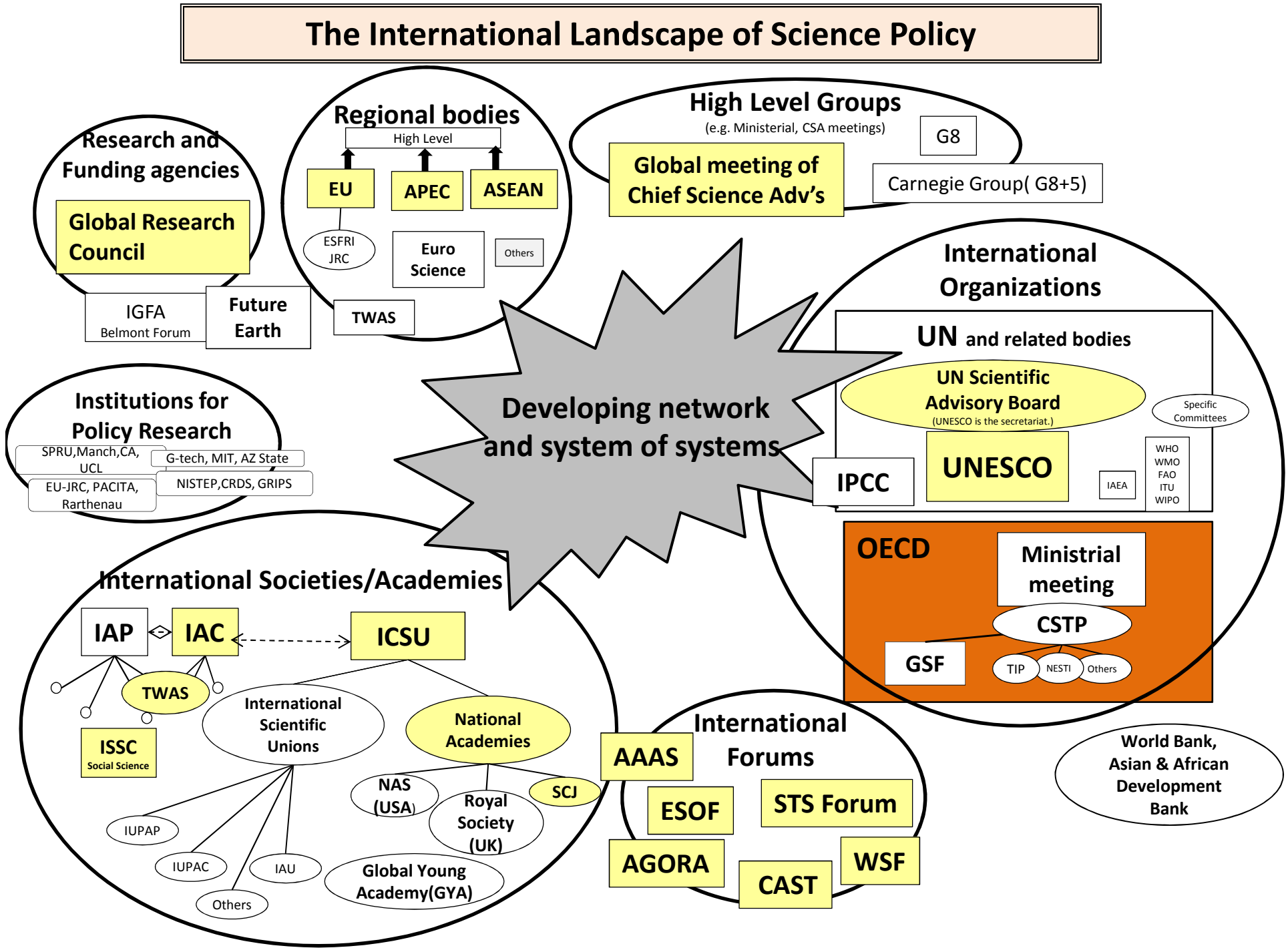
Rebuilding Public Trust in Science for Policy-Making

Tateo Arimoto, Yasushi Sato

Until recently, there was little recognition within Japan's science policy circle of the need to discuss the role of science in government policy-making. A rather innocent notion that the established knowledge and wisdom of scientists would ensure proper decision-making was prevalent.

The great earthquake, tsunami, and nuclear accident that occurred in March 2011 induced a radical alteration of such a simple, optimistic view on science in policy-making. In the nation's bitter struggle for recovery, scientists sometimes created confusion by supplying divergent recommendations on evacuation, food safety, and cleanup. Public confidence in the impartiality of scientists faltered when people suspected that some of them were too easily endorsing government views. Scientific societies did not have access to critical information and failed to be systematically involved in the national effort. Polls have shown that public trust in science in Japan was damaged

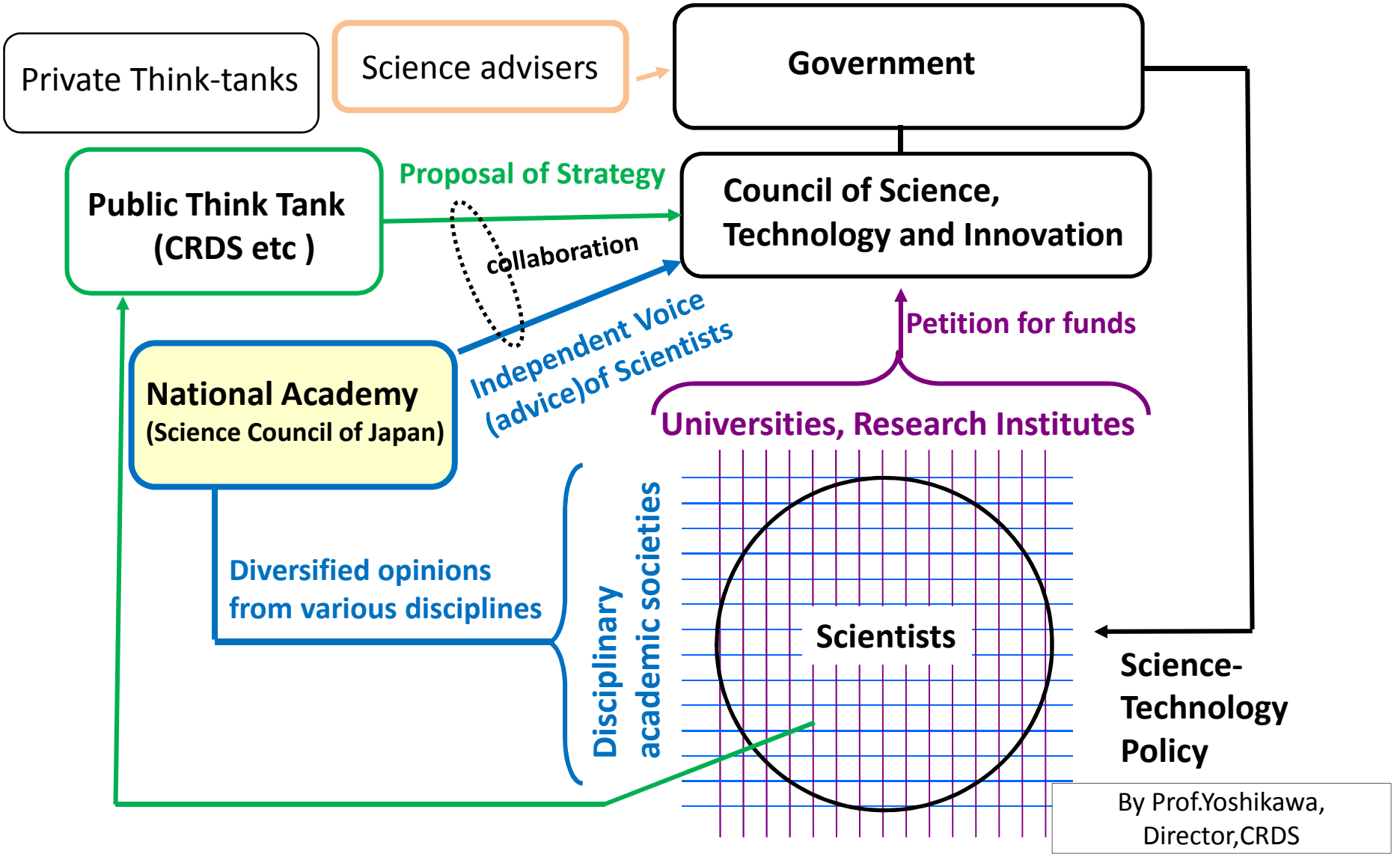
Science , Sept 7, 2012


The International Landscape of Science Policy
Regional bodies
High Level
EU
APEC
ASEAN
ESFRI
JRC
Euro Science
Others
TWAS
High Level Groups
(e.g. Ministerial, CSA meetings)
G8
Global meeting of Chief Science Adv's
Carnegie Group(G8+5)
Research and Funding agencies
Global Research Council
IGFA
Belmont Forum
Future Earth
International Organizations
UN and related bodies
UN Scientific Advisory Board
(UNESCO is the secretariat.)
Specific Committees
UNESCO
IPCC
IAEA
WHO
WMO
FAO
ITU
WIPO
Developing network and system of systems
Institutions for Policy Research
SPRU,Manch,CA, UCL
G-tech, MIT, AZ State
EU-JRC, PACITA, Rarthenau
NISTEP,CRDS, GRIPS
OECD
Ministrial meeting
CSTP
GSF
TIP
NESTI
Others
International Societies/Academies
IAP
IAC
ICSU
TWAS
ISSC
Social Science
International Scientific Unions
National Academies
NAS (USA)
Royal Society (UK)
SCJ
IUPAP
IUPAC
IAU
Others
Global Young Academy(GYA)
International Forums
AAAS
ESOF
STS Forum
AGORA
CAST
WSF
World Bank, Asian & African Development Bank

The Auckland Meeting

- The first global conference of scientific advicers (http://www.globalscienceadvice.org/)
- August 28/29, 2014, Auckland, NZ
- Participants: 200 practitioners, policymakers, and experts from 40 countries
- Five sessions
  - Panel 1: The process and systems of science advice
  - Panel 2: Science advice in situations of crisis
  - Panel 3: Science advice in the context of opposing political/ideological positions
  - Panel 4: Developing an approach to international science advice
  - Panel 5: The modalities of science advice: operationalizing in context

Strategy and Decision-making for S-T Policy
—Advices from National Academy and Public Think Tank —



By Prof.Yoshikawa,
Director,CRDS

Thank you very much for your attention!!

Questions:
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