Japan's Science and Technology (S&T) Diplomacy

Prof. Teruo KISHI
Science and Technology Advisor to the Foreign Minister
Ministry of Foreign Affairs of Japan

Japanese STI Overseas Outreach Caravan:
October 19, 2016, Paris, France

Appointment of the S&T Advisor to the Foreign Minister, 24 September, 2015

Roles of the S&T Advisor to the Foreign Minister

- Support the activities of the Foreign Minister from a S&T perspective
- Provide advice to the Foreign Minister and relevant departments on the utilization of S&T in various foreign policy-makings
- Reinforce networking among S&T advisors, scientists/academics

http://www.mofa.go.jp/mofaj/press/release/press4_002474.html

S&T Diplomacy Advisory Network

Collect S&T-related expertise to the S&T Advisor to the Foreign Minister and utilize it for planning/implementing the S&T Diplomacy

Advisory Board for the Promotion of S&T Diplomacy

***Members' affiliations as of October 2016**

[chair]	**Teruo Kishi**	**S&T Advisor to the Foreign Minister**	IR	**Takashi Shiraishi**	President, GRIPS
S&T policy	**Hiroyuki Yoshikawa**	Special Counselor to the President, JST		**Akihiko Tanaka**	Professor, Univ. of Tokyo
	Tateo Arimoto	Professor GRIPS, Principal Fellow, CRDS JST		**Yuichi Hosoya**	Professor, Keio University
	Atsushi Sunami	Vice President, GRIPS		**Masafumi Kaneko**	Direc./ Senior Research Fellow PHP Ins. Inc.
Life science	**Makoto Asashima**	Professor Emeritus, The University of Tokyo	Agri.	**Masaru Iwanaga**	President, JIRCAS
Medical	**Ryozo Nagai**	President, Jichi Medical University	Env.	**Yoshifumi Yasuoka**	Professor Emeritus, Univ. of Tokyo
Biology	**Mariko Hasegawa**	Exec. Direc, The Gradu. Univ. for Adv. Studies	PPP	**Michiharu Nakamura**	Counselor to the President, JST
Biotech.	**Haruko Takeyama**	Professor, Waseda Univ.		**Mitsuhiko Yamashita**	Exec. Vice President, Mitsubishi Motor Corp.
Informatics	**Masaru Kitsuregawa**	Director General, NII, Professor, Univ. of Tokyo		**Yoshio Masumi**	President, Osaka Univ. Venture Capital Co., Ltd.

Study Groups

Japan-US Coop. | Marine/Arctic | Health | Int. Coop.

G7 Ise-Shima Summit

In the discussions in the Study Groups convened under the Science and Technology Advisor, the importance of **"Evidence-based policy-making"** supported by scientific data was emphasized. The outcome documents of the G7 Ise-Shima Summit contained "Medical Data" and "Marine Observation".

TICAD VI

Presented "recommendations" to the Minister for Foreign Affairs

Enhance S&T standards

From Brain drain to Brain circulation

Int. exchanges of scientists etc.

Incorporate R&D outcomes into society (**social implementation**)

New strategy, production and industrial means for human welfare by the power of S&T

SDGs

https://sustainabledevelopment.un.org/sdgs

International Networking with S&T Advisors in partner countries

MOFA/MEXT,"Third Japan-United States Open Forum" Oct. 2015,Tokyo [Theme] Medical / data area

Symposium on Science and Technology Diplomacy
May 2016, Tokyo, Japan

TICAD VI JICA Symposium
August 2016, Nairobi, Kenya

ASEAN-STI Forum
September 2016, Bangkok, Thailand

SIP 戦略的イノベーション創造プログラム
Cross-ministerial Strategic Innovation Promotion Program

The Japanese S&T Policy toward Innovation
～ The 1st S & T Overseas Outreach Caravan ～

June 28th, 2016 (Tue) 17 : 30～18 : 00 p.m.
German-Japanese Symposium
Berlin, Germany

Japanese Science, Technology and Innovation Policy Director, Cabinet Office, Government of Japan
Jun IWAMATSU

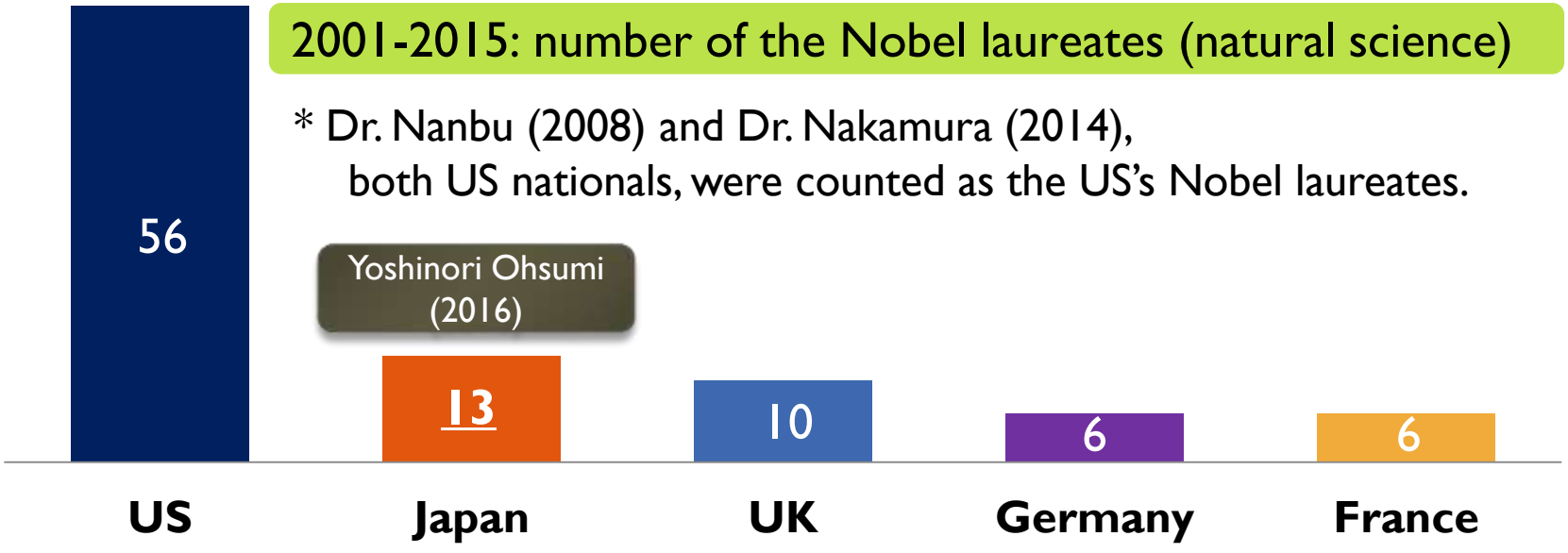
SIP Project "Structural Materials for Innovation (SM⁴I)"
S&T Advisor to the Minister for Foreign Affairs
Teruo KISHI

About SIP (Cross-ministerial Strategic Innovation Promotion Program):
A new type of Japanese national project for science, technology and innovation, spearheaded by the Council for Science, Technology and Innovation (CSTI) as it exercises its headquarters function to accomplish its role in leading science, technology and innovation beyond the framework of government ministries and traditional disciplines by facilitating coordination among government, industry, and academic entities. The SIP identified 11 themes that will address the most important social problems facing Japan, as well as contribute to the resurgence of the Japanese economy.

Program	Program Director	
Innovative Combustion Technology	Masanori SUGIYAMA	Toyota Motor Corporation
Next-Generation Power Electronics	Tatsuo OOMORI	Mitsubishi Electric Corporation
Structural Materials for Innovation (SM⁴I)	Teruo KISHI	The University of Tokyo
Energy Carriers	Shigeru MURAKI	Tokyo Gas Co., Ltd.
Next-Generation Technology for Ocean Resources Exploration	Tetsuro URABE	The University of Tokyo
Automated Driving System	Seigo KUZUMAKI	Toyota Motor Corporation
Infrastructure Maintenance, Renovation and Management	Yozo FUJINO	Yokohama National University
Enhancement of Societal Resiliency again Natural Disasters	Masayoshi NAKASHIMA	Kyoto University
Technologies for Creating Next-Generation Agriculture, Forestry and Fisheries	Takeshi NISHIO	Hosei University
Innovative Design/Manufacturing Technologies	Naoya SASAKI	Hitachi, Ltd.
Creating the Safest, Most Secure Social Infrastructure in the World	Atsuhiro GOTO	Institute of Information Security

Cabinet Office Ministry of Foreign Affairs

Japan ranked 2nd in number of the Nobel laureates (natural science) during 2001-2015



	1901-1990	1991-2000	2001-2015	Total
US	156	39	56	251
Japan	5	1	13	19
UK	65	3	10	78
Germany	58	5	6	69
France	22	3	6	31

http://www8.cao.go.jp/cstp/kihonkeikaku/5siryo/siryo4_2.pdf
http://www.mext.go.jp/b_menu/hakusho/html/hpaa201601/detail/1374199.htm

Issues Identified

1）Systematization

2）Drop in World University Ranking, Number of Publication and Citation

3）Imbalance on Research Funding (Applied Science toward Innovation vs. Basic Science)

4）Open Innovation through Industry-Academia-Government Cooperation

5）International Cooperation

- Revitalize Universities
- Secure PhD Holders (in quality and quantity)
- Mind-change of Industry
- Strengthen Industry-Academia-Government Cooperation
- Center-Based Research
- Introduce/Implement Open Science, Open Innovation, Inclusive Innovation

France-Japan Collaboration

◆ CNRS-JST

- ✓ Information Communication Technology including Computer Science (15 projects)
- ✓ Life Science (12 projects)

◆ ANR-JST

- ✓ Information Communication Technology including Computer Science (6 projects)
- ✓ Information Communication Technology (4 projects)
- ✓ Molecular Technology (12 ongoing projects)
- ✓ Nuclear Energy (to be started next year)

◆ Others

- ✓ Nanomaterials Workshop (11 times)

Potential Areas for Collaboration

- ✓ Agriculture
- ✓ Biotechnology
- ✓ Nano-Biodevices (MINATEC)
- ✓ Infectious Diseases (Pasteur Institute)
- ✓ Microbiome (Metagenopolis)
- ✓ Others.

Summary of the Future directions

Directions	Strategic plans
Contribute to solving global challenges	Support evidence-based policy-making in environmental and healthcare fields (promote international cooperation for gathering and analyzing data) Utilize S&T for SDGs
Deepen foreign relations between partner states and developing (and emerging) countries	Promote international research collaboration (SATREPS, e-ASIA, JASTIP etc.) Exchanges of Scientists