Summary of the 8th Funding Agency Presidents' Meeting (FAPM)

Date & Time: Monday, 2nd October, 2017 10:10-12:30
Venue: Room E, Kyoto International Conference Center
Co-Chairs: Dr. Michinari Hamaguchi, President, Japan Science and Technology Agency (JST)
Prof. Roland Fischer, Vice President, German Research Foundation (DFG)
No. of participants: 34 from 31 organizations from 25 countries and regions (see the list of full participants at the end of the document)

The 8th FAPM was again a successful event, where distinguished participants looked at the following two discussion topics,

1. **Merit review and evaluation of scientific impact** (in line with one of the Global Research Council (GRC)[1] 2018 themes)
2. **STI for SDGs, evaluation of societal impact**

In the beginning of the event, Dr. Hamaguchi (JST) and Prof. Fischer delivered opening remarks on behalf of the organizers. Appreciation to the STS forum was expressed for providing a rare opportunity for organizing an event with such a variety of high level participants.

The two discussion topics were then presented.

Dr. Schneider (DFG) explained the background of choosing merit review as the first topic. This topic was chosen for the inaugural assembly of the Global Research Council (GRC) in 2012 since merit or peer review is one of the major instruments for research funding organizations world-wide. He said that the topic might well be re-addressed, in view of the considerable change of the scientific world during the last 6 years where "Impact" has become more and more a decisive keyword, and respect for and acceptance of purely science- and excellence-driven decisions has alarmingly eroded in a couple of governments worldwide.

Mr. Ohtake (JST) outlined the Sustainable Development Goals (SDGs), focusing on the contribution and expected roles from STI to the achievements of the Goals. He emphasized the importance of a

[1] http://www.globalresearchcouncil.org/

nexus approach to the SDGs and thinking with a larger boundary conditions (Planetary Boundaries). Successful match-making between the existing problems and existing solutions would be able to demonstrate the power of science and technology, while disruptive STI would change the paradigm and transform the ways to reach the Goals. He called for concerted efforts among funding agencies worldwide, sharing best practices and collaborating with each other.

Participants then discussed the above-mentioned topics in 6 groups, each consisting of 4-6 representatives from different types of organizations with different roles, followed by oral summary by pre-assigned table chairs.

1. Merit review and evaluation of scientific impact

Table 1

- Society nowadays demands clear results with high impact. Funding for societal issues are becoming more common rather than purely academic research. In this context, consideration of the societal and scientific background to the research would be necessary. Readiness review may also be needed in addition to scientific review.
- Two perspectives, impact against the investment and excellency are important. Societal impacts cannot be evaluated by an ordinary merit review.
- Different review methods tailored to the purpose will be needed, e.g. for clinical medicine or education.
- In developing countries, reviewers from outside are needed.

Table 2

- Globally, there is a capacity problem. One solution might be to ask for a new way of proposal writing: proposals should not only be comprehensible for absolute specialist. This would enlarge the circle of potential reviewers for a given proposal. Specialized agencies with staff doing the review are not suitable to replace peer review.
- In cases where funding agencies have societal impact criteria, the evaluation could be uncoupled from the scientific merit. An example from Ireland is regarded as very suitable – first peer review on scientific quality, followed by a panel of experts from the private sector to look at applicability of expected research results and business plans.
- Inclusion of the public in proposal selection is not yet an issue. However, in medical studies patients' representatives are often included in selection panels.

Table 3

- How impact and quality is measured in journals is influenced by the journals selected by funders for reference, which in the case of the EU disadvantage for social sciences and humanities.

- We need to keep in mind strains on the merit system of increasing demand, increasing amount of requested pressure on funding and can work against younger researchers trying to establish themselves and also make it harder to respond to new disruptive opportunities
- The shift to impact requires - in addition to current excellence / merit review new people able to measure the impact. The rise of challenge-based funding reinforces the need for a strong focus on assessment of impact
- The rise of challenge-based approaches is also helpful for capacity building, as they can build new collaborations and research communities
- Rising demand has made support for disruption/innovation harder. Given limited funds merit process becomes conservative.
- Small communities can motivate international collaboration approaches among funders. Such communities need to be created to provide space for diversity (women) and targeting disadvantaged communities (new research universities).

Table 4

- Some organisations are using a bottom-up approach and others welcome applications with fixed priorities discussed with the Ministry in charge of Researchin their country, and some also work with industrial partners.
- All participants stressed its essential role of the peer review in the selection of applications. Still, in particular in relation with projects involving industrial partners, economic impact is also used. The need to have access and to use international evaluators was stressed.
- The question of opening up the possibility of appealing evaluators decisions was briefly discussed with different attitudes depending on the setting.

Table 5

- In the 3 research processes, blue sky research can be easily put onto peer review to evaluate scientific merit. The other two, challenge-driven research and industry-oriented require change in peer review.
- The necessary balance between scientific excellence and societal/industrial value is not normally in scientific review.
- Stronger needs for reviewers require international reservoir of candidates.

Table 6

- Qualities sought in experts are integrity, wisdom, expertise.
- There are three evaluation criteria: question (quality of the proposal), quality of the team (track record), environment (scientific advisor, host institution, etc.). Among these everybody agreed that the track record is the most important.
- Concerning capacity building, the following problem faced by Qatar was mentioned. Qatar is

a rich country that invests substantial assets in R&D and has many new institutions open to international researchers. It has however a high turnover of foreign scientists: the average time spent in the country is 2.7 years. On the other hand, a different example of a small country which has been much more successful in attracting foreign researchers at a more permanent basis is Singapore.

- Everybody agreed that using international reviewers at funding agencies is absolutely crucial.


2. STI for SDGs, evaluation of societal impact

Table 1

- We need to encourage the researchers to consider a link with a society including each item of the SDGs.
- It is difficult to tackle all the 17 Goals together. Focusing on some would be necessary according to local needs to address regional issues.
- All the 17 Goals are all related to research, not only natural science but social science and humanities. SDGs must be tackled by all stakeholders.
- FAs should provide certain guidance on sustainability and encourage researchers, or actual players, to trigger actions for SDGs.
- Human resource development is important. These developed HRs have to circulate, i.e., they have to return to their home countries for HRs' sustainability.

Table 2

- SDGs are not research goals but research could, in many cases, help to tackle SDGs.
- There already exists plenty of excellent research results on the thematic SDG areas. Rather than inventing new programs for “SDG research” exists, funders should concentrate on distribution of such results, on translational measures, and should encourage governments to start application and respective jurisdiction by governments.
- However, in some areas concerned there is still a need for fundamental research. Funding agencies could concentrate on programs for basic research on SDGs.
- It is not clear how to deal with potential IP issues. Standardized IP policies may well be needed.

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Table 3

- To increase awareness, SDGs need to be included in calls for proposals, so that applications address how they advance SDGs.
- FAs can align SDG goals and objectives with SDG outcomes. However, we need to be modest, as research in itself won't achieve SDGs. FAs need to inform policy and action
- SDGs actually align very well with existing Societal Challenges and National Objectives, especially in developing countries. Every research programme supports an SDG if you take a longer term view.
- FAs need to ensure science for merit review, but users and stakeholders and otherwise impacted people to speak to impact
- Researchers and business do see SDGs as opportunities - already happening
- SDGs by their nature encourage multidisciplinarity and interactions between researchers and users. SDGs are also a great North-South collaboration opportunity (Mediterranean basin involves EU, Africa, Middle East), and to create new collaboration funding programmes.

Table 4

- SDGs have been considered by a number of governments and included in their Science and Technology strategies. This led some agencies to set up specific programmes to deal with them, typically collaborative at an international level since the SDGs are global (e.g. the Newton Fund set up by the UK).
- So far few agencies have established channels of communication to disseminate research done on the SDGs. The document produced by JST was welcomed in this respect. More effort should be dedicated to that as the scientific community does not feel too comfortable with the SDGs because of the difficulty to connect them with specific research works.

Table 5

- Not all the FAs are explicitly linking their activities to the SDGs.
- Researchers should be encouraged to tell how their research is aligned with SDGs (e.g. VINNOVA breaking down SDGs into different pillars and researchers are expected to represent which they are aligned with).
- How to incorporate SDGs into FA mechanism depends on national priority. One option would be to provide separate funding for researchers to challenge issues based on the SDGs.

Table 6

- Although most problems related to SDGs stem rather from bad politics than science, the latter is an important tool to tackle them.

- Interdisciplinary research is very important in this area. In particular involvement of social sciences is crucial.
- UK and France are very active abroad, esp. in countries they have historical links with. In France among such institutions one can mention Institut de recherche pour le développement (IRD), which plays a role of both a performing and funding organization, and the Institut Pasteur. The principal UK institutions active on this front are the Global Challenges Research Fund and the Newton Fund.
- We agreed that the main goal when working on these issues in the developing countries should be capacity building, in other words they should be provided rather with a rod than a fish.
- When evaluating societal impact the same principles as with the scientific evaluation should be applied but the pool of experts should be broader.
- The role of young scientists is crucial. Their social conscience should be supported and gives hope of getting closer to achieving the SDGs in the future.

In the concluding remarks, Dr. Hamaguchi commented on the topics for the next FAPM. Until 2017, the topics of FAPM was announced earliest a couple of months prior to the meeting, with the detailed discussion points a month to a few weeks before the meeting. To further facilitate active participation by participants and for more concrete discussion, a candidate topic for next year, namely Open Science, was proposed. The proposal was based on suggestions from some of the related organizations and also brief discussion with the co-host, DFG. The elements related to Open Science have already talked about at FAPM, but as a timely and large topic that require consideration from various angles, it would make sense to take it as a stand-alone topic and discuss in detail. It was agreed that the secretariat would start the preparation for the next meeting accordingly and participants were encouraged to suggest discussion points to be highlighted.

Programme:

10:10-10:20	Opening Remarks	Greetings from Chairs
10:20-10:30	Introduction of Meeting Format & Discussion Points	Topic 1: Dr. Jörg SCHNEIDER, Head of International Cooperation, DFG Topic 2: Mr. Satoru OHTAKE, Principal Fellow, JST
10:30-11:00	Workshop Style Discussions	Half of the tables: Discussion on Topic 1 Another half: Discussion on Topic 2
11:00-11:30	Workshop Style Discussions	Half of the tables: Discussion on Topic 2 Another half: Discussion on Topic 1
11:30-11:40	Break	
11:40-12:10	Summary Report from each Rapporteur	3-minute oral summary from each table
12:10-12:20	Plenary discussion	Additional remarks from the floor based on the summary of group discussions
12:20-12:30	Concluding remarks	From Chairs

The following questions were proposed by the secretariat to guide the discussion:

1. **Merit review and evaluation of scientific impact** (in line with one of the Global Research Council (GRC) 2018 themes)

- Merit or Peer Review addresses – according to the Statement of Principles – scientific quality. Reviewers are chosen accordingly. Are they the right persons to look at additional impact funders may want to be respected (gender balance, societal impact, open access aspects…..)?
- Merit Review and Capacity Building in up-coming systems – do they go well together?
- Is Merit Review a process selecting “more of the same” rather than real innovation or risky research projects?
- Merit Review processes are a heavy burden for especially smaller scientific communities. Are there alternative methods ensuring quality-oriented selection of projects?
- How can “peer review” be effectively be combined with the up-coming demands for “open science” and citizen sciences”?

2. STI for SDGs, evaluation of societal impact

- ✧ What can FAs do to inform scientists of SDGs and coax them into thinking about their role, while scientists in general seem to be unaware of SDGs, their importance and possible contribution they can make?
- ✧ How FAs can contribute to achieving SDGs? How can we potentially mobilize global resources of research and innovation?
- ✧ Do you have any specific programmes within your organization dedicated/related to achieving SDGs? Would you be able to share your methodologies?
- ✧ How can we evaluate research activities/results related to SDGs and societal impact, which may neither succeed easily nor take the form of conventional impact?
- ✧ How can we change the mindset of stakeholders and build capacities necessary to tacked the challenges, to make them as opportunities?
- ✧ How can we foster collaboration in the era of Open Science and Open Innovation? What are the stumbling blocks you see in that process and how can we work together to move forward?

List of Participants, grouping, and rapporteurs (highlighted in colour):

Group	Name	Title	Organization	Country
1	Prof. Heikki Mannila	President	Academy of Finland	Finland
	Prof. Hanoch Gutfreund	Executive Committee Chairperson	Israel Science Foundation	Israel
	Dr. Michinari Hamaguchi	President	Japan Science and Technology Agency (JST)	Japan
	Prof. Teck Seng Low	Chief Executive Officer	National Research Foundation (NRF)	Singapore
	Prof. Wim van den Doel	Vice President	Netherlands Organization for Scientific Research (NWO)	The Netherlands
	Dr. Pham Dinh Nguyen	Deputy Director of Executive Office	National Foundation for Science and Technology Development (NAFOSTED)	Vietnam
2	Prof. Dr. Carlos Américo Pacheco	CEO	State of São Paulo Research Foundation (FAPESP)	Brazil
	Prof. James C. Liao	President	Academia Sinica	Chinese Taipei
	Prof. Warwick Anderson	Secretary General	International Human Frontier Science Program Organization (HFSPO)	France
	Prof. Dr. Roland Fischer	Vice President	German Research Foundation (DFG)	Germany
	Prof.Dr. Marc Schiltz	Secretary General	National Research Fund (FNR), Luxembourg	Luxembourg
	Professor Dr. Suthipun Jitpimolmard	President	Thailand Research Fund (TRF)	Thailand
3	Mr. Iain Stewart	President	National Research Council (NRC) Canada	Canada
	Prof. Hazem Mansour	Director	Science and Technology Development Fund (STDF)	Egypt
	Dr. Nakita Vodjdani	Representative of European and International Affairs	French National Research Agency (ANR)	France
	Dr. Premila Mohan	Scientist-G, Secretary	Science and Engineering Research Board	India
	Dr. Yoshimasa Goto	Executive Director	Japan Science and Technology Agency (JST)	Japan
	Prof. Ojārs Spārītis	President	Latvian Academy of Sciences	Latvia
4	Prof. Dr. Jean-Pierre Bourguignon	President	European Research Council (ERC)	Belgium
	Mr. Satoru Ohtake	Principal Fellow	Japan Science and Technology Agency (JST)	Japan
	Prof. Janusz Janeczek	Chairman of the Council	National Science Centre (NCN)	Poland
	Dr. Wannee Chinsirikul	Executive Director	National Nanotechnology Center (NANOTEC), NSTDA	Thailand

	Prof. Dr. Ahmet Arif Ergin	President	Scientific and Technological Research Council of Turkey (TÜBITAK)	Turkey
	Prof. Melanie Welham	Chief Executive	Biotechnology and Biological Sciences Research Council (BBSRC)	U.K.
5	Dr. Wolfgang Burtscher	Deputy Director-General	European Commission Directorate-General for Research and Innovation	Belgium
	Mr. David Cleave	Executive Director	International Science and Technology Center (ISTC)	Kazakhstan
	Prof. Sirimali Fernando	The Chairperson	National Science Foundation of Sri Lanka	Sri Lanka
	Dr. Andreas Göthenberg	Executive Director	The Swedish Foundation for International Cooperation in Research and Higher Education (STINT)	Sweden
	Mr. Lennart Stenberg	Senior Advisor	VINNOVA (Swedish Governmental Agency for Innovation Systems)	Sweden
	Prof. Dr. Sirirurg Songsivilai	Secretary General	National Research Council of Thailand (NRCT)	Thailand
6	Dr. Alain Fuchs	President	French National Centre for Scientific Research (CNRS)	France
	Prof. Zbigniew Błocki	Director	National Science Centre (NCN)	Poland
	Dr. Frans Van Den Boom	Executive Director	Qatar Foundation Research and Development	Qatar
	Sir Mark Walport	CEO Designate	UK Research and Innovation (UKRI)	U.K.