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Summary of the Second Funding Agency Presidents' Meeting, October 3, 2011

Co-Chairs:

Professor Dr.-Ing. Matthias Kleiner, President, German Research Foundation (DFG), DE
Professor Dr. Takayoshi Mamane, Executive Director, Japan Science and Technology Agency (JST), JP

Participants:

Dr. Eduardo M. Krieger, Vice-President, State of São Paulo Research Foundation (FAPESP), BR
Prof. Glaucius Oliva, President, National Council of Scientific and Technological Development (CNPq), BR
Dr. Suzanne Fortier, Natural Science and Engineering Research Council of Canada (NSERC), CA*
Mr. John McDougall, President, National Research Council (NRC) Canada, CA
Prof. Dr. Fakhry Sherif, Executive Director, Science and Technology Development Fund (STDF), EG
Prof. Rafael Rodrigo, President, Spanish National Research Council (CSIC), ES
Prof. Mustajoki Arto, Chairman of the Board, Academy of Finland, FI
Prof. Hanoch Gutfreund, Executive Committee Chairperson, Israel Science Foundation, IL
Dr. Makoto Kobayashi, Director, Research Center for Science Systems, Japan Society for the Promotion of Science (JSPS), Novel Laureate in Physics 2008, JP
Dr. Se-Jung Oh, President, National Research Foundation of Korea (NRF), KR
Dr. Alvin Culaba, President, National Research Council of the Philippines (NRCP), PH
Prof. Andrzej Jajszczyk, Director, National Science Centre (NCN), PL
Mr. Peter Eriksson, Chief Strategy Officer, VINNOVA (Swedish Governmental Agency for Innovation Systems), SE
Dr. Andreas Göthenberg, Executive Director, The Swedish Foundation for International Cooperation in Research and Higher Education (STINT), SE
The Honourable Mr. Chuan Poh Lim, Chairman, Agency for Science, Technology and Research (A*STAR), SG*
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The Second Funding Agency Presidents' Meeting was held on October 3, 2011 in Kyoto on the occasion of the Eighth Annual Meeting of the Science and Technology in Society (STS) *forum* to share and discuss common experiences and to enhance networking and cooperation among the funding agencies. 19 representatives of funding agencies from 17 countries participated in the meeting, which was co-chaired by Professor Dr.-Ing. Matthias Kleiner, President of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation), and Professor Dr. Takayoshi Mamine, Executive Director of the Japan Science and Technology Agency (JST), on behalf of Dr. Michiharu Nakamura, President of the JST. The two main discussion topics were “**Roles of Funding Agencies in Emergency Situations**” and “**Essentials of Research Funding**”.

The following issues were discussed in detail:

Discussion Topic I: Roles of Funding Agencies in Emergency Situations

- Which roles shall funding agencies have in emergency situations?
- Are funding agencies (well) prepared for emergency situations?
- How can funding agencies prepare for such situations in order to provide essential support to the scientific community?

The aftermaths of the Great East Japan Earthquake on March 11 have underlined the importance of international cooperation. Due to the Fukushima nuclear accident, certain fields of research will be focused on in many countries in the future. In May 2011, the German government decided to abandon nuclear energy completely by 2022. This decision is based on a broad consensus among the German population. The so called “German Ethics Commission for a Safe Energy Supply” with members from politics, science, the clergy etc. – co-chaired by Professor Klaus Töpfer and Professor Kleiner – laid the ground for this decision. The German example shows that scientific expertise can play an important role in political discussions.

In general, the participants acknowledged that funding agencies in most countries are not well prepared to react quickly and adequate in emergency situations and that there is an urgent need to establish new measures for immediate response as well as short-term and long-term measures for emergency situations. Multilateral cooperation could also be crucial as well as open access to relevant information and links to researchers who are in need of immediate support.

Moreover, the participants underlined that emergency situations are caused not only by natural disasters but also by man-made factors, e.g. economic crises. The participants pointed out that interdisciplinary approaches, such as combining natural sciences and social sciences perspectives, and flexible approaches especially for urgent funding programs are inevitable.

In the Tohoku area of Japan, the daily lives of people as well as R&D activities have severely been affected by the triple disaster. JST initiated various programs in order to tackle the situation. Because of the dimension of the disaster JST also recognised the importance of funding for international cooperation research.

J-RAPID Program

On April 18th, the J-RAPID Program was launched by JST for joint funding with foreign partners. JST adopted 33 projects out of 72 proposals for research collaboration related to Great East Japan Earthquake and associated disaster with National Science Foundation (NSF) U.S, French National Research Agency (ANR) France and so on. Since then, this program is renovated and established within as generalized JST's funding scheme in order to provide immediate support for international collaborative research whenever it will be necessary in the future (due to an emergency situation etc.).

Urgent Funding for Affected Areas

- **Research Seeds Quest Program (RESQ)**
The program was implemented by JST in order to support researchers mainly in the affected area to continue or restore their research activities. JST announced a call for proposals on April 22nd (open for about 40 days); 101 projects were adopted out of 316 proposals, including approaches to apply R&D outcomes for the benefit of the communities in the affected areas.
- **Funding of R&D with Social Application Outcomes**
RISTEX (Research Institute of Science and Technology for Society) of JST have launched the funding program for supporting application of existing R&D outcomes to the life and restoration in affected areas such as the project for development of wooden comfortable temporary housing, determination of the heavy metal pollution caused by the tsunami, and so on. Currently, six projects are funded.

Other Support from Funding Agencies

Major support from foreign partners was introduced with appreciation by JST, e.g.: EPSRC (Engineering and Physical Sciences Research Council of the UK) allows researchers affected by the disaster to access the UK national supercomputing facility, HECToR; DFG provides additional funding for current projects involving Japanese cooperation partners who are affected by the disaster to allow them to continue their joint research.

The discussion proved that essential lessons have been learnt from the disaster in Japan. The following aspects of international collaboration were elaborated:

Balance of Short-Term and Long-Term Support

An overview of past emergency responses by the participating representatives revealed that in most countries rapid response schemes are not yet implemented. Statements of the participants underlined the importance of maintaining a balance of short-term measures – which enable funding agencies to respond rapidly –, and long-term measures – which provide support through basic funding schemes. The participants agreed that multilateral and regional measures should coexist.

Significance of International Collaboration/Networking

Again – as already in the 1st Funding Agency Presidents' Meeting in October 2010 – the participants acknowledged that reliable and close international cooperation is desirable for solving global issues. This holds also true for emergency situations, even more in times when the frequency of natural disasters is increasing. The participants recognized that continuous networking and exchange of information are significant for rapid responses. For this purpose, the Funding Agencies Presidents'

Meeting at the STS *forum* is an important occasion. Linkages between long-term research centres of different countries are also crucial.

Collaboration through Open Access Databases

It was agreed that research databases with open access for qualified researchers are essential, although they are very expensive challenges in a long-term perspective. In emergency situations, scientific databases (or databases of researchers) could function as linking paths for communication. They could help to realize temporary relocation of affected researchers. Moreover, research databases enable to solve problems faster.

Importance of (Joint) Plans to Respond to Emergency Situations

An urgent need to intensify discussions about how funding agencies could react in emergency situations was identified by the participants. Flexible and immediate mechanisms to react are important and plans should be elaborated in advance on a national, regional and multilateral level; the scope of budget should be agreed on in advance.

Questions/ issues to be discussed further:

- Which multilateral cooperation schemes could and should be implemented to prepare for adequate support in emergency situations?
- What kind of new short-term and long-term measures could be established and which concrete procedures implemented?
- How can similar working groups (or networks of funding agencies) like the FA Presidents Meeting during the STS *forum* be established on a regional and multilateral level?
- How can validity or reliability of open access databases be achieved?

Discussion Topic II: Essentials of Research Funding

- What are the most important tasks for funding agencies to support multilateral projects?
- Which (new) rules should be established for peer review?
- What are the challenges to fund high-risk high-impact-research?
- Which issues have to be taken into account in regard to open access?

The first Funding Agency Presidents' Meeting in October 2010 was significant as a kick-off for funding agencies to exchange experiences and opinions on the discussion topics (summary of the meeting: http://www.dfg.de/download/pdf/dfg_im_profil/geschaeftsstelle/dfg_praesenz_ausland/japan/funding_agency_presidents_meeting.pdf or http://www.jst.go.jp/inter/symposium/fapm/fapm_2010.pdf):

1. Bottom-up Basic Research and Top-down Thematic Programs,
2. Funding for Global Issues,
3. International Collaboration.

All participants then agreed on the potential of joint funding to handle shared (global) challenges which require effort to create ideal conditions for science and research.

At this year's meeting, it was acknowledged that with respect to the catastrophe in Japan and its effects on the global research community, these 'global issues' and 'global challenges' need to be reconsidered. Moreover, there are needs for multilateral long-term programs with a perspective of substantial growth.

The following issues were discussed in detail in three groups:

Multilateral Cooperation / International Cooperation

There is a range of different multilateral projects. Examples are the European joint programming, which encourages multilateral collaboration, the Open Research Area in social sciences, which includes Germany, France, the Netherlands, and the UK or the Kyoto Initiative, which is run by the G8-HORCs. Flexibility, a certain degree of freedom and both bottom-up and top-down models are needed for multilateral cooperation. Top-down created topics require to transcend political boundaries and to be appropriate for a collaborative approach. As the budget for international cooperation is limited in Japan and varies widely among the funding agencies of different countries, the financial supply and scale are essential. Other important factors of multilateral cooperation are the increase of national and international mobility of students and researchers. In Spain, mobility grants are restricted to a period of two years.

Peer Review

When implementing peer review processes, funding agencies are challenged to find adequate external reviewers who are not in a conflict-of-interest situation, especially in countries which have just started to invest more in research. In some countries it is difficult to implement international peer review processes. The participants agreed that it is crucial to find other processes beside the dual peer review. Under the scheme of the G8 initiative a joint approval process is practiced.

High-Risk / High-Impact Research

Though it is extremely important to invest in high-risk/ high-impact research, funding agencies have a responsibility of being accountable for mitigating risk. It is a difficult challenge to meet both, the desire to see transformative changes coming from research and at the same time avoiding unnecessary risks of funding agencies investments. The participants agreed that in evaluation processes, there is high need for the right balance of looking at track records of researchers on the one hand and at the exciting features of their research plans on the other hand. It may be necessary to invest in people whose track record is not extensive yet, but who generate innovative ideas. NSF uses a model called FIRST, which is looking at proposals from a slightly different perspective, realizing that high-risk projects might have high-impact. The DFG meets the challenge of funding 'high-risk research' with the so called 'Reinhart Koselleck Project' as 'high-risk research' owns tremendous potential for innovation.

Open Access

The UK Data Archive, which is available to researchers by open access, provides data on social science grants. With regard to open access, timing of data entry and lodging was named as an important issue: Should data be lodged when it becomes reliable enough or at another stage in the process of research? The big costs of lodging data in archives, creating meta-data as well as data sets ask for allowing open access. Open access to journal articles is becoming a central topic in many countries.

Questions/ issues to be discussed further:

- How can the funding of bottom-up basic research and top-down thematic programs be harmonized?
- How could research collaborations addressing specific global R&D issues be supported more effectively?
- How should/ could multilateral funding be implemented on a larger scale?
- How can funding agencies collaborate to enhance the efficiency of their funding activities?
- How can funding agencies promote international cooperation among their projects?
- Which steps can/should be taken to get away from the dual peer review process? What kind of review processes should/ could be implemented alternatively?
- How could a balance of funding “high-risk” research projects and at the same time of mitigating risks of the funding investments been kept?
- How should/ could funding agencies support open access (of journal articles etc.)?

Outlook

The 3rd Funding Agency Presidents' Meeting will take place in the context of the next STS *forum* in October 2012. JST and DFG will prepare the meeting minutes, which could also be of use for other HORCs meetings like the G8 HORCs, the EUROHORCs, Asia HORCs etc.

The participants agreed that important questions of this year's discussion should be provided as a first set of questionnaire. The questions listed in this summary will be distributed to funding agencies worldwide in order to collect and prepare answers for the 3rd Funding Agency Presidents Meeting in 2012 at the STS *forum*. The aim is a data collection to share good practices for benchmarking funding agencies' activities.

Beyond the agenda

Professor Kleiner raised – as he did last year – the issue of financial contributions by funding agencies on a voluntary basis to the STS *forum*. A note on this behalf will follow accordingly.