

Summary of the International Symposium on Strategies for Regional and International Collaboration in Science and Technology

The Takeda Foundation has organized a study committee inviting intellectuals from the Japan Science and Technology Agency (JST), the Japan International Cooperation Agency (JICA), the National Institute for Policy Studies, the Shibaura Institute of Technology, the University of Tsukuba, the Response Ability.Inc., and the University of Tokyo to discuss strategies for international collaboration in science and technology. The Committee reached a conclusion, and last December, submitted to the Japanese Government a policy proposal for the creation of an Asian Research Area (ARA) as a regional collaborative mechanism to enable cross-border research collaboration and regional human development. Since the proposal has found some sympathy in the Japanese Government, the Foundation has decided it is time to reveal the concepts of the ARA to the world at large. On May 12, 2010 the International Symposium on Strategies for Regional and International Collaboration in Science and Technology was held at Soukairo Hall of GRIPS to promote the concepts of the ARA in cooperation with GRIPS, JST and JICA. The symposium was supported by the Ministeries of Education, Culture, Sports, and Science and Technology (MEXT), Economy, Industry and Trade (METI), Foreign Affairs (MOFA), and the Cabinet Office. The symposium had an attendance of 196 including 46 participants (23.5%) from the Japanese Government and relevant organizations, 35 (17.8%) from universities and public research institutes, 33 (11.7%) from private companies, 20 individuals (10.2%), and 16 (8%) from foreign embassies. Thus the ARA concepts have been presented to many Japanese and foreign science and technology policy groups and relevant people through the symposium.

Opening Remarks



The symposium began on time and the opening remarks were made by Dr. Hiroyuki Yoshikawa from JST and Mr. Kenzo Oshima from JICA. Dr. Yoshikawa, Director General of the Center for Research and Development Strategy, JST, has also been a member of the Council of the Takeda Foundation since its establishment and made opening remarks on behalf of the Takeda Foundation and JST. He stated that the purposes of scientific research have expanded beyond research for science to broader concepts including research for development and research for society as the 21st Century unfolds. He continued to state that, especially, research for the

sustainable development will be very important, and that a regional collaboration in Asia will be vital for the promotion of sustainable development.

Mr Oshima is the Senior Vice President of JICA. He stated that official development assistance in Asia has been changing from vertical assistance (from the developed northern countries to the developing southern countries) to a horizontal collaboration (from Asia to Asia), and explained a JICA-JST collaborative program, "Science and Technology Research Partnership for Sustainable Development," in which JICA will support project implementation in partner countries in cooperation with research institutes in Japan, and that JST will support the research institutes for project activities and expenses incurred in Japan.



Mr. Kenzo Oshima

Keynote Speech



The keynote speech, "Science and Technology Diplomacy" was given by Dr. Takashi Shiraishi, Executive Member of the Council for Science and Technology Policy (CSTP) of the Cabinet Office. He stated that just recently various layers of the science and technology community have begun to realize that it will be quite difficult to maintain competitiveness in science and technology, since Japan has been losing population. He stated that in

Dr. Takashi Shiraishi order to resolve this situation, Japan should open its closed society, and promote a regional collaboration in science and technology in Asia. He explained that CSTP has been discussing a regional collaborative framework similar to the ARA, and they call it the "East Asian Science and Technology and Innovation Area" placing stress on innovation, which is the driving force of the economic growth of a nation. According to Dr. Shiraishi, CSTP is trying to incorporate this framework into the 4th Science and Technology Basic Plan.

As for the ARA framework, the three basic institutions of the ARA were explained by three members of the Committee for Strategy for Collaboration in Science and Technology. First, Mr. Tateo Arimoto, Director General of the Research Institute of Science and Technology for Society (JST), also Chairman of the Committee, explained the Asian Research Fund, which will be established with multinational donations to support multinational collaborative research. Dr. Shinichi Kobayashi of the University of Tsukuba

explained the Asian Technology Assessment Center, which will assess the impact on society of technology developed in the ARA, and the “Smart Society” reflecting the common values of Asian societies. Finally, Mr. Takashi Watanabe of the Shibaura Institute of Technology explained the Asian Technology Incubation Center, which will provide technical assistance for the development and marketing of new technologies in Asia, and foster entrepreneurship in Asia.

Toward the Foundation of an Asian Research Area



Mr. Tateo Arimoto

Mr. Arimoto pointed out the following facts:

- 1) Asia has a huge population with a high average rate of literacy and strong work ethics.
- 2) Many Asian scientists and engineers leave Asia for better research environments and the ratio of scientists and engineers to the entire population is still low.
- 3) Asia suffers from many common problems including environmental and water problems, infectious diseases, and frequent natural disasters.

He stated that Asia can grow further and lead the world economy if it can solve its common problems, and proposed the following means to resolve them.

- 1) Asia should promote regional collaboration in science and technology.
- 2) The collaboration should go beyond simple multinational exchange programs.
- 3) Asia should build specific systems to realize a regional collaboration.

As these specific systems, he proposed the following.

- 1) Asia should build a platform, an Asian Research Area, for a regional collaborative framework, and establish a regional research fund with multinational donations that can make cross-border grants for multinational collaborative research as the infrastructure of the ARA .
- 2) Asia should build a society that places high value on the happiness of people and an environmentally- friendly life style so that the development of new technologies will not lead to greedy market fundamentalism. An Asian Technology Assessment Center should be established to support the development of environmentally friendly technologies that will make contributions to the happiness of people.
- 3) The promotion of science and technology in Asia should not be confined to research, but lead to the actual production of goods and services. An Asian Technology Incubation Center should be established to support the commercial development of new technologies.

Smart Society and Technology Assessment Center



Dr. Kobayashi from the University of Tsukuba presented the following ideas.

- 1) Asia should build a Smart Society reflecting the common values of Asian Societies.
- 2) A Smart Society is a society in which the environment, Earth, and future human beings are not sacrificed for the pursuit of economic prosperity, and would not expand economic

Dr. Shinichi Kobayashi disparity for the sake of economic growth.

- 3) In order to build a Smart Society, developing technologies should conform with four essential elements: sustainability, safety, security, and solutions.
- 4) Asia should conduct technology assessment to develop new technologies that conform with these four essential elements, and establish an Asian Technology Assessment Center (ATAC).

According to Dr. Kobayashi, we should consider appropriate solutions under specific local conditions rather than pursuing optimal solutions under the best conditions. We should also assess not only individual technologies, but also develop integrated and holistic technology assessment by expanding it to systems and services. This integrated and holistic technology assessment involves the dynamic evaluation of systems and services that include technology forecasting, risk analysis, and classical technology assessment. ATAC will be a core institution in the region, and target the development of region-wide risk management, and regulatory systems for infective diseases, natural disasters, environmental problems, and safety, and the development of new concepts, theories, and techniques to support the new technology assessment.

Development of Entrepreneurship and Technology Incubation Center



Mr. Watanabe of the Shibaura Institute of Technology pointed out that the economic growth in Asia is accompanied by an expansion in economic disparity and environmental destruction, and that Asia should create business models based on BOP (Bottom of Pyramid) to avoid such problems. He also pointed out that Asia should cultivate entrepreneurship and develop human resources. An Asia Technology Incubation Center (ATIC) will be a core institution for the development of entrepreneurship and

Mr. Takashi Watanabe human resources in the region, and assist the commercial

development of start-ups that try to address local needs. The ATIC will recruit projects that try to address local problems including poverty, the environment, and energy shortages, and provide advice and necessary costs for development for commercialization. As examples, he described the development of a human-powered water pump that can be repaired by local people, and the generation of electric power with bio-diesel in an un-electrified area. He stressed that it is essential to develop technologies that local people can use and repair themselves.

Panel Discussion

The panel discussion entitled “Regional and International Collaboration in Science and Technology” was moderated by Dr. Atsushi Sunami, Associate Professor of the National Institute for Policy Studies, following a coffee break. The panelists included Dr. Machi F. Dilworth, Head of the Tokyo Office, National Science Foundation, Dr. Jay Young Hur, Counsellor, Embassy of the Republic of Korea to Japan, Dr. Visweswan Navaratnam, Head of the DNDi Regional Office, Malaysia, Dr. Barbara Rhode, head of the Science and Technology Section, Delegation of the European Union to Japan, Dr. Xiangping Ruan, Counsellor, Embassy of the People’s Republic of China in Japan, and Mr. Keisuke Saito, Director General, Energy Conservation and Renewable Energy Department, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry. During the panel discussion, Dr. X. Ruan stated that China is very interested in a regional collaboration in science and technology with Japan because China has many things to learn from Japan, and he pointed out that the ARA should be incorporated into the current cooperation and collaboration mechanisms in Asia including APEC. Dr. J.Y. Hur pointed out that Japan should open up its closed society to Asia if it wants to take the initiative in promoting regional collaboration in Asia. Dr. B. Rhode stated that the creation of the ARA would be viewed as a long-term endeavor for Asia, because it took 50 years for Europe to construct the current collaboration mechanisms including the European Research Area. She also



pointed out that diversity in Asia should not be viewed as a hurdle for the creation of the ARA, but as a potential strength for the ARA once it is established.

Dr. V Navaratnam pointed out that a regional collaboration in Asia has already started in some non-profit sectors, referring to the fact that the DNDi (Drugs for Neglected Diseases initiative) has been conducting a collaborative project to develop drugs for neglected tropical diseases in collaboration with public institutes and private companies in Japan, Korea, China, Indonesia, Singapore, India, and Australia. There were also many comments and opinions expressed from the audience. One member of the audience stated that Asian countries would not join an alliance for the creation of an ARA just because Japan says that such a regional collaboration is necessary because of its declining population. He said that Japan should develop a concept that would benefit all Asian countries. At the last moment of the panel discussion, moderator Dr. Sunami, revealed that a regional collaboration in science and technology will proceed among three East Asian countries, Japan, Korea and China, and that a joint statement on the foundation of a regional fund with multinational donations from the three countries will be released at the Japan-China-Korea summit to be held on Jeju Island at the end of May.

Overview

Mr. Arimoto summarized the symposium in his overview remarks.

The concepts for an Asian Research Area (ARA) were recognized at the symposium. From this point forward, it is necessary to expand the discussion and dialogue on the various aspects of the ARA including its concepts, naming, projects, systems, and characteristics of Asia to lead toward the realization of the ARA. It is also important to take into consideration mid- to long-term points of view, and to coordinate the ARA framework with current cooperation and collaboration frameworks in Asia including APEC.

1. Points to remember for further advancement

The ARA should construct regional collaboration systems that are open to the rest of the world. The ARA should have as its aim the mutual benefits and prosperity of systems that connect with other world collaboration systems.

2. The Foundation of the ARA should not be an act of hegemony.

3. The ARA should allow the participation of multi-layered actors including governments, the profit and non-profit sectors, NGOs, and citizen groups.

4. The cooperation framework from developed to developing countries is becoming dated in Asia. Regional collaboration should not fall into the old realm of vertical cooperation, but should involve equal partnership.

5. Current regional collaboration activities remain simply an exchange of researchers. Asia

needs to construct systematic and sustainable regional cooperation systems.

6. The ARA should be a platform on which various stake holders, including social scientists as well as scientists, engineers, entrepreneurs, NGOs, NPOs, governments, and citizen groups, can grasp and analyze common regional problems and needs, and discuss measures to address them.
7. The ARA should construct networks of researchers, develop human resources and facilitate their world circulation, and foster entrepreneurship in the region. The networking of young researchers is especially important.
8. The ARA should maintain good governance of its activities including scientific integrity, transparency and independence.

Mr. Arimoto proposed that the establishment of an advisory group consisting of intellectuals from relevant countries should be considered. This group would become a core organization to promote the foundation of the ARA by facilitating free discussion among multilayered-actors including governments, the profit and non-profit sectors, NGOs, and citizen groups. He pointed out that it is important to start specific collaborative projects early regardless of their scale, and that it is necessary that the public, including the science and technology communities and ordinary people, understand and have a growing interest in the concepts of the ARA.

Closing Remarks



Dr. Mitsuo Akagi

At the end of the symposium, Dr. Mitsuo Akagi, Senior Managing Director of the Takeda Foundation made closing remarks on behalf of the organizing foundation. He pointed out the important roles of entrepreneurs who create value for people using the results of the scientific research, and people who select created goods and services on the market. He stated that it will also be important to consider knowledge, entrepreneurship, and people in the creation of the ARA. He closed the symposium by acknowledging the participation of the many people at the symposium.

GET-TOGETHER PARTY

A Get-Together Party was held in the Meeting room adjacent to the symposium venue to facilitate exchanges among the symposium speakers, panelists and participants. About 100 people attended the party. At the beginning of the party, Mr. Keisuke Tsumura, Parliament Secretary of the Cabinet Office in charge of the National Policy

Unit, Economic and Fiscal Policy, Science and Technology Policy, and Promotion of Local Sovereignty, gave welcoming remarks. Mr. Akihiko Furuya, Ambassador in charge of science and technology of the Ministry for Foreign Affairs also made welcoming remarks and gave a toast for the party.



Mr. Keisuke Tsumura



Mr. Akihiko Furuya

During the course of the party, Mr. Masaharu Nakagawa, Senior Vice Minister of MEXT, showed up despite his busy schedule and reported the current events concerning the ARA. During the Golden Week, he visited several Asian countries including China, Korea, and some of the ASEAN countries with Dr. Sunami to promote the Japanese initiative for the ARA. Mr. Nakagawa stated that he was able to demonstrate the Japanese initiative for a regional collaboration in science and technology by presenting the interim report of the ARA in response to a proposal by Korean representatives for the same kind of collaboration scheme. We are quite happy to hear that the interim report played a vital role in his crusade in Asia. The party was bustling with discussion and dialogue on the regional collaboration in science and technology in Asia, and the perception of the ARA by the attendees was deepened during the party.



Mr. Masaharu Nakagawa



Norio Ohto
Director
The Takeda Foundation