

2017 ASPAC Fellowship Report

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Abstract

I would like to define this SCWS 2107 in one word as SDGs (Sustainable Development Goals). The Tokyo Protocol, which describes the role of the World Science Council for SDGs support, was officially announced. Science museum/center representatives, scientists, policymakers, and civil society gathered together for one. They recognized the SDGs as both a geo-physical phenomenon and a socio-political phenomenon. Based on this collective awareness, various SDGs implementation strategies were presented and discussed by all stakeholder. The Japanese scientific community was systematically and strategically preparing the SDGs era; Japan Science and Technology Agency(JST) set up a TF team dedicated to the SDGs and Miraikan was holding various SDGs exhibitions and disaster related exhibitions, which led to social interest. Through this ASPAC Fellowship, I was able to look back on the experience of industrialization from the mechanization to the 4th Industrial Revolution era and to think about the role of the science museum/center for the SDGs society where both advanced and underdeveloped countries live well together and think about future strategy.

Introduction

The goal of applying for the ASPAC Fellowship was to experience the international level of the science museum/center to enhance the local and global capacity of the Korean Science Museum. By participating in a variety of sessions of the SCWS, I wanted to explore the realities and strategies of the advanced science museum/centers or our adjacent areas on issues surrounding today's science museums/centers.

The summit was, in short, SDGs. During the three-day, each stakeholder presented their own SDG domino graphics and discussed vision and strategy for SDGs. Under the big theme of "Connecting the World" in the age of SDGs, three topics led to lively conversation; global sustainability, co-design for transformation, personal engagement with science.

How do people with the same goals work to build governance or partnerships? I summarize the fact that I felt what kind of dialogue was taking place in order to induce the interest of general public and ultimately to induce the general public to participate in science.

Sustainability

The so-called developed countries that have led mechanization, electrification, digitization and opened the era of the fourth industrial revolution, have accumulated positive experiences such as creating new products, jobs that have never existed, improving overall quality of life and establishing new social values. On the other hand, Industrialization has been caused various global problems such as environmental pollution, depletion of energy resources, infectious diseases, and radiation leakage accident.

The "power to think" presented by Ando Tadao, the first keynote speaker, is still vivid. The basis of his architecture has been the harmony of human, nature or universe, and architecture. All is based on storytelling, whether it is new construction, empty house or local regeneration project. I think each of these stories symbolize the sustainability that we want to pursue. In particular, what do people in the Fukushima area need after nuclear accidents? Ando Tadao's answer was a huge children's library - food for thought.

The Science Museum/center is an ideal place for implementing action for solving global issues through the active use of creative technologies, especially new information communication technologies(ICT). There is no doubt about its role of stimulants in exploring the creativity, encouraging innovation, investing in creative technologies and opening markets. There is also an obligation to support inclusive growth such as poverty eradication in less developed countries through partnerships between the science museum and various sectors. For all of these, TSUNAGARI(connecting) for global wisdom is presented by Mamoru Mohri, chairman of International Programme Committee of the SCWS 2017.

Co-design

The most enjoyable thing of participating SCWS is that I can meet Nobel Prize winners or Prix Jeuness International in person. Professor Gordon said that scientists and science museums/centers should be able to persuade societies to take action for sustainable development. In particular, he mapped the global policy

agendas related to climate change. He explained the concept of Co-design in science project and then applied it to planning and conducting FutureEarth project. Ms. Bruktawit Tigabu gave a touching speech about how to find and empower local champions in countries with poor science capital like Ethiopia. The two showed that it is not important what social and scientific capital they have, but how it is important to do co-design.

2017 is a meaningful year for ASPAC to celebrate its 20th anniversary. ASPAC Community introduced special Video, Rice special exhibition showcase, World Biotech Tour in ASPAC region, the picture happiness on. I was proud to be a member of a growing ASPAC with potential. As Professor Graham Durant, let's find our Moon-shot by 2020, ASPAC will be a strong contributor shots based on 20 years of growth. On the other hand I felt sorry for the poor participation of the Korean Science Museums. However, the five NSMs have participated in the session and have seen the facts, I expect to be different in the future. I missed a great panel I recommended due to lack of communication with the speaker. It was an opportunity to learn how to communicate and persuade people outside the science museum/center for co-design.

Co-design in the field of technology, was also the most active plenary session. Professor Genevieve Bell said that the emergence of engineering at the end of the 18th century was the production of co-design, and presented the 3A questions for co-design; Autonomy, Agency, Assurance in the fourth industrial revolution era. Dr. Kazuo Yano's lecture on how to make human beings happier through AI and Data in the era of robot learning using AI led many questions from the audience. How did he pioneer new research when there was no big data concept? The power of thought, creativity, I think, is the value of humanity and the direction of co-design in technology.

Engagement

Through his keynote speech professor Lord he took the risk of micro-malt as an example and emphasized that all scientific communication areas including science museum/center field should think about positive message delivery frames. I felt how important it is to convey scientific contents and message based on understanding of human cognition and behavioral psychology.

Pavan Sukhdev explained the difference between value and price, and points out the fact that Nature has no waste. In the general economy, resources are used as Take, Make, and Waste, but nature add new values on the product of the process. For sustainability, he said the natural cycle must be applied to our markets/economies. What we cannot measure is that we cannot manage and we need to be able to analyze and qualify in order to change into a cyclical moderator. Like all other sectors of sustainability, citizens' perceptions of the cyclical economy seems to be the most important and this can be realized through education.

In the parallel session, titled Co-design of the Global STI Ecosystem for SDGs; Expected Role of Science Centers/Museums which was able to hear the strategies and preparations for the SDGs era of the Japanese scientific community, remained memorable. JST(Japan Science and Technology Agency) inaugurated STI (technology and innovation) for SDGs Task team and was systematically implementing strategies for the SDGs era. Japan Innovation Network introduced their SDGs initiative and collaboration and exemplified activities related to reducing carbon emissions.

Above all, Miraikan was leading SDGs culture through its exhibition. Backward from the Future is a game-based exhibition in which viewers choose the ideal planet after 50 years and overcome challenges from now on to pass it on to future generations. "No choice? The Earth - Sold Out! "Exhibition is a panel-oriented, participatory exhibition where various choices are made to achieve the goal of sustainable life below water, setting up a sushi restaurant in the future facing the depletion of fishery resources. In addition to these, disaster-related exhibitions such as Mission survival; 10 Billion and Lesson #3.11 were held. Through these exhibitions, science museums/centers should encourage visitors to think about various natural and man-made disasters and review attitude to cope with disasters.

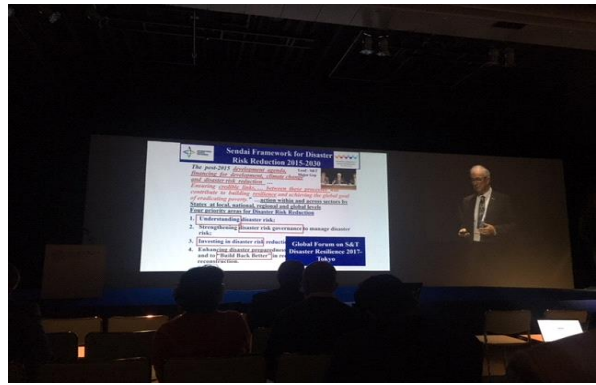
Conclusion

The expansion of the social role of the science museum is a clear necessity for the continuous development of the science museum/center. STEM education for children is important, and it is also necessary to raise awareness on various social issues related to science and technology. Now our biggest challenge is how the world works together for SDG.

I learned that, based on the power of thought, science museums/centers should be able to give a message about our sustainable future that harmonizes human, nature/ space, science and technology. We have to look for a variety of ways of "persuading" society to better cope with global issues such as climate change. We have to do co-design. For the success of SDGs, we need an effective communication frame. In particular, we have to rethink whether our method is based on human's cognitive and behavioral psychology.



Keynote Speech by Tadao Ando(Day1)



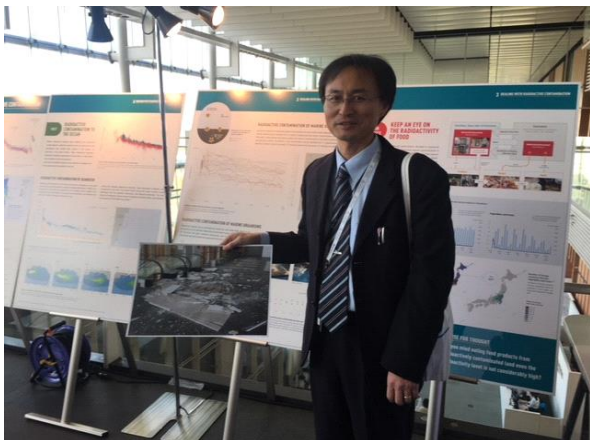
Keynote Speech by Prof. Gordon McBean(Day2)



With my champion prof Gordon, Bruktawit



With WBT Ambassadors after interview



Temporary Exhibition on Disaster and Dr. Yasushi



(E-1) Co-design of the Global STI Ecosystem for SDGs



Keynote Session, Mr. Pavan Sukhdev(Day3)



With ASPAC Friends