





















The 18th Science Council of Asia Conference "Role of Science for Society: Strategies towards SDGs in Asia"

PROGRAM OF ACTIVITIES

5th-7th December 2018 Science Council of Japan (SCJ) Tokyo, Japan

Organized by





The 18th Science Council of Asia Conference

"Role of Science for Society: Strategies towards SDGs in Asia"



5th-7th December 2018
Science Council of Japan (SCJ)
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As the Minister in charge of Science and Technology Policy of Japan, I would like to extend my greetings to the participants of the 18th Science Council of Asia (SCA) Tokyo Conference hosted by Science Council of Japan (SCJ).

This is the second occasion that the SCA Conference is held in Japan. The first was in 2007 at Okinawa when we had the 7th SCA conference. I would like to express my warm welcome to all the people who have worked together to hold this Conference and the researchers coming from all over Asia including representatives of SCA member academies and scientists of various research institutions and universities.

The theme of this 18th SCA Conference is the "Role of Science for Society: Strategies towards SDGs in Asia." In June of this year, the Cabinet of Japan decided "Integrated Innovation Strategies". The Strategies declare that the role of science, technology and innovation (STI) is extremely important to attain SDGs. The Strategies aim to attain 17 targets of SDGs by 2030 utilizing STI of our country, exert continuing efforts and present good examples in attaining SDGs because the frameworks to promote "STI for SDGs" have not yet been established. As a future direction, the Strategies also aim to formulate "STI for SDGs Roadmap" as an implementation plan towards SDGs at the world's highest level by the middle of 2019. Likewise, to support the formulation of roadmaps by other countries through presenting Japan's Roadmap to the international society.

Since SDGs is a concept that covers broad issues in economy and society, it is essential that your lines of expertise have to be integrated beyond the barriers of industry, government and academia. I greatly hope that this prestigious conference will bring about extensive discussions on various issues to attain the Sustainable Development Goals, as well as defined roles to be played by science. Similarly, for the meaningful ideas as a result of this conference to be shared across borders and beyond.

Finally, I sincerely hope that your stay in Japan will be truly fruitful and enjoyable.

Mr. Takuya Hirai

Minister of State for Science and Technology Policy



On behalf of the Science Council of Asia, I feel honored to greet you all in this great historic city of Tokyo, Japan. We are really grateful to Prof. H. Yoshino, Secretary General of Science Council of Asia and Prof. Juichi Yamagiwa, President of Science Council of Japan for their kind and warm invitation. I would like to express hearty thanks to Science Council of Asia (SCA) and Science Council of Japan (SCJ) for organizing this conference timely with important themes.

I have the honor to place before the house that "Transforming our world: the 2030 Agenda for Sustainable Development" was unanimously adopted at the UN General Assembly in 2015. Under a common principle of no one left behind out of 7 billion people living in the world, this Agenda has 17 goals (Sustainable Development Goals, SDGs) and its 169 targets to be achieved within 15 years from 2016.

In response to this, the 18th Science Council of Asia Conference in Tokyo will focus on Asian region specific issues and widely discuss such as what are the issues to be taken into account, how they are being treated and what are the directions to be proceeded, and we will have them in common to deal with in the future as Asia.

Topics of the Conference will include, but are not limited to the following:

Energy, Natural Resources and Built Environment (SDGs 7,11,12); Access to affordable, reliable and sustainable energy; Sustainable management and efficient use of natural resources; Smart cities and zero energy buildings; Aging Society, Health and Medical Care (SDGs 3); Access to quality essential healthcare services and affordable essential medicines and vaccines for all; End preventable deaths of newborns and children; Healthy city and housing; Inclusive design and technology for physically handicapped people; Biodiversity and Sustainable Use of Biological Resources (SDGs 14,15); Sustainable use of the oceans, seas and marine resources; Sustainable use of terrestrial and freshwater ecosystems; Fair and equitable sharing of the benefits from the utilization of genetic resources; Cities, History and Cultural Heritage (SDGs 11); Access for all to adequate, safe and affordable housing and basic services and upgrade slums; Protect and safeguard the world's cultural heritage; Adverse environmental impact of cities; Disaster Risk Reduction (SDGs 9,11,13); Reliable, sustainable and resilient infrastructure;- Strengthen resilience and adaptive capacity to climaterelated hazards and natural disasters; Gender (SDGs 5); Ensure women's full and effective participation and Reforms to give women equal rights to economic resources; equal opportunities for leadership; Inequalities and Immigrants (SDGs 1,10; Ensure the equal rights to economic resources for the poor and the vulnerable; Build the resilience of the poor and reduce their exposure and vulnerability to climate-related



extreme events and other economic, social and environmental shocks and disasters; Facilitate orderly, safe, regular and responsible migration and mobility of people; Education SDGs 4); Ensure that all girls and boys complete free, equitable and quality primary and secondary education; Gender disparities in education; Ensure that all learners acquire the knowledge and skills needed to promote sustainable development; Economy SDGs 8); Economic productivity through diversification, technological upgrading and innovation; Decent work for all women and men; Labour rights and safe and secure working environments for all workers, including migrant workers; Water and Food SDGs 2,6); Universal and equitable access to safe and affordable drinking water for all; Access to adequate and equitable sanitation and hygiene for all; Sustainable agriculture.

I thank deeply the organizing committee particularly Prof. H. Yoshino, Secretary General, Science Council of Asia (SCA) and Prof. Juichi Yamagiwa, President, Science Council of Japan (SCJ) for offering so much time and effort to make the 18th conference of the Science Council of Asia a great success.

Thank you all again,

Prof. Dr. Quazi Abdul Fattah

President Science Council of Asia (SCA)



I would like to welcome you to Science Council of Japan (SCJ), for participating in the 18th Science of Council of Asia (SCA). As President of SCJ, I am deeply honored that this important Conference is held in Japan.

SCJ which was established as a special organization, of the Cabinet Office, to represent the country's scientists both domestically and internationally in 1949 focuses on the academic exchange through the international framework.

Of which, SCJ has been contributing to the academic exchanges with the Asian countries since its inception of ACSC, a predecessor of SCA, a scientists' forum. ACSC was established in 1993 under the leadership of SCJ, and SCJ had contributed as not only its Secretariat but also a host academy of the annual international symposiums in order to promote Asia's academic progress. Since 2000, along with rising importance and influences of Asia in the world, increasing further prominence of constructing infrastructure to enhance academic exchanges and cooperation in the Asian region, made SCJ to advocate an establishment of SCA by evolutionally reorganizing ACSC, which received approval from many scientists in Asia.

Efforts to global issues have increased importance internationally in this century. "Transforming our world: the 2030 Agenda for Sustainable Development" was adopted by the UN General Assembly in 2015 in order to build a sustainable society in the world, and 17 goals (Sustainable Development Goals, SDGs) are demonstrated in the Agenda. Increasing influences of Asia makes a role of science important for society to share the issues and provide useful scientific advice. Therefore, the theme of the 18th SCA Conference, "Role of Science for Society: Strategies towards SDGs in Asia" is timely and appropriate. I am strongly convinced that all the participants who are scientists and researchers from Asia will produce fruitful outputs during the three-day discussions.

This year is the 25th anniversary of the ACSC which is a predecessor of SCA. I am very pleased that the SCA Conference is held in Japan for the first time in 11 years of this commemorative year, and I would like to sincerely appreciate for everyone and SCA personnel who have cooperated in organizing the 18th SCA Conference. SCJ continues to contribute to greater progress of SCA.

Dr. Juichi Yamagiwa

President Science Council of Japan





I am pleased that the 18th Science Council of Asia Conference is conducted by Science Council of Japan (SCJ). I would like to express my heartfelt gratitude to Member Organizations, Science Council of Asia (SCA) Secretariat for their cooperation and contribution to organize this Conference, and my deep appreciations goes to all the people who supported it.

The theme of the 18th SCA Conference is "Role of Science: Strategies towards SDGs in Asia". As you may already know, the purpose of SCA established in 2000 is "to facilitate scientific cooperation in the region toward progress in science and sustainable development of the region", and SCA has contributed to society through collaboration with academies in Asia. Under such circumstances, Sustainable Development Goals (SDGs) were brought in "Transforming our world: the 2030 Agenda for Sustainable Development" which was adopted at the UN General Assembly in 2015, and efforts to achieve the sustainable development which is key principle of "no one will be left behind" have begun. It is highly significant to discuss a role of science one more time in regard to the contribution to society based on a changing Asian and international situations. However, we had to limit 200 participations due to operational limitation, I hope that this circumstance facilitates outstanding discussions.

The 18th SCA Conference is held for 3 days and about 200 presentations are scheduled. I am delighted that an exceeding number of application is received, and noted a high level of interest on SDGs in Asia. In this Conference, there would be 10 themes in conformity with SDGs, and in addition to the parallel-sessions, Future Earth session, Committee of Science and Society and Young Academy of Japan joint session, Joint Project Workshop, etc. are convened as well. This Conference is an advantageous opportunity to build a network of scholars in and outside the country with scientists' joint researches, etc. and to contribute to the world from Asia, for which I am sure that there would be abundant outstanding discussions.

In order to achieve the SDGs in Asia, I hope informative outcome would be drawn through enthusiastic discussions on recognizing issues, analyzing solving methods, and directions to proceed with the experts of respective disciplines.

Hiroshi Yoshino

Professor Secretary General / Treasurer of SCA

Themes





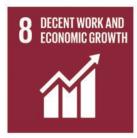


































1. Energy, Natural Resources and Built Environment

SDGs 7 11 12

Access to affordable, reliable and sustainable energy Sustainable management and efficient use of natural resources Smart cities and zero energy buildings

2. Aging Society, Health and Medical Care



Access to quality essential health-care services and affordable essential medicines and vaccines for all End preventable deaths of newborns and children

Healthy city and housing

Inclusive design and technology for physically handicapped people

3. Biodiversity and Sustainable Use of Biological Resources



Sustainable use of the oceans, seas and marine resources
Sustainable use of terrestrial and freshwater ecosystems
Fair and equitable sharing of the benefits from the utilization of genetic resources

4. Cities, History and Cultural Heritage



Access for all to adequate, safe and affordable housing and basic services and upgrade slums Protect and safeguard the world's cultural heritage Adverse environmental impact of cities

5. Disaster Risk Reduction

SDGs 9 11 13

Reliable, sustainable and resilient infrastructure

Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters

6. Gender



Ensure women's full and effective participation and equal opportunities for leadership Reforms to give women equal rights to economic resources

7. Poverty, Inequalities and Immigrants



Ensure the equal rights to economic resources for the poor and the vulnerable Build the resilience of the poor and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters Facilitate orderly, safe, regular and responsible migration and mobility of people

8. Education



Ensure that all girls and boys complete free, equitable and quality primary and secondary education Gender disparities in education

Ensure that all learners acquire the knowledge and skills needed to promote sustainable development

9. Economy



Economic productivity through diversification, technological upgrading and innovation

Decent work for all women and men Labour rights and safe and secure working environments for all workers, including migrant workers

10. Water and Food



Universal and equitable access to safe and affordable drinking water for all Access to adequate and equitable sanitation and hygiene for all Sustainable agriculture