

Science and Technology in Society *forum* (STS *forum*)
12th Annual Meeting
Kyoto, Japan, October 6, 2015
STATEMENT

1. The 12th Annual Meeting of the Science and Technology in Society forum took place from October 4 to 6, with the participation of over 1,000 global leaders in science and technology, policy, business and media from nearly 100 countries, regions and international organizations.
2. At the meeting, based on the recognition that the earth is becoming finite for the activities of humankind in the 21st century, participants reflected on how to strengthen the “lights” and control the “shadows” of science and technology. We considered the future of humanity and the sustainable development of society over a longer-term perspective, thinking of what the future will be like not just in twenty or thirty years’ time, but over 100 or 500 years from now.
3. Based on discussions at this year’s meeting, we would like to highlight the following viewpoints.

A. Energy and Environment

Over the long term, continued burning of fossil fuels will exact an unacceptable environmental cost and exhaust finite resources. We should have diverse energy sources for ensuring reliable and stable supply, and nuclear power should remain an important option, under the conditions of safety, security and non-proliferation.

We also stressed the need to establish an international framework for effectively mitigating greenhouse gas emissions that includes all countries. We hope that our message will be reflected in the discussions at the United Nations Climate Change Conference (COP21) in December 2015 in Paris.

B. Innovation

Industrial innovation driven by new manufacturing technologies, robotics, nanotechnology and new materials is playing a vital role in various areas including product development, healthcare and urban living.

We should strive to develop a coalition that includes the public and private sectors, academia, government and industry. Chief Technology Officers should become bridges between business and academia in the development of science and technology to nurture innovation. The ultimate source of major innovation is basic science, which has to be supported in both the public and private sectors.

C. ICT and Smart Cities

A global-level consensus on universal ICT rules is needed, as advanced utilization of ICT with improved security and privacy protection becomes essential for future human development. The merging of the internet with mobile telephony and other devices is transforming society and is helping developing countries and empowering women. The “Internet of Things” and use of “Big Data,” as well as the emergence of AI and robotics, will also create new challenges and opportunities for society.

More livable, humane, disaster-resilient and energy-efficient urban environments must be developed using science and technology. ICT in particular, through urban planning and better management systems, can help create “smart cities,” to support the evolution of cities, peoples, values and cultures.

D. Global Health

Recently, research into iPS cells and genomics has been achieving breakthrough results in life sciences. By making these results fit for practical use, we should encourage further progress in personalized and preemptive medicine, in harmony with human health, safety and ethical issues. Scientific knowledge on nutrition should also be expanded for human welfare.

A new international system is required to improve collaboration among developed and developing countries and WHO for global health, especially for dealing with infectious disease pandemics.

E. Resource Conservation

The oceans and their deep currents are central to the climate and the management of greenhouse gas emissions. Better understanding of the oceans and the fresh waters of the earth is vital for developing effective sustainable development futures for humans. We must think of better ways to make efficient use of various kinds of resources with careful attention to prevent significant problems for society.

To produce the food necessary for humanity in the face of the increasing uncertainties of climate change will require better use of land and water and more adapted resilient crops deploying the best science, including the use of GMOs, which have been shown to be safe and can contribute much to improve the nutritious content of the food of the poor.

F. Cooperation in Science and Technology

The innovations in one part of the world should be linked to others that need them, thereby ensuring that sustainable solutions spread throughout the planet.

Supporting education, research and local entrepreneurship is essential for capacity-building in developing countries. Cooperation among industries focusing on science and technology in the global economy today is increasingly important, while global competition among industries is the key to encouraging innovation.

G. Science, Technology and Education

Exchanges between scientists and society should be broadened and improved so that the public can make informed decisions, provided that the risks and benefits are clearly explained.

The importance of STEM education should be highlighted. High-quality science programs should be developed to interest and inform the public about the role of science and technology in society. Emphasis on the education and empowerment of women would help enhance sustainable development.

4. This year, we held workshops in major cities Kuala Lumpur and Milan. We have also established an "STS forum Future Leaders' Program" involving close to 80 active younger leaders for sustainable development of the forum. We will build on and expand the network we have established to further address the opportunities and challenges facing humanity.
5. We look forward to meeting here again next year. We agreed to hold the 13th Annual Meeting of the STS forum in Kyoto from Sunday, October 2 to Tuesday, October 4, 2016.