

Plenary Session
“Dialogue between Political Leaders and Scientists”

I will present my comments on three topics:

1. The dialogue

Modern science, since its inception four hundred years ago, is continuously dedicated to search for new scientific evidences for a better understanding of Nature, from the atomic level up to the dimension of the Universe. Therefore, the time frame for the scientist is of long range, believing that the advancement of Science by itself will ultimately help to solve the problems faced by Society. On the other hand, Science is also universally conceived as an essential means to meet the immediate Society's need for sustainable development, water, food, energy, health care, safety and alleviation of poverty among others. Therefore, the political leaders, expressing the needs of the Society, require knowledge for immediate and quick results. To overcome these differences, and to avoid a communication gap, the dialogue between Scientists and Political Leaders is absolutely necessary. The political leaders from one side need better information on the time scale used by scientists to advance knowledge, and also the necessity of public investments for basic Science. On the other side, scientists need to be more pragmatic to understand the urgency to cope with societal needs, helping the policy makers to select the ways in which the new knowledge may be applied to solve the problems. Finally, the dialogue to be more effective must use institutional channels, both at national and international levels.

For the scientists, the Academies of Science, Medicine and Engineering constitute the principal voice to convey their contribution to establish the policy for science, at national level (government and parliament). Internationally also, the Academies are organized (IAP, IAC, IAMP, TWAS, CAETS and ICSU) to optimize the relationship between Science and Society.

2. Cooperation versus Competition

The concept of the universality of Science is well established and Science is considered one of the most important international human activities. Most of the challenges faced

by Science are too complex and require substantial investments that no nation can afford in an isolated manner. Moreover, many of these challenges are of global concern because they affect all humankind and depend on programs carried out by international scientific organizations. While cooperation in Science is universally adopted, collaboration in technology and innovation is limited by competition in the market place. The disparity between the have and have not nations is increasing, because the developing countries are not able to benefit from the virtuous cycle represented by the positive interaction between science and development.

In our dialogue, a new mechanism more creative and more ambitious needs to be envisioned to extend international collaboration, not only in Science, but also in technology and innovation in order to enhance the ability of the developing countries to adopt new technologies and to adapt them to local needs.

3. Public versus Private Funding

Basic research is universally financed by public resources. The projects carried out in collaboration between university and industry represent less than 10% of the total investments. On the other hand, the for-profit organizations has now become the world's predominant force in applying S&T to produce and distribute new goods and services, thus the private sector accounts for more than 60% of the global investment in R&D. Unfortunately, the contribution of the private sector to R&D in the developing countries is relatively small. In several of these countries in the last decades, substantial advancement was obtained in the scientific capacity greatly due to international collaboration, but they did not succeed in translating Science into Innovation and Development in the same intensity.

Brazil is a good example of a developing country that after creating a solid scientific basis is now implementing several initiatives to enhance innovation through the modernization of its legal framework, by facilitating joint projects between university and industry and by stimulating the private sector to invest in innovation.

The increase in the percentage of the investment in R&D of the multinational companies in their foreign affiliates could be an important mechanism to help local development and also to create working conditions for the scientists, thus avoiding brain drain.

Finally, I want to express my deep gratitude to the organizers of STS Forum in the name of Koji Omi San. As a former co-chair of the Interacademy Panel for International Issues, representing the academies of science of the developing countries, I can testify the importance of the forum and its influence to increase the international cooperation, covering the entire spectrum of S,T&I activities, enabling the people of the developing countries to also participate in the benefits brought by Science and its applications. After all, Science is a human common heritage.