the last word: Driving innovation through partnership with developing countries

Japan Science and Technology Agency President Michiharu Nakamura discusses the Agency’s international government-funded programme SATREPS – a collaborative, multidisciplinary approach to today’s global issues, from infectious diseases to natural disasters

SCIENCE AND TECHNOLOGY

Research Partnership for Sustainable Development (SATREPS) is an international, interdisciplinary, Japanese Government programme jointly managed by the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA). Rather than focusing on advances in science and technology themselves, the key focus of SATREPS is on benefiting societies and economies by bringing new discoveries and technologies resulting from research to the market as products, or reflecting those findings in government services and similar applications or policies, and on driving innovation through such activities.

As such, we see it as important to enhance systems and capabilities for sustaining R&D and incorporating outcomes into society after projects have reached the end of their research periods by promoting interdisciplinary efforts to utilise findings from social, as well as natural, sciences, and enlisting the participation of a diversity of related parties. It is difficult for any single country to assemble all of the components required to drive innovation. For this reason, we must promote international partnerships and cooperation aimed at open, borderless innovation, and play a leading part in S&T diplomacy.

The programme also promotes international networking among researchers as projects are being implemented, and seeks to foster ties between government agencies, local authorities, international organisations, private enterprises, NGOs and other stakeholders, as well as the research institutions of countries involved in a particular project.

WORKING TOGETHER

Within the framework of SATREPS, Japan’s counterparts for joint research are developing countries receiving official development assistance, particularly in Asia and Africa. However, North America and Europe have long maintained high standards of S&T and investment in relevant policy fields, and are set to continue to do so for decades to come. As such, JST believes it is important to promote strategic partnerships with these countries to drive innovation and generate synergy and mutual benefits.

The US and Canada are not direct partners for research under SATREPS, but we certainly hope to work in some way with programmes such as Partnerships for Enhanced Engagement in Research (PEER) being implemented by the US Agency for International Development (USAID) and the National Science Foundation (NSF) to boost the capabilities of researchers in developing countries through joint research with American researchers on development issues, and similar programmes being implemented by European agencies.

CASE PROJECT: ERADICATION OF INFECTIOUS DISEASES

Infectious diseases control is one of the key S&T areas in SATREPS, other than energy/environment, bioresources, and natural disaster prevention. Emerging and re-emerging diseases such as HIV/AIDS, malaria, dengue fever and tuberculosis are impeding both people’s health and the socioeconomic advancement of developing countries, but with globalisation and the increasing movement of people and goods, such diseases are no longer just a developing country issue.

Our ‘Research and Development of Therapeutic Products against Infectious Diseases, especially Dengue Virus Infection’ project with Thailand, adopted in 2008, focused on the dengue virus that infects 50 million people yearly in the tropics, causing around 20,000 deaths. It is spread by mosquitoes, and there is still no effective treatment. Researchers have already identified neutralising antibodies from dengue patients useful in combating the virus, and pharmaceutical companies are showing great interest.

CASE PROJECT: NATURAL DISASTERS

The effects of natural disasters on a particular region today have worldwide repercussions. Japan is a world leader in earthquake and tsunami research, and so other countries look to us to play a leadership role in improving their disaster mitigation capabilities.

‘Enhancement of Technology to Develop Tsunami-Resilient Community’, a project with Chile that was adopted in 2011, is leveraging lessons learned from large-scale tsunami damage of the 2010 earthquake in Chile and the March 2011 Great East Japan Earthquake. It aims to enhance technology to prevent tsunami damage by developing very precise early warning methods for Chile, estimating potential damage at the pilot site, and conducting research into programmes that can create tsunami resilient communities. This research should also contribute to the formulation of tsunami countermeasures worldwide.

GLOBAL COLLABORATION

JST will continue its efforts to promote open innovation through strategic bilateral or multilateral partnerships. To date, SATREPS joint research projects have already been launched in 39 countries, but there are still other countries in need of such projects. In order to address global challenges, we must further increase the number of countries with which we carry out joint research. SATREPS continues to send out representatives to parties in countries that have not yet benefited from the programme to directly encourage their participation.

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