

International Liaison to Develop Science in Sri Lanka

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With the new technological development taking place in the globe, the scientific world simultaneously is fast becoming interdisciplinary. Therefore, it is necessary to connect the world through sciences. The use of scientific collaborations among the nations to address common problems has become imperative. Therefore, building international liaison has become an important topic today.

Realising this factor, the government of Sri Lanka has turned to invest not only on infrastructure development but also for the capacity development for Science and Technology (S&T) personnel. As a result, bilateral agreements were signed with Pakistan, China, Japan and Germany.

In 2016, the government of Sri Lanka organized a forum on the subject of Science and Technology for Society (STS) with the objective of exploring opportunities for the Sri Lankan

society from the global S&T Developments. Therefore, it is encouraging to note that gradually the Government has accepted the importance of S&T for socio-economic development of the country. Taking this as a positive signal, we as a society should work together to convince the Government to increase the investment to 1% of GDP towards research while making efforts to convince scientists and technologists to deliver the desired output to the society. The authorities need to take the initiatives to involve scientists and provide adequate funding for Research and Development (R & D.) All the scientists need to work in local and international networks in their respective discipline of science for the benefit of the society.

National Science Foundation (NSF) having noticed the importance and the current trends in the global arena enhanced creating new networks with several countries. This is in order to strengthen the

cooperation in the areas of S&T. So NSF will promote and enhance capacity building through liaising with individuals, associations or institutions locally and internationally which hopefully will facilitate the return of Sri Lankan scientists and technologists of distinction for S&T development.

International Grant Schemes

NSF in order to facilitate scientists and technologists and also to enhance their knowledge related to S&T as indicated above, has introduced Grant schemes. This is to help them to exchange and obtain information and enable them to network. The International Liaison Division (ILD) at NSF coordinates the following schemes.

- 1.) Travel Grant Scheme (TG)
- 2.) Overseas Special Training Programme (OSTP)
- 3.) International Partnerships for Science and Technology (IPSAT)

4.) International Collaborative Research Programme (ICRP)

5.) Overseas Science Education Programme (OSEP)

The Travel Grant Scheme provides an opportunity to Sri Lankan scientists and technologists to present and share the research findings at International fora and to acquire knowledge and skills on new discoveries, achievements and developments in their respective fields of research. It also provides an opportunity to get exposure at global level and to establish links with scientists worldwide working in similar research areas for future collaborations.

OSTP enhances national capacities by providing opportunities for training and acquiring advanced laboratory skills which are not available in Sri Lanka in the foreseeable future, industrial experience and international exposure to scientists and technical personnel in academia, research institutions, government bodies or industry and for media personnel in relevant institutions.

IPSAT scheme is to facilitate Sri Lankan scientists, engineers, science and technology policy makers and research personnel, to undertake collaborative R&D/S&T service assignments with foreign based scientists for stipulated periods in Sri Lanka. This is to encourage our scientific community to have international research collaborations, technology transfers and also promote in obtaining expertise towards developing globally-engaged research in Sri Lanka.

The NSF introduced International Collaborative Research Programme (ICRP) to shift the collaborative research among Sri Lankan scientists, engineers and social scientists to go beyond the boundary of Sri Lanka towards international arena so as to connect and to carry out joint research programmes with their counterparts.

The OSEP scheme provides international exposure on trends in modern science, technology, research and innovation to Sri Lankan school children, teachers and university undergraduates to upgrade and improve their knowledge on science, technology and innovation to face the challenges of the modern world.

The following Table illustrates as to how the NSF awarded Grants to the scientific community in the country. It shows the gradual increase of the number of awards and thereby the benefits the scientific community had reaped from these schemes.

Multilateral and Bilateral Co-operation

The bilateral and multilateral programmes are aimed at developing research cooperation among countries, funding organizations and to improve

Table 1 - Number of Grants awarded

	Number of Grants Awarded		
Year	Travel Grant	OSTP	IPSAT
2012	36	17	1
2013	43	19	3
2014	51	16	3
2015	41	16	3
2016	63	44	15
2017	60	38	11



Fig.01 : NSF Global partnership

quality of research in the country while encouraging the networking on scientific cooperation among them.

As such, NSF has established bilateral and multilateral cooperation with the objective of increasing and developing international scientific

relationships. The aim of these programmes is to provide opportunities to the Sri Lankan scientists, academics, researchers and technologists to enhance their knowledge and to be on par with the international counterparts. These schemes will enable them to obtain new knowledge and training in S&T which will open

out to international joint research programmes.
Bilateral Co-operation

In recent years NSF has given increased attention to bilateral scientific cooperation with the intention of enhancing S&T capacities and capabilities of our scientists. NSF organized a few meetings on Bilateral Scientific Cooperation under the theme 'NSF Global Partnerships' with scientists from USA, Canada, Germany, China and Japan, in September 2016 in Colombo.

The main objective of these meetings was to discuss research systems and opportunities available in their countries for collaboration with Sri Lanka. Further, NSF identified key activities which could be conducted in collaboration with the above countries. Some local scientists who had already established collaboration with



Fig.02 : Signing the agreement with Pakistan Science Foundation



Fig.03 : First workshop between NSF and NSFC (National Natural Science Foundation of China)

these countries were also invited for these meetings. Consequently, NSF was able to sign Memorandums of Understanding (MOU) with some of these countries.

Under the MOU signed with the Pakistan Science Foundation (PSF) in 2016 NSF was able to provide opportunities for Sri Lankan scientists to initiate collaborative research programmes with joint co-funds from both institutes for their respective research areas.

With the aim of resolving issues of livelihood i.e. water security, CKDu, NSF with National Natural Science Foundation (NSFC) held the first joint workshop in Beijing, China in July 2017 under the theme “Climate Change Adaptation, Environment

and Health” and subsequently called joint research proposals for co-funding by the both institutions. NSF signed the MOU with NSFC in 2016.

Further, NSF signed a Memorandum of Cooperation (MOC) with Japan Science and Technology Agency (JST) in 2017 and currently is organizing joint research programmes following the Joint Workshop held on the theme “Genetic Resources in Livestock Farming and Agriculture.” Some scientists and researchers related to these fields from both countries will participate at this Workshop which will be held in October this year.

In addition, NSF signed a MOU with the German Academic Exchange Service (DAAD) in

April this year which will benefit higher education and research sector. As such, the Project-based Personnel Exchange (PPE) can be utilized to improve the quality of researchers in the Universities and higher education in the country.

Multilateral Co-operation

With regard to the multilateral scientific cooperation, NSF plays a control role as the focal point in Sri Lanka for many international scientific bodies. Among them Sri Lanka works very closely with the following organizations.

- a.) International Centre for Genetic Engineering and Biotechnology (ICGEB)
- b.) International Science Council (ISC)
- c.) The World Academy of

- Science (TWAS)
- d.) Global Research Council (GRC)
- e.) UNESCO Programmes
- f.) Science Council Asia (SCA)

Sri Lankan scientists have been provided opportunity to submit research proposals under ICGEB Collaborative Research Programme (CRP) and Early Career Research Grant scheme annually. Further, at the ICGEB Board of Government meeting in 2018 Sri Lanka was given the opportunity to present the proposal on ICGEB Regional Research Centre (RRC) for south Asia which is proposed to be established in Sri Lanka. Accordingly, the MOU is under consideration for signing. Another MOU is to be signed between ICGEB and NSF on co-funding work on allowance for Research Assistants under ICGEB CRP grants.

Activities under the ISC, NSF intends to work on sustainable development, climate change *etc.* Ministry of Science, Technology and Research signed a MOU with the European Organization for Nuclear Research (CERN) in 2016 for which NSF provided funding for Sri Lankan students during this period to participate at the Summer Students Programme in CERN, Geneva.

The NSF concord with The World Academy of Sciences (TWAS) have been awarding the TWAS Young Scientist prize annually for the talented young

scientists who have attained high level of excellence in research work, in the fields of Biology, Chemistry, Mathematics and Physics. The award consists of a cash prize and a certificate.

The Man and the Biosphere (MAB) Programme was a direct outcome of the UNESCO – Biosphere Conference in 1968 and in Sri Lanka it was launched in 1971. The National MAB Committee is hosted at National Science Foundation. The MAB Programme is an Intergovernmental Scientific Programme that provides a scientific basis for a healthy relationship between people and their environment. It combines natural and social sciences, economics and education, to improve human livelihoods and safeguard natural ecosystems, develop natural resources thus promoting innovative approaches to economic development that is socially and culturally appropriate and environmentally sustainable.

Together with New Zealand Ministry of Business Innovation and Employment, the NSF co-organized the Asia Pacific Regional Meeting of the Global Research Council (ASPGRC) in November 2017 in Colombo. Thirty-seven delegates representing research funding organizations from twenty countries took part at this meeting. “Science Diplomacy” and “Peer Review” were the two themes discussed at this meeting. Recognizing the role play in

advancing science, addressing global, regional and national interests and issues and the important role the GRC already plays in science diplomacy, the delegates supported the concept. Science as tool for diplomacy has been used for several decades by many countries around the world to bridge the world through science. “Science for Diplomacy” is one of the activities where scientific cooperation can improve international relations. Many of the challenges related to health, economic growth, climate change *etc.* in our country will be addressed through international relations. Therefore, our scientists, technologists, research institutes, universities with the government and the private sector could look into social equity, poverty reduction, other social needs and identify solutions that are adaptable to local conditions with inputs from foreign collaborators where necessary.



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