

VIDYA

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NSF Getting A Positive Mileage!

The NSF excelled at the Best Annual Report and Accounts Awards 2019 organized by the Association of Public Finance Accountants Sri Lanka (APFASL), the Public Sector Wing of CA Sri Lanka.



Dr Thamara F. Dias/Additional Director of the NSF who was the Director General (Covering) in 2017 receiving the award from Mr Udaya R. Seneviratne/ Secretary to the President



Under the category “Research Institutions”, the NSF was adjudged the winner while the National Engineering Research & Design Centre (NERDC) and the Industrial Technology Institute (ITI) were adjudged runners up at the Third Best Annual Report and Accounts Awards 2019 organized by the Association of Public Finance Accountants Sri Lanka (APFASL). All three institutions coming under the purview of the Ministry of Science, Technology & Research was a merit to the Ministry.

The award ceremony was held at the BMICH on the 25th October 2019, Mr Udaya R. Seneviratne/Secretary

to the President being the Chief Guest of the occasion. The APFASL holds this competition annually aiming at improving the quality of annual reports and accounts published by the public sector, with the ultimate objective of encouraging the institutes to improve transparency and accountability in performance.

The annual reports of 2017 were considered at this competition. The 2017 annual report of the NSF contains a comprehensive analysis of all the work performed during the year with graphical presentations and pictures that would enable the interested parties to form a judgment on performance of the NSF and its future directions.

National Science Centre becoming a reality after 72 years !

Science culture is essential for any country to move towards a knowledge economy. Today Science Centres are becoming increasingly recognized and valued as a key component of educational and recreational infrastructure in many countries, for inculcating scientific awareness and scientific temper. More than 200 million visitors participate in exhibitions and programmes conducted by over 1200 science centres around the world each year, and these numbers are growing. Unfortunately, Sri Lanka with a population of 20 million people, a fifth of which is adolescent and school-age children and a recognized scientific establishment going back over a century is the only



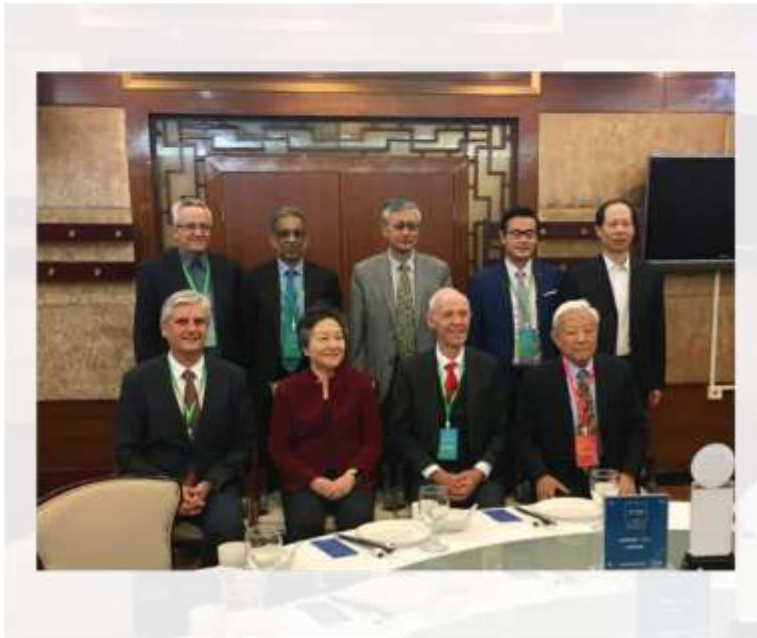
His Excellency Dr Karunasena Kodituwakku, the Ambassador of Sri Lanka to China and the Chairman of the NSF Dr Azeez M. Mubarak (holding the Master Plan) together with the distinguished officials from China & UNESCO

country in South Asia without a science museum/science centre.

Subsequent to the request of Sri Lanka government to UNESCO, the China Science and Technology Museums (CSTM) under the guidance of Chinese Association of Natural Science Museums (CANSM) and UNESCO, has prepared the Master Plan titled “Content Construction Planning Scheme for the National Science Centre, Sri Lanka” and officially handed over to the Sri Lankan Government on the 15th October 2019 at the Opening Ceremony of the International Symposium on “The Development of

Natural Science Museums” under the Belt and Road Initiative (BRISMIS 2019) in Beijing.

The concept of the Science Museum was initially proposed by the Ceylon Association for Advancement of Science (CAAS) way back in 1947 but it never materialized due to the lack of relevant experiences, funds and other issues. In 2018, on the initiative of the NSF,



the Government of Sri Lanka resurrected the project and requested UNESCO for technical assistance for the construction of a National Science Centre and allocated 17 acres of land within the proposed Tech City in Homagama. The UNESCO agreed to provide support under the framework of the cooperation letter of agreement between UNESCO and the Chinese Association of Natural Science Museum (CANSM) through which such support is being provided to countries involved in the Belt and Road Initiative. On the invitation of CANSM, China Science and Technology Museum (CSTM) in partnership with UNESCO and facilitated by NSF has formulated this blueprint for the establishment of the proposed National Science Centre.



Ambassador of Sri Lanka to China HE Dr Karunasena Kodituwakku and Chairman of the National Science Foundation of Sri Lanka Dr A. M. Mubarak attended the ceremony on behalf of Sri Lanka. Dignitaries including Dr Meng Qinghai/Vice President & the Executive Secretary of China Association for Science and Technology (CAST), Dr Cheng Donghong/President of the CANSM, Dr An Laishun/Vice President of the International Council of Museums (ICOM), Dr Philippe Pypaert, Science Program Specialist of UNESCO Office in Beijing, Mr Yin Hao, Director-General of China Science and Technology Museum (CSTM) and Mr OU Jiancheng, Deputy Director-General, China Science and Technology Museum (CSTM) and Vice President & Secretary-General, Chinese Association of Natural Science Museums (CANSM) also took part in the ceremony.

Dr Philippe Pypaert, Science & Technology Program Specialist/ UNESCO Office, Beijing and Dr Cheng Donghong President of CANSM formally handing over the Master Plan of National Science Centre, Sri Lanka to Dr Azeez M. Mubarak, Chairman of the National Science Foundation (NSF), Sri Lanka.

Socio-cultural factors shaping up S&T

A Conference was held in Colombo from 3rd - 4th October 2019 to create a platform to discuss, present and debate knowledge on how the Science and Technology (S&T) development of a country can be shaped up by the socio-cultural factors. The Conference was attended by eminent academics, researchers, policymakers and state officials in the field mainly from Sri Lanka and India.

The NSF organized this International Conference on “Social and Cultural Nexus of Science and Technology Development” noting the different approaches taken by the developed and other developing countries in the region in technology adoption. Sri Lanka has not been able to significantly pay attention to identify attributes of various socio-cultural factors that can make a positive impact on the progression of science and technology of the country. This has created policy gaps and certain failures in the sectoral developments. The Conference was organized to address some of these gray areas and enhance the policy debates on how the progress of science and technology of the country can be stimulated by taking a holistic view on the topic.



Mr Chinthaka S. Lokuhetti, Secretary to the Ministry of Science, Technology & Research graced the occasion as the Chief Guest of this Conference. Dr A. M. Mubarak, the Chairman of the NSF emphasized the importance of identifying socio-cultural factors that can either facilitate or slow down the S&T development process. Dr Bhushan Patwardhan, the Vice-Chairman/University Grants Commission of India delivered the Keynote speech.



The participants presented the research findings in four technical sessions. Cultural Embeddedness of Science, Social and Economic Context of S&T Development, Risks and benefits of modern technology and the Role of the private sector, Education, Media & State policy in S&T development were the main themes discussed at Plenary Sessions and Policy Dialogues.



Participants expressing their views

The Role of education in promoting S&T was highlighted as important and the concept of a holistic approach in education was brought forward to develop intellectual, emotional, social, physical, artistic, creative and spiritual potentials of the human resource. It was noted that communication skills, cognition skills, creative thinking and digital, environmental & bilingual literacy as most critical skills demanded by the present work environment.



The Chairman/NSF in his speech emphasized the importance of identification of socio-cultural factors that can either facilitate or slow down the S&T development process. The timeliness of the Conference in this forth Industrial Revolution characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres was highlighted. During the keynote speech Dr Bhushan

Patwardhan/Vice-Chairman, University Grants Commission of India emphasized the value maintaining the status quo between planet-people-profit to secure life on the earth amidst S&T development. Prof. Amita Singh from the Jawaharlal Nehru University delivered the first Plenary Speech on "Cultural Embeddedness of Science" and Prof. P Kanagasabapathi/Council Member of ICSSR made the second Plenary Speech on "Social and Economic Context of S&T Development".

The NSF entered into a strategic partnership with the ICSSR by signing a Memorandum of Understanding. This partnership will enable the two institutions to strengthen the research collaborations between Sri Lanka and India in the field of Social Sciences. Accordingly, exchanging scholars, organizing joint conferences, seminars & workshops and sharing literature will be done through this partnership.



NSF is strengthening ties with the JST

Getting young scientists extensively and meaningfully involved in Science, Technology and Innovation (STI) is essential and seemingly is the trend in the Asian region. The young researchers are the future leaders of STI who will play a pivotal role in application of STI towards socio-economic advantages of the country. Therefore, providing guidance and mentoring young researchers & nurturing all the passions for STI in them will be essentially important and an investment.

In this context, the NSF partnered with the Japan Science and Technology Agency (JST) to facilitate a conducive environment for the young researchers to boost their interests to become future research leaders. Formation of Sakura Science Club Alumni Association of Sri Lanka (SSCAASL) is one of the mechanisms that will enable fostering young researchers in this endeavour.

The first meeting of the SSCAASL to achieve this objective was held successfully on the 21st February 2019 at Renuka City Hotel, Colombo. Japan Science and Technology Agency (JST) in collaboration with the NSF organized this event with the participation of JST representatives, diplomats from the Japanese Embassy in Colombo, NSF officials, distinguished academics,

young researchers and school students. Another aim of the meeting was to strengthen ties and networks among young researchers in Sri Lanka and further consolidate the relationship between Sri Lanka and Japan especially in the field of Science, Technology and Innovation.

Prof. Ananda Jayawardane, Director General of the NSF representing Sri Lanka and Mr Kazuki Okimura/JST Principal Fellow, representing Japan welcomed the gathering. HE Mr Akira Sugiyama, the Ambassador Extraordinary and Plenipotentiary of Japan to Sri Lanka and Mrs Noor Rizna Anees/Additional Director General, Dept. of External Resources, Ministry of National Policies and Economic Affairs of Sri Lanka also addressed the gathering.

Being the hub institution, the NSF will facilitate many activities with the SSCAASL to promote STI by obtaining active contribution from the young researchers for socio-economic advantage of Sri Lanka. Five coordinators from the SSCAASL were appointed in this regard. It is believed that the SSCAASL will provide an ideal platform for the young researchers to initiate & establish close collaborations with other researchers in Japanese universities, government institutions and industry for mutual benefits.



Mrs Noor Rizna

Ms Ai Maeda

Mr Kazuki Okimura

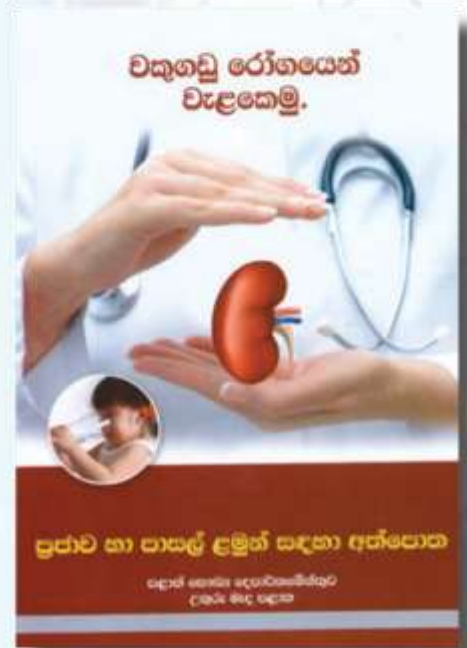
Delegate addressing the gathering

His Excellency Mr Akira Sugiyama

Preventing Kidney Diseases: NSF Publication Support

The NSF provides financial assistance to science writers under a special grant scheme, Publication Support, for the purpose of encouraging publication of books and other reading material related to Science & Technology and Science Education addressing current technological developments. Creating awareness among the general public on important issues such as health and natural disasters is the main purpose of this exercise. Moreover, the grant scheme is targeted at increasing the availability of reading materials in Science and Technology to enhance science literacy of people and improve their wellbeing.

A booklet on “How to prevent kidney diseases” authored by Dr Hema Weerakoon of the Provincial Department of Health Services, Anuradhapura, was published under the NSF Publication Support Scheme in June this year. The booklet contains important information on kidney diseases and provides room to create awareness on the prevention of kidney diseases among the target readership in the general community and health officials.



At the book launching programme

The booklet was launched on the 27th of 2019 June. The Governor of the North Central Province, Hon. Sarath Ekanayake was present at the launching ceremony. The awareness programmes of this nature conducted for the general public by the Ministry of Health will be ideal occasions for distribution of the booklet to educate people on various kidney diseases and preventive measures that can be practiced to reduce the number of kidney patients.

As a leading organization in promoting science and technology among the general public, the NSF is proud to be a part of this important social activity conducted by the Ministry of Health.

SLSTINET takes another step ahead

National Science Library & Resource Centre (NSLRC) of the NSF is the National Focal Point for dissemination of Science & Technology (S&T) information in the country. The efficiency of providing the information service is enhanced through a network, Sri Lanka Science & Technology Information Network (SLSTINET) operated among S&T libraries in the country. The current membership of SLSTINET is over 120 consisting member libraries in the universities, research institutions, government departments & statutory bodies, banks and other special libraries in Sri Lanka. The core objectives of the SLSTINET are to share library resources among the membership and professional development of the librarians.

The SLSTINET annual conference, “The Evolving Roles of the Librarians as Information Professionals in the Digital Era”, was organized by the NSLRC on the 9th August 2019 at the Sri Lanka Foundation (SLF) with over 180 participants.

Role of SLSTINET and way forward, Establishment of E-Resource Consortium: Objectives, Benefits & Composition, E-Resource Consortium: Implementation and Impact Study through Metrics, Library as an Information Service Platform,



Dr P. V. Konnur/Adviser, VT University Consortium, Belagavi, Dr B. S. Shivaram/Senior Technical Officer, CSIR, Bangalore & Expert Member for VTU E-resource Consortium, Dr Kishor Satpathy/Chief Librarian, Indian Statistical institute and Dr Siddamalliah/Librarian, Rajiv Gandhi University of Health Science (RGUHS) & Chairman, Health Science Library & Information Network (HELINET), Bangalore were among the resource persons of the Conference

Roles and competencies of librarians in the 21st century, Library Marketing and Popularizing Library Services among Communities, Continuing Professional Development (CPD) for Library & Information Professionals, Future of Digital Libraries & Data Security, and Popularizing Open Access Publications & Transforming Libraries into New Business Model as Information Centers were the important topics discussed at this Conference. The keynote speeches of the Conference were delivered by Dr A. M. Mubarak, the Chairman/NSF and Prof. P. S. M. Gunaratne, Vice Chairman of the University Grants Commission (UGC).

New Light in Local Boat Building Sector

The boat and ship building industry has shown considerable development within the last few years and is identified as one of the key players in the export sector of Sri Lanka. However, majority of the players in the boat building sector has not yet adopted the use of advanced composite materials and advanced innovative technologies, but rather use fibreglass materials and technologies such as hand lay-up and spray-up processes to meet their needs.

The global boat building industry has shifted from fiberglass to polymer composite structures and use advanced composite moulding technologies. In Sri Lanka, few industry players use advanced materials and technologies to be on par with global counterparts. Lack of infrastructure facilities within state universities for transforming advanced composite manufacturing technologies is a key barrier for future development of the boat building sector in Sri Lanka.

To address the existing knowledge gap, the NSF supported Dr U. I. K. Galappaththi/Senior Lecturer, from the Department of Mechanical and Manufacturing Engineering of University of Ruhuna to manufacture model boats using Vacuum Assisted Resin Transfer Moulding (VARTM) process. VARTM process was successfully used to design composite laminate structures for three prototypes, PANGA 22, Dingy and flat bottomed Theppama.

With over 45 participants representing SMEs, Sri Lanka Navy and leading private sector boat builders, a knowledge dissemination workshop was held at the University of Ruhuna.



Lectures followed by hands-on experience sessions provided a good platform to create awareness on the technologies used in global applications in boat building sector and other application areas such as aerospace & railway structures, wind turbines and marine vessels.

A booklet containing guidelines for manufacturing boats using VARTM technique, equipment and consumables required, manufacturing procedure, mixing ratios of fibre and matrix materials and selection of equipment was circulated among all participants.

This project funded under the Technology Grant Scheme of the NSF paved the way to develop a knowledge hub, Boat Building E-Hub (BBEHUB), where local boat builders are able to explore advanced composite manufacturing technologies. A sustainable platform created to link with the University of Ruhuna for future research and knowledge transfer activities in ship and boat building sector of Sri Lanka is another major outcome achieved under this project.

Online processing of JNSF & SLJSS

The two journals of the NSF, Journal of the National Science Foundation of Sri Lanka (JNSF) and Sri Lanka Journal of Social Sciences (SLJSS) started online processing of its manuscripts which has made the two journals more user friendly and attracting more submissions.

The NSF publishes two journals; the JNSF and SLJSS, which are considered as two of the most prestigious journals in Sri Lanka. The Journals have a long history, the JNSF being 47 years old and the SLJSS 42 years. The JNSF was first published in 1973, covering all aspects of science and technology, and is cited by the Science Citation Index Expanded (SCIE) since the last quarter of 2008. To date, it is the only Sri Lankan journal to be covered by the SCIE.

The SLJSS has been cited in SCOPUS and the Emerging Sources Citation Index (ESCI) since 2017 & 2018, respectively.

The JNSF has been published online on Sri Lanka Journals Online (SLJOL) since 2008 and was among the first journals to be included on SLJOL. The SLJSS joined SLJOL later in 2015.



SLJOL, which was launched in 2008, is a database of journals published in Sri Lanka developed in collaboration with the International network for the availability of Scientific Publications (INASP). It contains 85 journals and is currently managed by the NSF. One of the objectives of SLJOL is to give greater visibility and accessibility to the participating journals. As part of this, the site is provided with an online journal processing platform to all the participating journals.

Although the recent issues and most of the back issues of the journals are available online, the manuscript processing was not done through the system. Taking a step forward, the JNSF and SLJSS initiated processing of manuscripts through the online platform from 2019. The online processing platform offered by the SLJOL is a user-friendly interface for authors, reviewers and journal managers.



The authors have the advantage of submitting their manuscripts online, without the trouble of sending hard copies, with cover letters etc., and the ability to check the status of the manuscript by simply logging into the system at any time, from anywhere. The system ensures that the reviewing process is double-blind, with the identity of the authors and reviewers being anonymous to each other.

The reviewers are invited to review the manuscripts through an e-mail providing a username and a password (if the reviewers are not registered earlier). They can first go through the abstract of the articles before agreeing to review. Once agreed, they receive access to the full article. Frequent reminders are sent out automatically through the system, encouraging the reviewers to complete the job on time.

One of the many advantages of the online processing system to the journal editors is the facility of plagiarism checking via access to the iThenticate Similarity Check software and advice on copyright and licensing. In addition to this, the editors have the ability to rate reviewers for future reference and also access statistics on their performance.

Since starting online processing, the submissions received by the JNSF and SLJSS has increased exponentially, attracting authors from all the continents, specially from Asian countries. The time taken for the review process has also been reduced, which is an advantage for the authors.



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